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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.

1. POLITY AND GOVERNANCE

1.1. ONE NATION, ONE ELECTION BILL

Why in the news?

The **Constitution (129th Amendment) Bill, 2024**, and **The Union Territories Laws (Amendment) Bill, 2024**, introduced to give effect to “**One Nation One Election**” referred to the Joint Parliamentary Committee.

Key Provisions of the Bills

The **Constitution (One Hundred and Twenty-Ninth Amendment) Bill, 2024** proposes amendments and new article to enable simultaneous elections for the Lok Sabha and State Legislative Assemblies.

Articles Amended	Article 82A inserted
<ul style="list-style-type: none">• Article 83 (Amendment): Duration of Houses of Parliament.<ul style="list-style-type: none">○ The Bill proposes adding new clauses so that if Lok Sabha is dissolved before the end of its full term, the next Lok Sabha will only be for the unexpired term.○ Another proposed sub-clause clarifies that the new House (formed after the mid-term election) will not be a continuation of the old one.• Article 172 (Amendment): Duration of State Legislatures.<ul style="list-style-type: none">○ Amendments similar to those proposed to Article 83 are proposed to Article 172.• Article 327 (Amendment): Power of Parliament to make provision with respect to elections to Legislatures.<ul style="list-style-type: none">○ After the words “delimitation of constituencies”, the words “, conduct of simultaneous elections” shall be inserted	<ul style="list-style-type: none">• Simultaneous Elections: It refers to general elections for both the Lok Sabha and all Legislative Assemblies held together.• Appointed Date: The President can bring into force the proposed changes on the date of the first sitting of the Lok Sabha.<ul style="list-style-type: none">○ All state Assemblies elected after the appointed date and before the expiry of the full term of the Lok Sabha “shall come to an end on the expiry of the full term of the House of the People”.• Election Commission’s Powers: If it opinion that state election cannot be conducted with Lok sabha election, it may make a recommendation to the President, to declare by an order, that the election to that Legislative Assembly may be conducted at a later date• If an Assembly election is deferred, the full term of that Assembly will also end with the full term of the Lok Sabha elected in the general election.• EC will declare the end date of each Legislative Assembly's term when notifying its election schedule.

- **The Union Territories Laws (Amendment) Bill, 2024:** It proposes to **amendment to the Government of Union Territories Act, 1963, Government of National Capital Territory of Delhi Act, 1991, and Jammu and Kashmir Reorganisation Act, 2019** to align the term of UT’s Legislative Assembly with the Lok Sabha.

About Simultaneous Elections

- Simultaneous Elections (popularly known as **One Nation, One Election**) means holding elections to the **House of the People, all the State Legislative Assemblies, and local bodies** i.e., Municipalities and Panchayats, together
 - **Local bodies are not included in the bill.**
 - Simultaneous **elections do not mean** that voting across the country for **all elections needs to happen on a single day.**
- Previously, a high-level committee, headed by **former President Shri Ram Nath Kovind**, recommended a roadmap for holding simultaneous polls to Parliament, State Assemblies, and Local bodies.

Recommendations by other institutions:



Election Commission of India, First Annual Report(1983): It recommended holding simultaneous elections for the House of the People and the Legislative Assemblies of States.



Law Commission (170th report, 1999): Hold simultaneous elections for Lok Sabha and State Assemblies but delay results until the Assembly's term ends (interval not exceeding six months).



Parliament Standing Committee on Personnel, Public Grievance and Law & Justice (79th report): Implement two-phase synchronized elections- some Assemblies at Lok Sabha midterm and others at its term end.



NITI Aayog (Discussion Paper, 2017): Phase-wise synchronization of tenures of Lok Sabha and Assemblies.



Law Commission (Draft report, 2018): Synchronize elections via Advancing/postponing timings in some states, Holding elections twice in five years.

Need for Simultaneous Elections:

- **Financial Burden:** Conducting simultaneous elections could significantly cut down the financial costs associated with multiple election cycles.
 - This model reduces the expenditure related to the **deployment of resources like manpower, equipment, and security for each individual election.**
- **Economic Impact:** Asynchronous elections cause uncertainty and instability, **thwarting supply chains, business investments and economic growth.**
- **Disruption to Governance and policy paralysis:** Frequent imposition of the Model Code of Conduct (MCC) causes **policy paralysis** and slows down the pace of the developmental programmes.
- **Voter Participation Challenges:** Staggered elections induce 'voters' fatigue' and present a significant challenge in ensuring their participation.
- **Operational Efficiency and Resource Optimization:** Simultaneous elections would **reduce the number of election-related offences and disputes and lessen the burden on courts.**

Issues Involved in Simultaneous Elections

- **Constitutional Challenges:** **Imposing of President's Rule** could be misused to maintain synchronization.
- **Logistical Challenges:** India's vast electorate of **over 96 crore electors (2024)** requires **over one million polling booths** and significant security resources.
 - Conducting simultaneous elections could strain administrative capacity.
- **Concerns Regarding Federalism:** Constitutional Amendments concerning the term of the state legislative assemblies under Article 172 can be carried out without ratification by states.
 - Thus, opinion and say of States is reduced.
- **Impact on Voter Behavior:** Simultaneous elections may lead to a **"nationalization" of local issues**, with voters prioritizing national parties over regional concerns, weakening the voice of smaller parties.
- **Legal and Parliamentary Requirements:** Amendments to multiple constitutional provisions (e.g., Articles 83, 172, 327) and changes to the Representation of the People Act, 1951 are required.
- **Political accountability:** Frequent elections hold lawmakers accountable, while fixed terms may provide unwarranted stability **without performance scrutiny challenging democratic principles.**

Conclusion

Simultaneous Elections presents both potential benefits and challenges. While it could enhance political stability, reduce election-related expenses, and improve governance, concerns remain regarding logistical feasibility, potential

for political manipulation, and the impact on smaller parties and regional considerations. Careful planning and a robust democratic framework are crucial for successful implementation.

1.2. ATROCITIES AGAINST SCHEDULED CASTES

Why in the News?

Standing Committee on Social Justice and Empowerment has raised concerns over the failure of several States to establish the necessary mechanisms to effectively address cases of atrocities against Scheduled Castes.

What are Scheduled castes and their background?

- **Article 366** defines the term 'Scheduled Caste'.
Under Article 341, the President may notify the Scheduled Castes for a state or UT after consulting the State governor (of the respective State). Parliament can amend this list by law.
 - The term, "**Scheduled Castes**" was first incorporated into the **Government of India Act of 1935**.



Data Bank

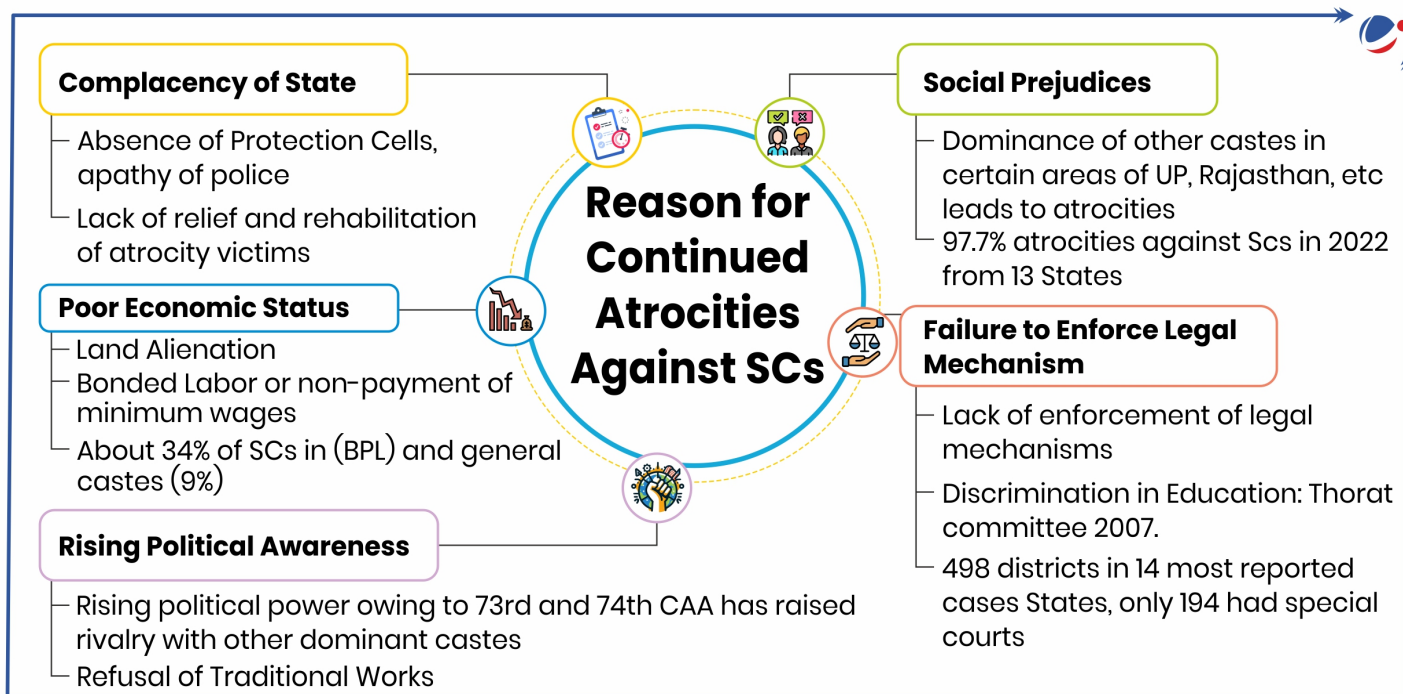
- SCs constitute **16.6% of India's population** (2011 Census).
- Crimes against SCs rose **13.1%, with 57,582 cases in 2022**.
- **Crime rate increased** from **25.3% (2021) to 28.6% (2022)**.
- **Conviction rate dropped** from 39.2% (2020) to 32.4% (2022).

Mechanism to tackle Caste based atrocities

- **Constitutional**
 - **Fundamental Rights: Article 14, 15, 16, 17.**
 - **DPSP: Article 46** (promotes the educational and economic interests of SCs) and **Article 338 (National Commission for SCs)**
- **Legal**
 - **Untouchability (Offences) Act in 1955:** To punish the practice of untouchability. Later on, this was amended to the **Protection of Civil Rights Act, 1976**.
 - > Under this Act, 'untouchability' as a result of religious and social disabilities was made punishable.
 - **Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989:** It is a special law which deals with offences specifically committed against members of the SC/ST community in India – **defined as "atrocities"**.
 - > Provision Special Courts for the speedy trial.
 - **The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013:** This Act aims to eliminate the practice of manual scavenging and rehabilitate those engaged in it.
 - **The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Amendment Act, 2015:** It added new crimes of sexual offences against women of SC/ST under the ambit of atrocities.

Observations of Standing Committee on Social Justice and Empowerment

- **Inefficiency in curbing atrocities against SCs:** Several States have not been able to set up the requisite system to effectively implement **Civil Rights (PCR) Act, 1955** and the **Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989**.
- **Sanitation workers:** The aim of National Action for Mechanised Sanitation Ecosystem Scheme (NAMASTE) is to ensure that there are zero fatalities in sanitation work in India have been not attained.
- **Absence of targets/goals:** Several schemes under which physical targets are not fixed, such as Pradhan Mantri Adarsh Gram Yojana (PMAGY), Venture Capital Fund (VCF) for SCs etc.
- **Surrender of fund in many schemes:** Such as in the case of **Scheme of Residential Education for Students in High School in Targeted Area (SHRESHTA)** for SCs due to delay in submission of proposal by the State/ UT Governments to Centre.
- **Apprehension of achieving Gross Enrolment Ratio in higher education:** Target of GER of SCs at 27 per cent fixed to be achieved by 2025-26 looks difficult as several States are submitting reduced annual action plan or there is pendency in submission of plan.
- **Lack of implementation of Pradhan Mantri Anusuchit Jaati Abhudaya Yojana (PM-AJAY):** More villages are needed to declare as Adarsh Grams in their States as it has happened in Uttar Pradesh, Tamil Nadu etc.



Way forward

- **Utilize the funds for welfare schemes:** States/UTs that are not able to justify their role in implementing the welfare schemes **should be dealt strictly**, ensuring beneficiaries are not deprived of any of the welfare Scheme.
 - In the spirit cooperative federalism, States must actively contribute their share of resources for the smooth execution of centrally sponsored schemes.
- **Quantifiable targets:** Fix the physical targets of all the welfare schemes so that there is no laxity in the implementation of the Schemes at any stage by the States or other Implementing Agencies.
- **Empowerment of National Institute of Social Defence (NISD):** It addresses critical areas such as Drug Abuse prevention, rehabilitation of socially marginalized and vulnerable groups etc.
- **Process of identifying the poorest households of SCs:** So that benefits of various schemes reach to them such as enrolling the eligible SC students under The Scholarship for Higher Education for Young Achievers Scheme (SHREYAS).
- **Skill training: Schemes like Pradhan Mantri Dakshta aur Kushalta Sampaan Hitgrahi (PM-DAKSH)** for SCs, OBCs, sanitation workers and others should have larger outlay to cover large populace.

1.3. BHARATIYA VAYUYAN VIDHEYAK, 2024

Why in the News?

Recently, President granted assent to the **Bharatiya Vayuyan Vidheyak (BVV), 2024** aimed at **replacing the Aircraft Act, 1934** and **modernise** India's aviation sector, enhance **safety** measures, and align with **global standards**.

Key features of BVV, 2024

Parameters	Retained from Aircraft Act, 1934	Addition/ Changes in Bharatiya Vayuyan Vidheyak, 2024
Regulatory Structure	The Act sets up 3 authorities: <ol style="list-style-type: none"> 1. Directorate General of Civil Aviation (DGCA) 2. Bureau of Civil Aviation Security (BCAS) and 3. Aircraft Accident Investigation Bureau (AAIB) <ul style="list-style-type: none"> • The central government exercises overall superintendence over these bodies. 	Power to issue Radio Telephone Operator (Restricted) Certificate and licence transferred from Department of Telecommunication to DGCA .


		<ul style="list-style-type: none"> It simplifies the licencing process by consolidation under one authority, the DGCA.
Regulation of aircraft-related activities	The Act regulates activities related to aircrafts including manufacturing, use, operation, and trade .	It adds powers to regulate design of aircrafts .
Power to make Rules	The Act empowers the central government to make Rules on matters including: <ul style="list-style-type: none"> regulation of specified activities related to aircrafts and matters on licencing, certification, and inspection, regulation of air transport services, and implementation of Convention on International Civil Aviation, 1944. 	It adds that the central government may make Rules on radio telephone operator certificate and licences under the International Telecommunication Convention .
Offences and Penalties	Offences punishable with imprisonment up to 2 years , a fine up to ₹1 crore, or both: <ul style="list-style-type: none"> Violating rules on carriage of certain prohibited goods. Flying aircraft in a manner to cause danger to a person or property, and Failure to comply with directions of DGCA and BCAS. 	Discretionary Penalties: The Central Government has the discretion to specify civil or criminal penalties for violation of certain Rules. E.g., implementation of international convention, protection of public health etc.
Adjudication of penalties	Adjudication of penalties: Central government-appointed Adjudicating Officer of the rank of the Deputy Secretary or above. First Appeal: Appellate Officer , who must be of a higher rank than the Adjudicating Officer.	Second Appeal: Second Appellate Officer , must be an officer of a higher rank than the First Appellate Officer.

Concerns related to BVV 2024

- Lack of independence of DGCA:** The central **government** exercises **superintendence** over DGCA unlike other regulatory bodies of telecom, insurance and electricity sector.
- Appellate System:** Appeals against decisions of bodies like DGCA are **limited to the Union Government**, potentially affecting their efficacy.
- Arbitration: Unilateral appointment of Arbitrator** by Government in cases related to compensation is seen to be **violative of the Right to Equality (Article 14)**.

Aviation Governance in India


- The aviation industry in India is governed by the **Ministry of Civil Aviation (MoCA)**.
 - Its primary **responsibility** is **formulation of policy, rules, and regulations** related to civil aviation operations in the country or related to **international civil aviation operations** from the country.



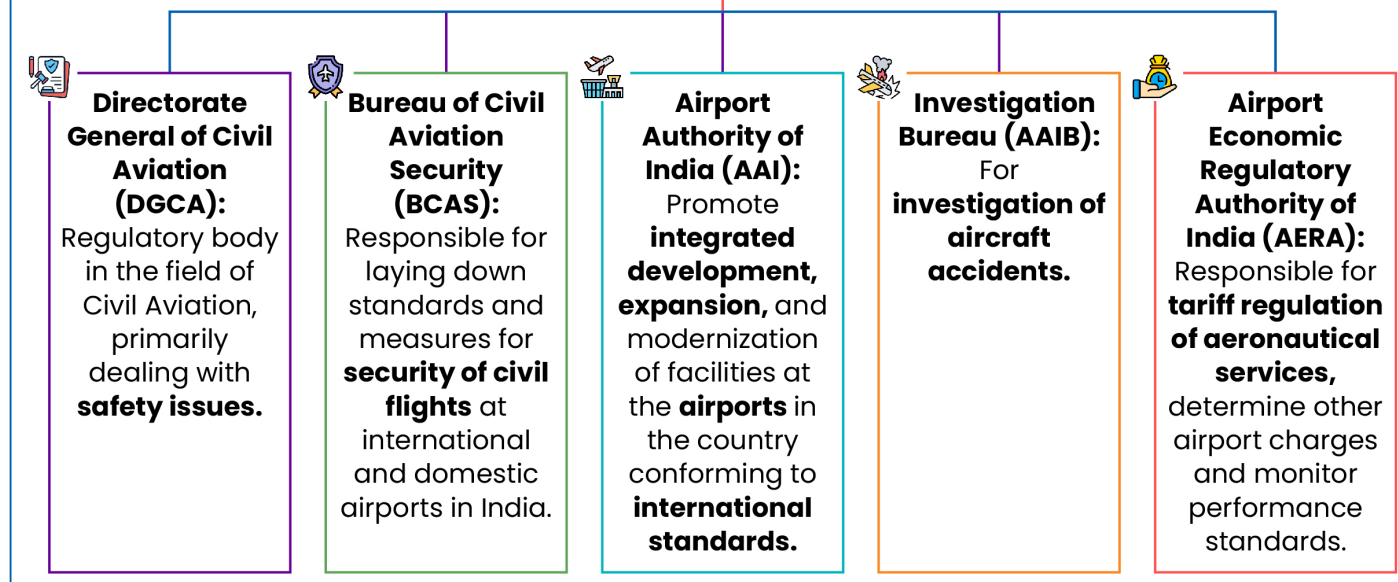
Data Bank

Aviation Sector in India

- **9th** largest civil aviation market, globally.
- **3rd** largest domestic air passenger market.
- **157** number of operational airports in 2024.
- **14.5%** CAGR in number of domestic passengers during FY14 and FY20.
- **15%** Women pilots in the country (almost 3-times the global average).



Organizations under Ministry of Civil Aviation



Key legislations:

- **Aircraft Act 1934 (and Aircraft Rules, 1937):** Regulates various activities related to civil aviation, and licensing of airports.
- **The Airports Economic Regulatory Authority of India (AERA) Act, 2008:** Set up an independent authority to regulate tariffs for aeronautical services delivered at airports and monitor the performance standards of airports.
- **FDI Policy: 100% FDI** is permitted in **scheduled Air Transport Service/Domestic Scheduled Passenger Airline (Automatic upto 49% and Government route beyond 49%)**.
 - > However, for NRIs 100% FDI is permitted under automatic route.
 - > 100% FDI in Greenfield and Brownfield airport projects.

Key Initiatives for India's Aviation Sector

Policies:

- **National Civil Aviation Policy, 2016:** Aimed at making regional air connectivity affordable and convenient, establish an integrated eco-system promoting growth of civil aviation sector and tourism etc.
- **Vision 2040 for the Civil Aviation Industry in India:** A strategic roadmap by Invest India outlining the long-term goals and strategies for the development of the civil aviation sector.

Schemes/ Initiatives:

- **RCS-UDAN Scheme:** Target to operationalize 1,000 UDAN routes and revive/develop 100 unserved & underserved airports/heliports/water aerodromes by 2024.
- **Maintenance, Repair and Operations (MRO):** Union Budget 2024-25 incentivises MRO activities in aviation.
- **Privatization of Airports:** Privatization of 25 airports via PPP under the National Monetization Pipeline.
- **Technological interventions:** NABH Nirman (for airport capacity augmentation), Digi Yatra (for paperless travel) and AirSewa (for online grievance redressal), GPS Aided GEO Augmented Navigation (GAGAN) (developed by AAI and ISRO for Air Traffic Management).

International Cooperation:

- **Delhi Declaration on Civil Aviation (2024):** Adopted at the 2nd Asia Pacific Ministerial Conference on Civil Aviation (APMC), it sets a framework for enhancing regional cooperation in civil aviation.
- **Carbon neutrality initiatives:** Standardization of Carbon Accounting and Reporting framework of Airports.
 - > Since 2014, 73 airports like Delhi and Bengaluru have switched to 100% green energy usage.

Conclusion

India's aviation sector is on a **transformative path**, with significant strides in **infrastructure development, regional connectivity, and sustainability efforts**. **Bharatiya Vayuyan Vidheyak, 2024** can promote growth of the sector by removing ambiguity and confusion in the **legal framework**.

1.4. OVERSEAS CITIZEN OF INDIA (OCI)

Why in the News?

Ministry of External Affairs has dispelled concerns regarding **OCI** cardholders being **reclassified as foreigners**, confirming that the existing OCI rules remain unchanged.

About OCI Cardholders

- The **OCI Scheme** was introduced by amending the **Citizenship Act, 1955 in 2005**.
- **Eligibility:** Any foreign national, **except a national of Pakistan or Bangladesh**,
 - who was a citizen of India at the time of, or at any time after 26th January, 1950; or
 - who was eligible to become a citizen of India on 26th January, 1950; or
 - who belonged to a territory that became part of India after 15th August, 1947; or
 - who is a child or a grandchild or a great grandchild of such a citizen; or
 - who is a minor child of such persons mentioned above; or
 - who is a minor child and whose both parents are citizens of India or one of the parents is a citizen of India - is eligible for registration as OCI cardholder.
- Also, **spouse of foreign origin of a citizen of India** or spouse of foreign origin of an Overseas Citizen of India Cardholder and whose marriage has been registered and subsisted for a continuous period of not less than two years immediately preceding the presentation of the application **is also eligible for registration as OCI cardholder**.
- **Foreign military personnel** either in service or retired are also **not entitled for grant of OCI**.
- **Person of Indian Origin and OCI cardholders** have been **merged** under one category OCI in **2015**.
- As on 31st January, 2022 40.68 lakh OCI registration cards are issued.

Benefits of OCI card holders

- **Multiple-entry** multi-purpose life-long visa to visit India
- **Equality with NRIs in certain financial, economic and educational matters** except for acquisition of agricultural or plantation land and in matters pertaining to inter-country adoption of Indian children.
- **Eligible for grant of Indian citizenship** under Section 5(1)(g) of the Citizenship Act, 1955 **after completion of 5 years as OCI card holder**, provided he has resided in India for one year out of 5 years before making the application.
- **Eligible to enroll in the National Pension Scheme (NPS)** at par with Non Resident Indians.

Restrictions related to OCI cardholders

- OCI is not to be misconstrued as 'dual citizenship'. OCI does **not confer political rights to vote**.
- **Not eligible to hold Indian constitutional posts:** President (**Article 58**); For election of Vice-President (**Article 66**); Judge of the Supreme Court (**Article 124**) and High Court (**Article 217**).
- Not eligibility for being a member of the House of the People/Council of States/ Legislative Assembly/Legislative Council.
- With regard to equality of opportunity in matters of public employment (**Article 16**)
 - **Not eligible for public service positions in Union or State affairs, except** for specific posts designated by the Central Government through special orders.
- Special approval is required for research, mountaineering, missionary activities, journalism and to visit Restricted / Protected Areas.

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

Weekly Focus #116- India Abroad: Legacy of Indian Diaspora



1.5. NEWS IN SHORTS

1.5.1. PROCESS FOR REMOVAL OF RAJYA SABHA CHAIRPERSON

Opposition has moved a **motion of No-confidence** against **Rajya Sabha (RS) Chairperson**.

- As per **Article 64**, **Vice President (VP)** shall be **ex officio Chairperson** of **RS**.

About Constitutional Removal Procedure

- Notice Period: 14-day notice** is to be given **prior** to moving a Resolution, outlining clear **intentions**.
- Passing of a Resolution:** As per **Article 67(b)**, VP can be removed from office by a resolution passed by RS with a **majority of all its members and agreed to by Lok Sabha** with a **simple majority**.
- Unlike** provisions for removal of **President**, the Constitution does **not specify grounds for removal of VP**.

1.5.2. SC GUIDELINES ON MERCY PETITION

Supreme Court (SC) issued guidelines on processing of Mercy Petitions to States/UTs

- Pronounced in the **State of Maharashtra Vs. Pradeep Yashwant Kokade case**, guidelines seek to **streamline the mercy petition and death penalty execution processes** avoiding undue delays, safeguarding convicts' legal rights, etc.

Major Guidelines issued by the SC

- Dedicated Cells for Mercy Petitions:** To be established by **States and UTs** to handle mercy petitions and process them promptly within the prescribed timeframe.
- Attachment of Judicial Officer:** An official from the Law and Judiciary Department to be attached to the dedicated cell.
- Information Sharing and Documentation:** Prison authorities must forward mercy petitions to the dedicated cell and call for information from police stations and investigation agencies, etc.
- Coordination with Governor and President's Secretariats:** Mercy petitions must be forwarded to these secretariats for further action.
- Electronic Communication:** Communications should be conducted via email to ensure efficiency, barring cases that require confidentiality.
- Guidelines and Reporting:** State Governments to issue executive orders detailing procedures for handling mercy petitions.
- Implementation:** States/UTs to report compliance with the SC directions within three months.
- Guidelines to Sessions Courts:** Maintain record of such cases, issue notices to public prosecutors or investigative agencies for pending appeals.
- Execution warrants:** To be **issued by the State** immediately after the death penalty becomes enforceable.

Other Significant Observations by SC

- Impact of Delays:** Delays have a dehumanizing effect on the convicts **violating Article 21**.
- Right to Challenge Delay:** Convicts can challenge delays under **Article 32 (SC)** and **Article 226 (High Court)**.
- Case Specific Determination:** What constitutes undue or inordinate delay cannot be defined and to be decided on a case-specific basis.

About Mercy Petition

- Constitutional Framework:** Constitution has granted the **President (Article 72)** and **Governor (Article 161)** the power to grant pardons or commute sentences.
 - SC in **Maru Ram vs. Union of India (1981)**, established that the President must act based on the Council of Ministers' advice in mercy petitions.
- Legal Framework:** Covered under **Section 472(1) of Bharatiya Nagarik Suraksha Sanhita (BNSS) 2023**.

1.5.3. E-COURTS MISSION MODE PROJECT PHASE III

Union Cabinet approved Phase III of the e-Courts Mission Mode Project

- The e-Courts Mission Mode Project phase III aims to usher in a regime of **maximum ease of justice** by moving towards **digital, online and paperless courts** through digitization of the entire court records.

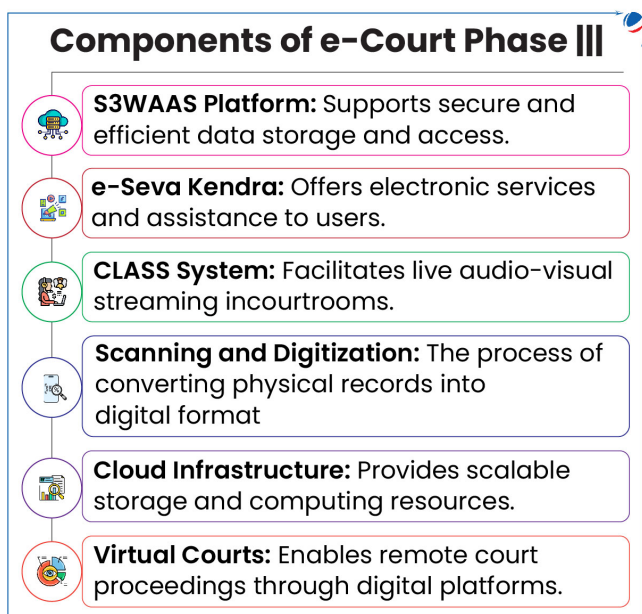
- The e-Courts Project is under implementation since 2007 for ICT enablement of Indian Judiciary as **part of National e-Governance Plan**.
- Its **phase I & II** were implemented during **2011-15** and **2015-23** respectively.

About the e-Courts Phase III

- **Central Sector Scheme:** For 4 years (**2023 to 2027**) with a financial outlay of **Rs.7,210 crore**.
- **Objective:** To create a **unified technology platform for judiciary**, thus providing a seamless & paperless interface between courts, litigants & other stakeholders.
- **Implementation: High Courts (HCs).**
 - **Funds** are released to HCs by **Department of Justice** (Ministry of Law) on recommendation of **e-Committee (Supreme Court of India)**.
 - The **e-Committee** is responsible for the **policy planning, strategic direction and guidance** for implementation of e-Courts project.

Significance of Digitalization of Courts

- **Judicial Modernization:** Enables data-driven decisions, fully digitizing justice delivery.
- **Reducing case pendency:** By **integrating emerging technologies like AI, Optical Character Recognition**, etc., courts can improve efficiency & reduce pendency.



1.5.4. AMRIT GYAAN KOSH PORTAL

Amrit Gyaan Kosh Portal on iGOT platform jointly developed by **Capacity Building Commission** and **Karmayogi Bharat** launched.

About Amrit gyan kosh Portal:

- **Purpose:** Capacity Building Commission aims to **empower educators and enhance the quality of public administration** training across India.
- This comprehensive repository **curates' best practices** from across India, **aligning with 15 of the 17 Sustainable Development Goals (SDGs)**
- It encompasses diverse policy themes such as health, education, agriculture, and digital governance.

About iGOT Karmayaogi platform

- All-in-one online platform for civil service officials.
- It guides **learning, hosts discussions, manages careers, and conducts reliable assessments** to showcase officials' competency effectively.

1.5.5. E-DAAKHIL PORTAL

The Department of Consumer Affairs announces the nationwide implementation of the E-Daakhil portal.

About E-Daakhil portal

- It was first launched by the **National Consumer Dispute Redressal Commission (NCDRC) in 2020.**
 - NCDRC is a **quasi-judicial commission** set up under the Consumer Protection Act of 1986.
- It is an online platform that simplifies the **consumer grievance process**, allowing consumers to file complaints and track cases without the need to be physically present.
- The portal has been a key tool in **promoting consumer rights and delivering timely justice.**

1.5.6. THE BOILERS BILL, 2024 PASSED IN THE RAJYA SABHA

The Bill replaces **Boilers Act, 1923** and incorporates the provisions in consonance with **the Jan Vishwas (Amendment of Provisions) Act, 2023**.

- The Bill will ensure **the safety of life and property of persons from the dangers of explosions of steam boilers.**

Key provisions of the Bill

- **Regulation:** Centre will constitute **Central Boilers Board** to regulate the design, manufacture, erection and use of boiler and boiler components.
- **Inspection:** Inspections can be carried out by **State-appointed Inspectors or authorized third parties**.
- **Ease of Doing Business (EoDB):** Of the 7 offences in the erstwhile Act **only 4 serious offences involving loss of life or property have been retained for criminal penalties**.
 - **For all non-criminal offences ‘fine’** has been converted into **‘penalty’** to be levied through executive mechanism instead of courts as existed earlier.

Issues associated with Bill

- **Safety Concerns:** The state government can exempt areas from the Bill, raising doubts about ensuring safety in exempted zones.
- **Limited Judicial Recourse:** Decisions of the central government and state-appointed inspectors **cannot be challenged in regular courts**. Aggrieved individuals must file **writ petitions in High Courts under Article 226 of the Constitution**.
- **Hindrance to EoDB:** No timelines are set for inspections, or approvals for boiler alterations, repairs, or erection.

About Boilers

- A boiler refers to a **vessel in which steam is generated under pressure**.
- As of 2024, **the country has about 40 lakh steam boilers**.
- Boilers **fall under the concurrent list of the Constitution**.



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2. INTERNATIONAL RELATIONS

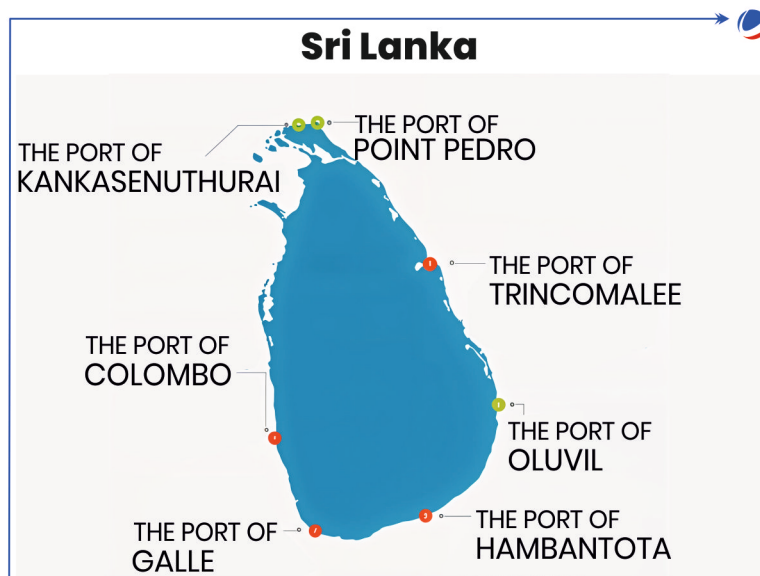
2.1. INDIA-SRI LANKA RELATIONS

Why in the News?

Sri Lankan President reaches Delhi on maiden foreign tour after taking office.

Key Announcements of the Meet

- Continuation of discussions on the **Economic & Technological Cooperation Agreement (ETCA)**.
 - It would build on the free trade agreement (FTA) that was implemented in 2000.
- **Explore the possibility of jointly working on rehabilitation of Kankesanthurai port** in Sri Lanka with grant assistance from the Government of India.
- Expedite implementation of **India-funded grant project of Sri Lanka Unique Digital Identity**.
- **MOU on a protocol to amend the Double Taxation Avoidance Agreement (DTA)** to bring the DTA in line with international standards on prevention of tax treaty abuse.
- **Other announcements:**
 - Support the development of **Trincomalee as a regional energy and industrial hub**.
 - Early finalization of the proposed **bilateral Social Security Agreement**.
 - **Assistance of USD 14.9 million by India** to undertake a Signaling System in the **Maho Anuradhapura segment of Sri Lankan railways**.
 - **Comprehensive scholarship program** for 100 economically disadvantaged students.
 - **MOU to train 1500 Sri Lankan civil service officers**.



Significance of India- Sri Lanka bilateral Relations

For both Nations

- **Mutual Support at international forums:**
 - India's support for Sri Lanka's application to become a **member of BRICS**.
 - Sri Lanka has extended its support to **India's candidature for a non-permanent seat on the UN Security Council** for 2028-29.
- **Shared maritime security interests in the Indian Ocean Region:** Both are committed to countering traditional and non-traditional threats as well as to ensure a free, open, safe and secure Indian Ocean Region.
- **Energy cooperation:** Several projects are at different stages of discussions, for instance, plans for inter-grid connectivity, a multi-product petroleum pipeline between the two countries, supply of LNG, and the under-preparation Sampur Power Project.
- **Regional and multilateral cooperation:** Both are part of Indian Ocean Rim Association (IORA), and BIMSTEC.
- **Military Collaboration:** Joint exercises like **SLINEX (Naval)** and **MITRA SHAKTI (Army)** are held annually.
 - Sri Lanka also participates in **MILAN** the multilateral naval exercise hosted by the Indian Navy.

For Sri Lanka

- **Role of India in Debt Restructuring:**
 - **Financial aid:** Nearly **USD 4 billion** was provided by India in various kinds of aid in **2022 and 2023** to help the country navigate its economic crisis. (see infographic)

- **Co-chair of Official Creditors' Committee (OCC):** OCC was formed in **2023 by 17 countries**, co-chaired by **India, Japan, France**, to discuss Sri Lankan debt treatment
 - > Includes **Paris Club creditors** and official bilateral creditors.
- **International Monetary Fund (IMF) bailout:** India was among the **first countries** to provide financing **assurances to IMF**, a prerequisite for the **IMF's \$2.9 billion** bailout package approved in **2023**.
- **Conversion of line-of-credit to grant assistance:** India extended USD 20.66 million as grant assistance to settle the payments related to seven completed line-of-credit projects in Sri Lanka.
 - > Further project that for the **rehabilitation of Kankesanthurai Port** in the northern province will now be executed through a grant.
- **Economic importance:** India has been Sri Lanka's largest trade partner, **top FDI contributor**, and **largest source of tourists**.
- **Other key areas of support from India:**
 - **India acts as a 'first responder' for Sri Lanka** in the field of Humanitarian Assistance and Disaster Relief.
 - India supports **Colombo Security Conclave**, backing Sri Lanka's regional security initiatives.
 - **Capacity Building** including installation of the Maritime Rescue Coordination Centre (MRCC) under an Indian grant.
 - **Cultural support** like **restoration of the Thiruketheeswaram Temple in Mannar and exposition of sacred Kapilavastu Relics** in 2012.

India's Financial Support to Sri Lanka	
<p>Support granted by India</p> <ul style="list-style-type: none"> ● Currency Swaps and Trade Credit: <ul style="list-style-type: none"> ○ A USD 400 million currency swap through the Reserve Bank of India (RBI). ○ Deferral of USD 500 million in trade liabilities under the Asian Clearing Union (ACU), helping Sri Lanka avoid immediate default. ● Fuel and Food Imports: USD 500 million in fuel import credit and a USD 1 billion import credit facility to ensure essential imports like fuel and food etc. ● Humanitarian Aid: Supply of essential items such as food, medicines, and medical equipment. 	<p>Strategic Motivations Behind India's Support</p> <ul style="list-style-type: none"> ● Countering China's Influence: China's Belt and Road Initiative (BRI) had expanded its presence in Sri Lanka through projects like Hambantota Port and Colombo Port City. ● Protecting Economic Interests: The Colombo Port is vital for India's trade, handling transshipment of container traffic to and from Indian ports. ● Strengthening Bilateral Ties: India sought to improve relations with Sri Lanka, which have been strained by historical grievances and anti-India sentiment.

For India

- **Security of Indian Ocean:** Sri Lanka is **India's closest maritime neighbour** and plays crucial role in preventing territorial actions inimical to India's security/stability.
- **Alignment with India's policy:** Central place in India's '**Neighbourhood First**' policy and **Security and growth for all in the region (S.A.G.A.R) vision**.
- **Indian Origin Tamils (IOTs):** Around 1.6 million IOTs, primarily employed in tea and rubber plantations, with a significant presence in Colombo's business sector.

Challenges in India-Sri Lanka Relations

- **Chinese Strategic Presence in Sri Lanka:** Several developments may have security implications for India.
 - **China's growing influence** through financial aid and projects like **Hambantota Port increases** its leverage over Sri Lanka, impacting India's interests.
 - **Chinese vessels (Shi Yan-6, Yuan Wang-5)** conduct data collection activities may potentially aid future military operations against India.
- **Fishermen Disputes:** Sri Lanka opposes use of **bottom trawlers by Indian fishermen** and frequent entry into Sri Lankan waters citing concerns regarding environmental damage and overfishing.
 - Also, territorial dispute over this **Kachchatheevu Island**, ceded to Sri Lanka in 1974, remains a contentious issue, with Indian fishermen claiming traditional fishing rights.

- **Delayed Implementation of the 13th Amendment:** The amendment was a result of Indo-Lanka Accord (1987), aimed at resolving ethnic conflict through devolution of power.
 - **Contentiousness:** Sinhala nationalists oppose it as an imposition; Tamil groups seek broader powers.
 - **India's Role:** India pushed for devolution, but Sri Lanka's reluctance, especially on land and police powers, remains.

Way forward

- **India's Five "S" approach to the world:** Samman (Respect), Samvad (Dialogue), Sahyog (Cooperation), and Shanti (Peace); to create conditions for universal Samridhi (Prosperity).
 - India's '**Neighbourhood First Policy**' and **SAGAR policy** should be the guiding force in tackling inimical Chinese attitude in and around the Indian Ocean.
- **Proposed solution towards resolving Fishing Issue:**
 - **Shared Fishing Zones:** Allow Indian fishermen to fish within 5 nautical miles of the International Maritime Boundary Line in exchange for Sri Lankan access to India's Exclusive Economic Zone.
 - **Regulated Trawling:** Limit trawling to twice a week, reduce fishing hours, and enforce a 3-nautical-mile distance from the Sri Lankan coast & ultimately enforce a strict ban on bottom trawling.
 - **Leasing Kachchatheevu:** Sri Lanka could lease the island to India, maintaining ownership while allowing Indian fishermen to fish in its waters.
- **13th Amendment:** Present Sri Lankan government could use this opportunity to devolve powers to the provinces.

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

Weekly Focus #108– India's Neighbourhood Policy: Prospects and Challenges



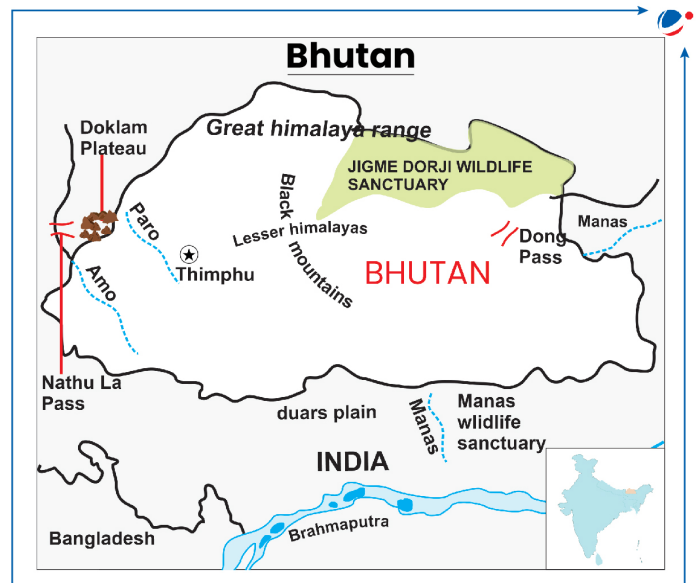
2.2. INDIA-BHUTAN RELATIONS

Why in the News?

The King and the Queen of Bhutan were on an official visit to India.

Key Highlights of the Visit

- India's Prime Minister reassured Bhutan's King of India's continued support for the **Gelephu Mindfulness City project**, enhancing prosperity.
 - The city is a **2500 Km zero-carbon, co-operative project** that will offer space to businesses in finance, tourism, green energy, technology, healthcare, agriculture, aviation, logistics, education and spirituality.
- Expressed satisfaction over-
 - **Inauguration of first Integrated Check Post (ICP)** along the India-Bhutan border at Darranga in Assam.
 - **1020 MW Punatshangchhu-II hydro power project** was nearing completion.



Significance of India- Bhutan Bilateral Relations

For Both countries

- **Robust political relationship:** Highlighted by **Treaty of Friendship**, which was **first signed in 1949** and **renegotiated in 2007**.
 - Formal diplomatic relations **were established in 1968**.

- **Mutually beneficial hydro-power cooperation:** The 2006 bilateral agreement and its 2009 Protocol govern hydropower cooperation with benefits for both countries.
 - **For Bhutan:** India provides Bhutan **access to Indian financing and energy markets** to support hydro-power development, which is a vital catalyst for the country's socio-economic development.
 - > E.g., India facilitated the access of **Basochhu hydropower and Nikachhu hydropower plants** for trading on Day Ahead and Real Time Markets in the Indian Power Exchanges.
 - **For India:** Clean energy imported from Bhutan alleviates power deficiency sustainably.
- **India-Bhutan Buddhist Connect:** Both countries promote pilgrimage at important Buddhist sites.
 - Kolkata's Asiatic Society **also loaned statue** of 16th-century monk Zhabdrung Ngawang Namgyal, regarded as the founder of the modern nation state of Bhutan, **to Bhutan.**
- **Transboundary wildlife conservation:** E.g., Both countries collaborate through **Transboundary Manas Conservation Area (TraMCA)** to protect the wildlife in Manas National Park in India and Royal Manas National Park in Bhutan.

Do you know ? Sale of Hydropower **accounts for the largest share of Bhutan's GDP.**

For Bhutan

- **Free trade regime:** India-Bhutan Agreement on Trade, Commerce and Transit, first signed in 1972 (**revised in 2016**), establishes a Free Trade Regime between the two countries.
 - It **allows duty-free transit of Bhutanese exports** to third countries.
- **Developmental assistance:** India has stepped up the development support for Bhutan under their 13th Five Year Plan (2024-29) and also supports Bhutan's **Economic Stimulus Programme.**
- **India as a net security provider:**
 - **Doklam Standoff:** India invoked the **India-Bhutan Treaty of Perpetual Friendship 2007** to intervene on Bhutanese territory (which China claims) to prevent the China from constructing a road to **Gipmochi In 2017.**
 - **IMTRAT:** The Indian Military Training Team (**IMTRAT**), established in **1961-62**, provides training to Bhutanese forces.
- **Infrastructure Development:** India's **Border Road Organisation (BRO)** has constructed the majority of roads in Bhutan under **Project 'DANTAK'.**
- **Other Areas of support from India:**
 - **Scholarships for Bhutanese students** to study in India;
 - India contributes to **50% of the Bhutan's total foreign direct investment (FDI);**
 - India provides financial support for '**Digital Drukyl**' for establishing optical fibre in Bhutan etc.

For India

- **Trade:** India is Bhutan's largest trade partner with **balance of trade favouring India.**
- **Strategic location:** Bhutan is a strategic partner of India as it acts as a buffer between China and India, especially along the sensitive Chumbi Valley.

Cooperation in New and Emerging Areas



Space Cooperation: Jointly developed the India-Bhutan SAT (launched in 2022).



Fin-Tech Collaboration: Launched RuPay Card in two phases (2019-2020) for cross-border payments, Introduced the BHIM app in 2021 to promote cashless transactions.



e-Learning and Digital Connectivity: Integration of Bhutan's Druk Research Network with India's National Knowledge Network to enhance educational connectivity.

Growing Concerns in India-Bhutan Relations

- **Increasing Proximity between China and Bhutan:**
 - While Bhutan does not have a diplomatic presence in China, **2023 marked first-ever visit** by a Bhutanese Foreign Minister to China.
 - **China significantly influences Bhutan's economy**, accounting for over **25% of its trade**.
 - Bhutanese are inclined towards **establishing diplomatic relations with China** and resolving the border issue.
- **Chinese Territorial Assertiveness:** China considers Bhutan as part of its **"five-finger policy,"** which views **Tibet as the palm** and **Ladakh, Nepal, Sikkim, Bhutan, and Arunachal Pradesh** as the fingers.
- **Bhutan-China border disputes:** Bhutan and China signed a **"three-step roadmap"** in October 2021 to expedite boundary dispute resolution.
 - **India fears** China may pressure Bhutan to cede access or control over **the Doklam plateau**, threatening **India's strategic Siliguri Corridor**.
- **Other challenges:**
 - **Militant groups:** India's North-East militant groups, such as **United Liberation Front of Assam (ULFA) & National Democratic Front of Bodos (NDFB)**, use Bhutan as a hideout.
 - **Stalled projects:** Bhutan has stalled the **BBIN Motor Vehicle Agreement** (Bangladesh, Bhutan, India, Nepal) over environmental concerns.

Conclusion

As Bhutan navigates its relations with China, India's engagement remains crucial to Bhutan's regional security and autonomy, ensuring both nations continue to prosper together while addressing emerging challenges. India should focus on enhancing economic cooperation through continued development assistance and strengthening mutual security commitments. Moreover, Bilateral relations can be further strengthened in areas like educational collaborations that strengthens human connections and exploring deep-rooted cultural ties.

2.3. INDIA-KUWAIT RELATIONS

Why in the News?








The Prime Minister of India visited **Kuwait**, marking the **first trip by an Indian PM in 43 years**.

Key Outcomes of the visit

- **Award Conferment:** Indian PM received Kuwait's highest honor, 'The Order of Mubarak Al Kabeer.'
- **Strategic Partnership:** India-Kuwait relations elevated to a strategic partnership.
- **International Solar Alliance (ISA):** Kuwait joined ISA for sustainable energy cooperation.
- **Asian Cooperation Dialogue (ACD):** Highlighted the significance of **ACD in regional cooperation**.

- **ACD:** Inaugurated in 2002, the regional forum promotes cooperation among 35 Asian countries, with India as a founding member.
- **India-GCC Cooperation:** Kuwait, as GCC President, pledged stronger India-GCC ties.
- **Defence Pact Signed:** Key areas of cooperation include training, exchange of personnel and experts, joint exercises, cooperation in defense industry, supply of defense equipment, etc.
- **Other Developments**
 - Renewed **Cultural Exchange Program (2025–2029)** for arts, literature, etc.
 - India praised Kuwait for hosting the **4th Dushanbe Process on counter-terrorism and border security**.

India-Kuwait Relations : An Overview

	1990 Kuwait Airlift	India airlifted over 1,70,000 Indians between August and October from Kuwait, After Iraq's invasion setting a Guinness World Record.
	Diplomatic Connect	India was one of the first countries to establish diplomatic relations with Kuwait following its independence from British Protectorate in 1961 .
	Indian Community Engagement	1 million Indians in Kuwait. The largest expatriate group. 26 CBSE schools in Kuwait with around 60,000 students .
	Energy trade	Kuwait is the 6th largest crude oil supplier and 4th largest petroleum gas supplier to India.
	Historical ties	India has consistently been among Kuwait's top trading partners . Until 1961 , the Indian Rupee was the legal tender in Kuwait.
	Investment	The KIA has invested indirectly in India with estimated investments of more than US\$10 billion .
	Bilateral Investment Promotion Agreement	It was signed with Kuwait (2003) with a tenure of 15 years. It expired on 2018.

Convergence in India-Kuwait Relations

- **Kuwait's Strategic Location and India's Interests:** There is mutual convergence in securing the sea lanes of communications in the region. **E.g.**, the Red Sea, the Gulf of Aden, the Gulf of Oman and the Arabian Sea, given that they are some of the world's busiest.
 - Also, **Kuwait's strategic position** would strengthen India's connectivity projects. **E.g.**, The India-Middle East-Europe Economic Corridor (IMEEC).
- **Kuwait's Petroleum-based Economy Converges with India's Energy Security:** Kuwait's oil reserves account for 6% of global reserves and substantial gas reserves. It's oil revenues make up 94% of the state's income.
 - **Kuwait meets 3.5%** of India's total energy needs & it has also expressed interest in India's Strategic Petroleum Reserve Programme.
 - **Petrochemical sector** offers another promising avenue for collaboration as India's rapidly growing petrochemical industry is set to become \$300 billion by 2025.
- **India is a Key Investment Destination:** Kuwait Investment Authority (KIA) manages one of the largest baskets of sovereign wealth funds (~\$1 billion), the fourth largest after Norway, China and the UAE.
- **India's Interest in Strengthening Ties with GCC (see box):** Kuwait currently holds the presidency of the Gulf Cooperation Council (GCC).

- **India and Kuwait's Geopolitical Alignment:** The growing political ties between India and Kuwait (part of India's extended Neighbourhood) reflect the evolving India-Gulf relations, shifting beyond oil trade.
 - **This strategic reorientation** offers India opportunities to enhance its geopolitical influence (as a Net Security Provider) in the Gulf region.

Divergences in India-Kuwait Relations

- **Expatriate Welfare and Labor Issues:** India's large expatriate community in Kuwait faces challenges like labor rights violations and mistreatment. The 2024 fire in Mangaf killed **40 Indians**, highlighting poor working conditions.
- **Limited Economic Diversification:** While energy trade forms the backbone of the relationship, both countries economic engagement is limited in other sectors. Also, India has a trade deficit with Kuwait.
- **Geopolitical Tensions in the Gulf:** Kuwait's diplomatic stance during regional crises, like the Gulf War and the ongoing tensions in Yemen and Syria, can sometimes differ from India's non-interventionist policy.

India and Gulf Cooperation Council (GCC)

- **GCC Established:** 1981
- **GCC Members:** Comprises six member states. Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE.

India and GCC Relations

- **Economic and Trade Relations:** The GCC is also one of the largest trading blocs of India's foreign trade.
 - **E.g., in 2023-24**, the bilateral trade between India and GCC comprised **~14% of India's total foreign trade**.
 - **Trade balance** is in the **GCC's favour** mainly because of the **large volumes of oil and gas India imports from the GCC countries**.
 - **Investment:** Between 2000 and 2024, India received a collective FDI of ~US\$25 billion from the GCC countries, excluding significant portfolio investments.
- **Energy Security:** The GCC supplies over **50% of India's crude oil** and **70% of its natural gas**. E.g., **Qatar is India's largest supplier of liquefied natural gas (LNG)**.
- **Indian Diaspora and Remittances:** The GCC hosts over 8 million Indian expatriates, making it the largest expatriate community in the region. GCC countries are the **second largest** source of remittances to India, after the US.

Challenges in India-GCC Relations

- **Geopolitical Rivalries in the Region:** The Saudi Arabia-Iran rivalry has impacted India's relations with both nations, complicating diplomatic and economic ties.
- **Labour Migration and Social Issues:** India has raised concerns over the Kafala system (migrant worker's employment and immigration status control) in GCC countries, highlighting issues like exploitation, human rights violations, and abuse of migrant workers.
 - **Example:** A 2021 report by *The Guardian* revealed that around 6,500 migrant workers from India, Pakistan, Nepal, Bangladesh, and Sri Lanka died in Qatar since it won the FIFA World Cup host.
- **Slow Progress in Free Trade Agreement (FTA) Negotiations** Despite ongoing discussions, the India-GCC FTA remains unresolved, hindering deeper economic integration.
- **Discriminatory "Asian Premium" on Crude Oil Pricing:** The "Asian Premium" imposed by OPEC countries results in higher crude oil prices for Asian nations, including India, compared to Western buyers.

Conclusion

The recent visit of India to Kuwait marks a significant step in making the relations grow stronger. Going forward, early finalisation of the renewed Bilateral Investment Promotion Agreement, renewable energy and stricter monitoring of recruitment agents needs to be prioritised.

2.4. TRADE WEAPONISATION

Why in the News?

Recently, Minister of External Affairs expressed concerns over the increasing **Weaponization of Trade** and associated job losses.

What is Trade Weaponization?

- In simple words, Trade weaponization means using **trade as a tool of foreign policy rather than as an economic goal** in and of itself.
- It is defined as **strategic use of trade policies and tools to induce a trade partner to change its practices** in any issue-area (including economic policy and diplomatic relations) by **exploiting its economic vulnerabilities and asymmetries of trade partners**.
 - Albeit usually welfare-enhancing, **international trade also generates relations of asymmetric interdependence**, where **one party may lose more** than the other if economic ties are suspended.
- For example, **trade can be weaponized to induce a country to change its security alliances**, such as in the case of the **1973 oil embargo**.
 - In 1973, Arab states imposed an oil embargo on the US and its allies against US's \$2.2 billion military aid package for Israel.

Do you know

- > A trade war is economic conflict **between similarly powerful countries** (e.g., China and US) which occurs to gain economic advantage through tariffs and trade barriers, while **trade weaponization** involves a **dominant country using trade as a tool** to exert geopolitical influence over less powerful nations.

Key Tools for Trade Weaponization

- **Selective Import/Export Restrictions:** E.g., USA's **Countering America's Adversaries Through Sanctions Act** (CAATSA) targeting Iran, Russia, and North Korea.
- **Exploitation of Economic Dependencies:** E.g., China leads in producing 20 critical minerals, accounting for 60 % of global production and 85 % of rare earth processing.
 - This strategic advantage allows China to potentially restrict exports or manipulate prices, for pressuring other countries on geopolitical issues such as One China Policy.
- **Non-Tariff Barriers:** Preventing customs clearance, obstacles concerning environment, biosecurity, intellectual property standards, etc.
 - E.g., The **EU imposed strict labeling and certification requirements on agricultural products**, making it difficult for Indian farmers to sell their products in the EU market.
- **Currency Manipulation:** E. g., **China** has been accused of manipulating its currency to keep it undervalued, making Chinese exports cheaper and more competitive in global markets.
- **Fulfilling National Agenda:** After Chinese human rights activist Liu Xiaobo received the Nobel Peace Prize in 2010, **China reduced trade with Norway**.
 - **Trade only began to recover after the Norwegian king's visit to China in 2018**, a year after Liu's death

Consequences of Trade Weaponization

- **Economic Consequences:** Supply chain disruptions, reduced trade, and limited market access slow economic growth, lead to job losses, and may result in inflation that harms consumers especially in Global South.
- **Geopolitical Consequences:** Trade disputes can escalate into **broader geopolitical tensions**, potentially leading to diplomatic crises.
 - E.g., U.S. imposed economic sanctions on Russia over Ukraine, and Russia responded with counter-sanctions. This economic conflict worsened their tense relationship, leading to a Cold War-like atmosphere.
- **Weakening of Multilateral Institutions:** Trade weaponization undermines **principles of multilateralism**, where countries cooperate to establish rules-based systems, **erode trust among nations** collectively.
 - E.g., the **WTO Dispute Settlement System** is dysfunctional due to the US's refusal to appoint new judges to the Appellate Body.

Trade Weaponization used against India

Western countries tried to pressure India by exploiting its economic and technological vulnerabilities, but India turned these challenges into opportunities:

- **Attaining Food Security:** India signed a food aid agreement with the U.S. in 1954 under **Public Law (PL) 480**.
 - However, the **U.S. stopped the aid in the late 1960s** as India refused to yield policy changes, like industrial privatization, demanded by the U.S.

- In this Background **C Subramaniam envisaged “Green Revolution”** which eventually made India a net exporter of food grains.
- **Nuclear Energy:** For example, due to earlier Western countries sanctions over India’s nuclear test in 1974 and 1998 and lack of indigenous uranium, India has uniquely developed a 3-stage nuclear programme to exploit its reserves of thorium.

Measures to counter Trade Weaponization

- **Supply Chain Resilience**
 - **Supply Chain Resilience Initiative (SCRI)** is an international collaboration between **Australia, India and Japan** to promote best practice w.r.t. national supply chain policy and principles in the Indo-Pacific.
 - Establishment of **Indo-Pacific Economic Framework for Prosperity (IPEF)** to build cooperation and economic integration in the Indo-Pacific.
 - **Mineral Security Partnerships (MSP)** for securing supply chains for critical minerals essential for modern technologies and clean energy.
- **Countering dominance:** Like **China plus one** (business strategy that prevents investing in China only); **Friend Shoring** (enhancing trade between economic and political allies), etc.
- **Strengthening Domestic Production:** Investing in local industries to produce critical goods can reduce reliance on foreign suppliers.
 - For example, India’s initiatives like **Make in India, Atmanirbhar Bharat, Production-Linked Incentive (PLI) Scheme** etc.
- **Strengthening International Cooperation:** Multilateral organizations like the World Trade Organization (WTO) should be empowered to enforce rules and resolve disputes effectively.

Conclusion

The increasing weaponization of trade poses significant challenges to the global economy. By fostering international cooperation, diversifying supply chains, enhancing economic resilience, and promoting fair trade practices, nations can mitigate these risks and create a more stable and prosperous future.

2.5. NEWS IN SHORTS

2.5.1. UK JOINS CPTPP

UK has recently become the **first European country** to join the **Indo-Pacific trade bloc** Comprehensive and Progressive Agreement for Trans-Pacific Partnership (**CPTPP**).

- Previously, **in 2023**, CPTPP parties and the UK **signed the accession protocol** to enable the UK to join the CPTPP.

Significance of such multilateral groupings for India

Recently, **NITI Aayog CEO advocated for India to join trade blocks** like **CPTPP and RCEP** (Regional Comprehensive Economic Partnership) due to following benefits:

- **Economic Opportunities:** Would allow India to tap into **new markets** and benefit from **"China plus one" strategy**.
- **Export market:** Reduced tariffs and access to expansive markets in the Asia-Pacific region can **boost exports**, particularly from the **Micro, Small, and Medium Enterprises (MSMEs) sector** that accounts for 40% of India’s exports.

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

 **Genesis:** Free Trade Agreement across Pacific signed originally by 11 countries in March 2018 in Santiago, Chile and **entered into force on December 30, 2018**, after **US withdrew from original Trans-Pacific Partnership (TPP) in 2017**.

 **Membership:** 12 member nations (**UK, Australia, Canada, Japan, New Zealand, Brunei, Chile, Malaysia, Mexico, Peru, Singapore, and Vietnam**).

 **Significance:** Bloc accounts for about **15% of global GDP** and provides trade access to a **market of more than 500 million people**.

To know more about significance of multilateral groupings for India, refer to Article 3.1. Importance of Large Trade Agreements in November 2024 Monthly Current Affairs Magazine.

2.5.2. NEPAL AND CHINA SIGNED BRI COOPERATION FRAMEWORK

Framework is expected to pave the way implementing Belt and Road Initiative (BRI) projects in Nepal, which joined BRI in 2017.


- Also, both countries have committed to developing the **Trans-Himalayan Connectivity Network (THMDCN)** and improving infrastructure in roads, railways, aviation, and power grids.
- **Pakistan** and **Sri Lanka** are also part of the BRI.


Key Concerns for India

- **Security Threats:** Nepal shares a long land border (about 1700 km) with India and act as a buffer zone between both countries. China's Infrastructure project will make border areas more vulnerable in case of conflict.
 - E.g. Chinese-funded airport in Pokhara (located close proximity to border)
- **Regional Influence:** China's economic influence in Nepal may push the country to align politically with China, weakening India's regional influence.
 - This is considered a part of China's "**string of pearls**" strategy to encircle India with Chinese-friendly nations.
 - Also, influence over Nepal may be exercised by using **Debt Trap Diplomacy**.
- **Other:**
 - Impacting Trade Relations, India is currently **Nepal's largest trade partner**, with investments in cross-border energy trade.

About Belt and Road Initiative (BRI)

 **Genesis:** Initiated by People's Republic of China as 'One Belt One Road' in 2013, it seeks to connect Asia with Africa and Europe via land and maritime networks.

 **Aim:** Improving regional integration, increasing trade and stimulating economic growth.

 It comprises **Silk Road Economic Belt** (A trans-continental passage) and **Maritime Silk Road** (A sea route).

2.5.3. PHEWA DIALOGUE

Recently, Nepal and China launched the "**Phewa Dialogue**" series.



About Phewa Dialogue

- It derives its name from the famous **Phewa Lake** situated in **Pokhara Valley** of Nepal.
- This will be Nepal's first official think tank forum **dedicated to South Asia Regional Economic Integration**.

2.5.4. INDIAN CHEMICAL COUNCIL WINS OPCW-THE HAGUE AWARD

The 2024 OPCW The Hague award conferred upon 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.
- **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**.

 <h3>About Indian Chemical Council (ICC)</h3>  <p>Genesis: Founded in 1938 to support and drive the growth of India's chemical industry.</p> <p>About: Apex national body representing all branches of India's chemical industry, including organic/inorganic chemicals, plastics, and petrochemicals.</p> <p>Industry Representation: Represents over 80% of India's \$220 billion chemical industry.</p>	<h3>About Chemical Weapon Convention (CWC)</h3> <p>Genesis: It came into force in 1997.</p> <p>Aim: To eliminate an entire category of weapons of mass destruction by prohibiting development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons by States Parties.</p> <p>Members: 193 States Parties (India is an original signatory to the Convention).</p> <p>Implementing Body: Organization for the Prohibition of Chemical Weapons (OPCW)</p>
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2.5.5. UNITED NATIONS DISENGAGEMENT OBSERVER FORCE (UNDOF)

Recently, **UN Secretary General** paid tribute to **Brigadier Amitabh Jha**, who was serving with **United Nations Disengagement Observer Force (UNDOF)** at Golan Heights.

About UNDOF

- **Headquarters:** Camp Faouar (Syrian side of the Golan Heights).
- **Genesis:** Established by **UN Security Council (UNSC) resolution 350 (1974)**, following the 1974 Disengagement of Forces Agreement between Israel and Syria.
- **Mandate:** Maintain the ceasefire and supervise the area of separation — a demilitarized buffer zone — as well as the area of limitation — where Israeli and Syrian troops are restricted — in the **Golan**.
 - **Mandate is renewed every 6 months** by UNSC and has been renewed till June 2025.
- **India is third largest military contributor** to UNDOF.

2.5.6. "CROSSROADS OF PEACE" INITIATIVE

During a recent **trilateral consultation between India-Iran-Armenia**, the Armenian side briefed on its connectivity initiative, "**Crossroads of Peace**."

About Crossroad of Peace Initiative

- It is an ambitious regional transport proposal aimed at connecting Armenia with its neighboring countries—**Turkey, Azerbaijan, Iran, and Georgia**.
- **Objectives:** Seeks to revitalize and develop crucial infrastructure—roads, railways, pipelines, cables, and electricity lines—to facilitate the flow of goods, energy, and people across these nations.
- It aims to connect the **Caspian Sea to the Mediterranean Sea** and the **Persian Gulf to the Black Sea** through easier and more efficient transportation links.

2.5.7. KERCH STRAIT

Recently, Russian tanker splits in storm spilling oil in Kerch Strait waterway.

- A strait is a **narrow waterway between two pieces of land** that connects two large bodies of water.

About Kerch Strait

- **Location:** It is located in the **eastern part of the Crimean Peninsula** connecting **Black Sea and the Sea of Azov**.
- **Significance:** Key route for exports of Russian grain and for exports of crude oil, fuel oil, LNG, etc.



SMART QUIZ

You can scan this QR code to practice the Smart Quiz of International Relations at our open test online platform for testing your understanding and recalling of the concepts.



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।

DELHI: 4 फरवरी, 11 AM

JAIPUR: 20 जनवरी

JODHPUR: 3 दिसंबर

प्रवेश प्रारम्भ

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3. ECONOMY

3.1. STATE FINANCES

Why in the News?

Reserve Bank of India (RBI) released **State Finances: A Study of Budgets Of 2024-25 Report** with theme 'Fiscal Reforms by States'.

Fiscal Position of the State Governments as per Report

- **Decline in consolidated Gross Fiscal Deficit (GFD):** State governments contained their **gross fiscal deficit within 3% of Gross Domestic Product (GDP)** during 2021-22 to 2023-24.
 - GFD of the Indian States fell from an average of 4.3% of GDP during 1998-99 to 2003-04 to 2.7% of GDP during 2004-05 to 2023-24.
- **Revenue Deficit:** States maintained the **revenue deficit at 0.2% of GDP** during 2021-22 to 2023-24.
- **Expenditure quality improved:** Capital outlay, expenditure that leads to creation of **physical/financial assets**, increased to 2.6% of GDP in 2023-24 from 2.2% in 2022-23.
- **Debt of States:** Declined from **31.8% of GDP** at end-March 2004 to **28.5% of GDP** at end-March 2024
 - However, it remains well above the level of **20%** recommended by the **Fiscal Responsibility and Budget Management (FRBM) Review Committee (2017) and FRBM Act**.

About FRBM Act, 2003

- It was enforced in July 2004 with an objective of ensuring **inter-generational equity in fiscal management** and ensuring **long-term macroeconomic stability**.
- It prescribes limits for Fiscal Deficit (FD) in order as burden of **present-day borrowings would have to be borne by the future generations**.
- It has been amended four times in **2004, 2012, 2015 and 2018**.
- **Targets under the Act**
 - Fiscal deficit to be **3% of the GDP**.
 - Containing **General Government debt to 60% of GDP (Central Government Debt to 40% of GDP and State Government Debt to 20% of GDP) by 2024-25**.

Know the term

➤ **Gross fiscal deficit:** It is a measure of how much the government needs to borrow.

Formula: Gross fiscal deficit =

Total expenditure – (Revenue receipts + Non-debt creating capital receipts)

Or

Net borrowing at home + Borrowing from RBI + Borrowing from abroad

➤ **Revenue deficit:** It represents shortage of Government's funds to maintain daily affairs.

Formula: Revenue deficit = Total Revenue expenditure – Total Revenue receipts

Why Fiscal Deficit is still high in some States?

- **Reduction in Transfer of Money from Centre to state:** There has been a decline in grants from the Centre attributed to the cessation of GST compensation and the tapering of Finance Commission grants.
 - E.g., Finance Commission Grants under proviso to **Article 275(1)** have reduced by more than 18% in 2022-23 to 2023-24. (Budget 2024-25)
- **Power Sector Losses:** Electricity distribution companies (DISCOMs) continue to remain a drag on State finances with total accumulated losses at ₹6.5lakh crore by 2022-23 (2.4% of GDP). (Power Finance Corporation, 2024).
- **Rising subsidy burden:** Driven by farm loan waivers, free/subsidised services (like electricity to agriculture and households, transport), cash transfers to farmers, youth, women etc.

- **Unreliable fiscal data and reporting:** States reporting standards are often inconsistent with those of the Finance Commissions, the Union Ministry of Finance, and the Reserve Bank.
 - This leads to ambiguities in reporting, differential treatments of public account items, non-uniform nomenclature, and underreporting of debt liabilities.
- **Other issues in fiscal management in states:**
 - **Absence of Fiscal Data:** Quarterly data release is hampered by non-availability in the case of a few States/UTs and delays in others.
 - **Delays in the setting up of State Finance Commissions (SFCs):** It hampers **fund transfer to Local government bodies** which remain heavily reliant on transfers from the State governments.
 - **Too many Central government schemes:** They reduce flexibility of State government spending and dilute the spirit of cooperative fiscal federalism.
 - **Economic, climatic and geopolitical uncertainties:** They exacerbate the fiscal risks, leading to large divergences of actual revenues and expenditures from the budgeted estimates.

Fiscal Reforms undertaken by States

- **Fiscal Responsibility Legislations (FRLs):** Enactment of FRBM Acts/FRLs **by State government** has incentivised formulation of fiscal policy strategies, creation of Medium-Term Fiscal Plans (MTFPs) and improvement in transparency.
- **Institutional Reforms:** Setting up of **State Institutions of Transformation** with help of NITI Aayog by several states Assam, Gujarat and others.
- **Expenditure Reforms:**
 - Moving towards **Direct Benefit Transfer** (DBT to remove duplicate/fake beneficiaries and plug leakages);
 - Adoption of the **National Pension System (NPS)** (replacing the Old Pension Scheme);
 - Implementation of a **Single Nodal Agency (SNA)** for the centrally sponsored schemes etc.
- **Tax Reforms:**
 - Adoption of **goods and services tax (GST)**;
 - **Modernisation of Tax Administration** through e-governance measures such as e-registration, e-filing, and e-payment streamlining compliance and reducing costs while addressing revenue leakages.
- **Greater reliance on market-based financing:** Share of market borrowings in financing of GFD increasing from 17% in 2005-06 to 79% in 2024-25.
- **Power Sector Reforms:** UDAY scheme, fifteenth finance commission allowed an additional borrowing space of **0.5% of GSDP** for States for power sector reforms.

Best practices

For Streamlining compliance and enhancing transparency:

- **GST Seva Kendras, Gujarat:** To simplify registration and prevent documentation misuse.
- **Facilitation cells, proposed by Haryana:** To create to assist startups and MSMEs with GST compliance.
- **e-tendering, Assam:** To ensure transparency in the issuances of wine licenses

Leveraging technology to boost revenue

- **QR code-based track-and-trace system, Haryana:** To prevent diversion of alcohol.
- **Faceless GST tax administration, being developed in Delhi:** Using data analytics and automation software.
- **Use of drone surveys and satellite imaging, Odisha:** To monitor mining operations, prevent illegal activities, and enhance mining revenue.

Way Forward: Recommendations of the report

- **“Next generation” fiscal rules:**
 - **Some space for counter-cyclical fiscal** policy to provide flexibility in the face of large exogenous shocks.
 - > **Switzerland** stands as a prime example of **decentralised fiscal governance** (States have autonomy to create fiscal rules).
 - **Risk-based fiscal framework** that considers state-level fundamentals. E.g., States with higher debt levels and slower growth rates may require stricter fiscal rules than States with lower debt levels.

- **Medium-Term Expenditure Framework (MTEF)** which links policymaking to budgeting by ensuring forward planning for fund availability and improving accountability.
- **Data Driven Fiscal Policy Making:** Data analytics, machine learning and artificial intelligence can be used for improved taxation system.
- **Improving fiscal data generation and dissemination processes:** E.g., data on outstanding liabilities can be provided in a uniform format.
- **Contain DISCOM Losses:** Through Initiatives aimed at **enhancing productivity**, reducing transmission and distribution losses, **rationalising tariffs** in accordance with the underlying cost of power supply, **privatising generation and distribution** etc.
- **Other recommended measures:**
 - **Rationalisation of subsidies and centrally sponsored schemes (CSS).**
 - **Implementing of the 'golden rule'**, which requires that all current/revenue expenditures be financed from current revenue while capital expenditure is financed through borrowings.
 - **Refine the process of appointment of SFCs** so that timely and adequate resources are available to the local bodies.
 - **Outcome budgeting**, i.e., linking spending to measurable outcomes, to foster accountability and targeted resource use.
 - **Adoption of climate budgeting.**

Conclusion

The State governments have demonstrated **fiscal prudence**. However the state finances will increase due to several developmental expenditure and liabilities. Therefore, the **reforms have to be undertaken** which would strengthen **public finances and ensure fiscal sustainability and management**.

To know more about Transfer of Money from Centre to state, refer to Article 1.1. Fiscal Federalism in April 2024 Monthly Current Affairs Magazine.

3.2. GDP BASE YEAR REVISION

Why in the News?

Government has formed 26-member Advisory Committee **on National Accounts Statistics (NAS)** to update the GDP base year from existing 2011-12 to 2022-23.





More on the News

- The **NAS under chairmanship of Biswanath Goldar** has been formed **to identify new data sources & refine methodology for compiling NAS**.
 - **Central Statistics Office (CSO)** brings out NAS annually which includes **GDP estimates from multiple approaches**.
- **Advisory Committee on NAS** will review data sources to align GDP with inflation and industrial indices.
- The **previous base year revision in 2015** changed base year from **2004-05 to 2011-12**.
 - In the new series, CSO did away with **Gross Domestic Product (GDP) at factor cost**, and adopted the international practice of valuing industry-wise estimates as **Gross Value Added (GVA) at basic prices**.

What is Base Year?

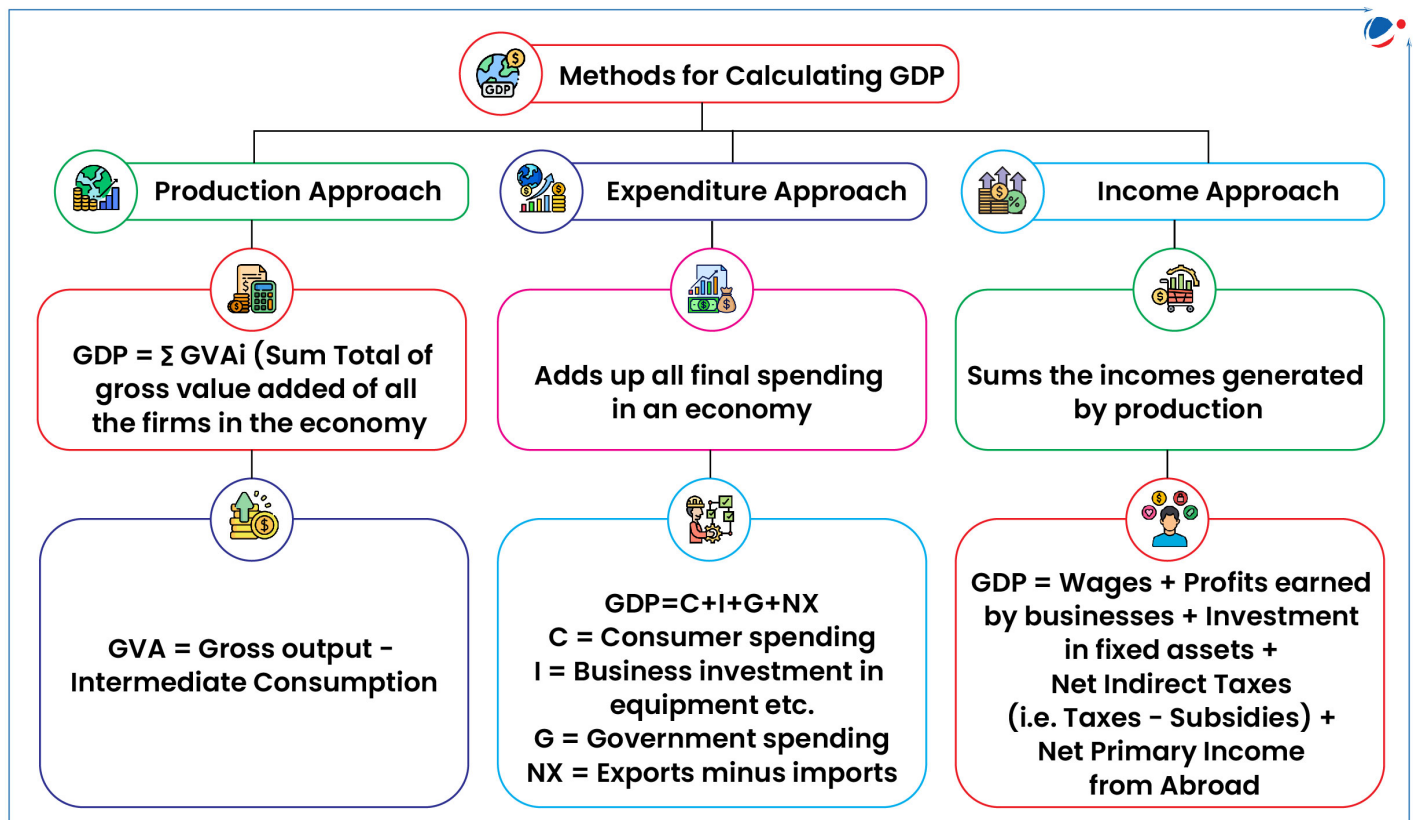
- A base year is the **reference year** whose **prices are used to calculate the real growth** (minus inflation) in national income.
- Thus, Base year is a **benchmark used for GDP calculation**.
 - For example: If 2011-12 is the base year, GDP for other years is adjusted to match 2011-12 prices.
- Revision of base year are also **relevant for other metrics** such as the Index of **Industrial Production (IIPs)**, the **Wholesale Price Index (WPI)** and the **Consumer Price Index (CPI)**.

Need to Update the GDP Base Year

-  **Removing Inflation Effects:** Outdated base years can overestimate GDP by ignoring rising prices.
-  **Enhances Data Quality:** Includes new data from digitization, enhances more reliable data use, etc.
-  **Global Comparison:** Aids in comparing GDP with other countries.
-  **Other Reasons:** Adapts to post-pandemic dynamics, supports policymaking, etc.

About GDP

- **Measurements of GDP:** Theoretically, GDP can be measured in three different way, each of which should give the same answer (refer to the infographic)
 - **Nominal GDP:** Measured at current market prices, ignores inflation.
 - **Real GDP:** Adjusted for inflation using base year prices, showing true economic growth.
- **Limitations of GDP**
 - Excludes non-market activities (e.g., household work)
 - Ignores income inequality
 - Overlooks environmental damage
 - Misses informal economy contributions
 - Doesn't measure welfare or living standards



Other relevant information on GDP

Chain-based GDP calculation

- Involve **measuring GDP by linking short-term changes** in economic activity using a **rolling base year**.
- **Updates the base year periodically** (often annually), allowing for a continuous series of growth rates.
- **Common in advanced countries** like the US, Australia, Canada, and EU nations.
- However, it is not considered suitable for India as it
 - May not work well due to **volatile agriculture and fuel prices**.
 - **Resource-intensive and complex**, challenging for a resource-limited country.
 - **Reduces ease of long-term data comparisons**.

GDP Accounting Standard

- For the purpose of **global standardization and comparability**, countries **follow the System of National Accounts** evolved in UN after elaborate consultation.
- **System of National Accounts (SNA) 2008** is latest version of international statistical standard for national accounts, adopted by **United Nations Statistical Commission in 2009** and is an update of earlier 1993 SNA.

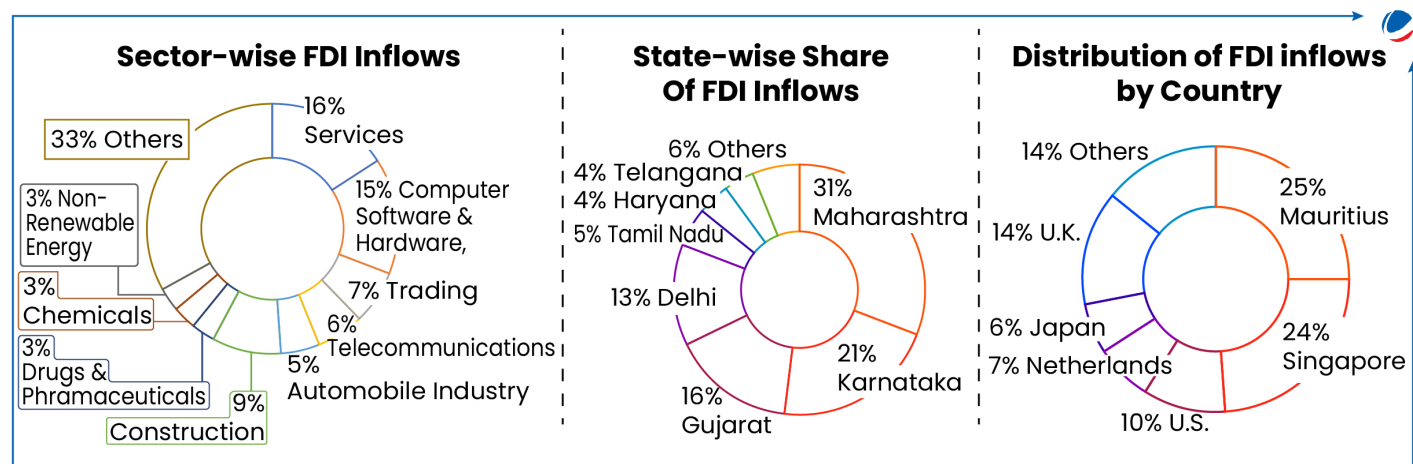
3.3. FOREIGN DIRECT INVESTMENT (FDI)

Why in the News?

According to data from the **Department for Promotion of Industry and Internal Trade (DPIIT)**, the **cumulative amount of FDI inflows into India** has crossed the **\$1 trillion milestone** (\$1,033.40 billion) in the **April 2000-September 2024** period.

More on the News

- The decade **2014-24** saw an **increase of 119%** in FDI inflows over the preceding decade (2004-14). (Union Ministry of Commerce and Industry)
- India's FDI inflows have increased **~20 times** from **2000-01 to 2023-24**.
- During 2000-2024, India's **service sector** attracted the **highest FDI equity inflow** (US\$ 115.18 billion).



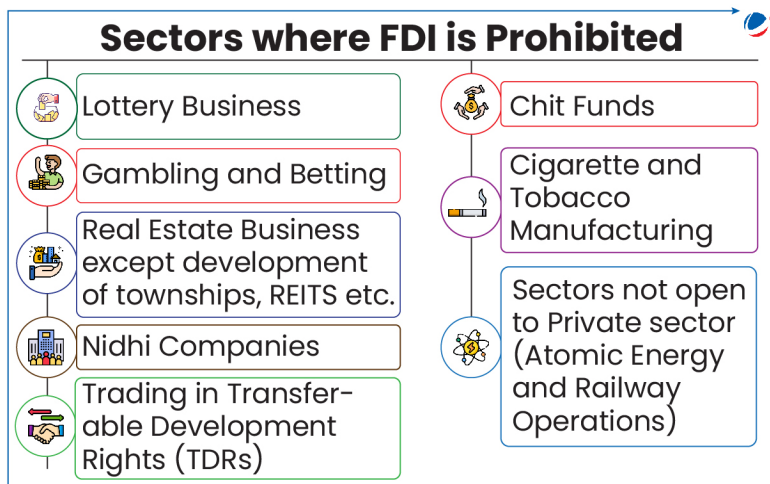
What is Foreign Direct Investment (FDI)?

- FDI means **investment** through **capital** instruments by a person **resident outside India** in an **unlisted Indian company**; or in **10% or more** of the post issue **paid-up equity capital** on a fully diluted basis of a **listed Indian company**.
- It is usually a **long-term investment** and is largely a **non-debt creating capital flow**.
- **Routes of FDI**
 - **Automatic Route:** Under the automatic route, an overseas investor is **only required to inform the Reserve Bank of India (RBI)** after the investment is made.

- **Government Approval Route:** Under the government approval route, a foreign investor has to get a **prior nod from the Ministry or department concerned.**

- **Regulation**

- Currently, FDI in India is **governed by FDI Policy 2020** and **FEMA (Non-debt Instrument) Rules, 2019.**
- **DPIIT** is the **primary regulator of FDI in India.**
- The **RBI**, which has the authority to **implement the FDI Rules**, is the other major regulator.



FDI vs. Foreign Portfolio Investment (FPI)

Parameters	Foreign Direct Investment (FDI)	Foreign Portfolio Investment (FPI)
Form of investment	An investment made by a foreign entity in a business enterprise intended for long-term operations.	Investment in financial assets (e.g., stocks, bonds) of a foreign country intended at short-term gains.
Type of investment	Involves investments in financial and non-financial assets, including resources, technology, and securities.	Focuses on financial assets such as stock, bonds, etc.
Volatility	Low volatility due to stability of extended investment periods.	More volatile and subject to quick changes in investor sentiment.
Investor Control	Higher as they can influence company decisions	Limited control and are considered passive investors.
Liquidity	Low liquidity as long-term investment with assets not easily liquidated.	Highly liquid, investors can buy or sell assets with ease.

Challenges for FDI in India

- **Complex Regulation and policy uncertainty:** The complexity of regulations such as **tax laws, transfer pricing** etc., impact foreign investors due to **difficulties in compliance.** This leads to **legal disputes, potential financial losses** and **opportunities for companies to exploit loopholes.**
 - **E.g., Retrospective taxation on Vodafone leading to legal disputes.**
- **Institutional deficiencies:** The **Competition Commission of India (CCI)** has not been entirely effective in **halting anti-competitive actions** and **preventing the misuse of dominant positions**, impacting India's economic development.
 - **E.g., Flipkart controversy** resulted in India losing out from **preferential treatment** under the **US Generalised System of Preferences (GSP).**
- **Concentration of FDI:** FDI inflows have been **disproportionately concentrated in few sectors like services** as well as **regions (urban areas of states like Maharashtra, Karnataka etc.),** creating **inequalities in development prospects.**
 - Lack of adequate infrastructure facilities especially in **rural areas** acts as a **deterrent in attracting FDI.**
- **Impact on local businesses:** Foreign company's **extensive operations and purchasing power** threaten the local businesses who find it **hard to compete** with these companies.
 - **E.g., Opposition towards Walmart's arrival into India.**
- **Impact on Labour market:** FDI and foreign companies may **raise questions** about the **nature of work, job security, and possible displacement of local people.**
 - **E.g., Amazon and Uber** are facing legal action and criticism in India due to **subpar working conditions.**

Do you know ?

➤ According to government notification in 2020, **Government Approval Route is mandatory for investments** from entities/ citizens/ residents **from a nation sharing a land border with India** (namely China, Bangladesh, Pakistan, Bhutan, Nepal, Myanmar, and Afghanistan).

Challenges faced by Indian Economy due to FDI

- **Dependency on foreign capital: May lead to fluctuations and uncertainty, impacting economic expansion plans.**
 - E.g., Fears of a global recession, protectionist measures in some regions and the economic downturn linked to the Russia-Ukraine war were some reasons for a drop in FDI inflows in 2023.
 - **Instances of economic downturns** impact investor confidence and **result in capital flight, straining currency stability and balance of payments** of the nation.
- **Development vs. Environment: Poorly managed FDI** can have an impact on nearby **ecosystems and communities** due to **negative externalities** of environmental degradation.
 - E.g., **UK-based Vedanta Resources'** mining activities in **Niyamgiri Hills** faced opposition from activists.
- **Intellectual Property concerns: Inadequate management of technology transfer** and intellectual property transfer could **prevent the host nation** from properly utilising the expertise brought in by international companies.
 - E.g., **Bio-piracy in Pharmaceutical sector.**

Steps taken to promote FDI inflows

- **Schemes: Make in India (MII), Start-up India, PM Gati Shakti, National Industrial Corridor Programme, Production Linked Incentive (PLI) Scheme** etc. have promoted FDI inflows into India in line with **Atmanirbhar India**.
- **Promoting Ease of Doing Business (EoDB):** Reducing compliance burden, India Industrial Land Bank, Project Monitoring Group (PMG), liberalization of FDI policy are initiatives that **simplify, rationalize, digitize and decriminalize Government to Business (G2B) and Citizen Interface.**
 - E.g., **Jan Vishwas (Amendment of Provisions) Act, 2023;** more than 42,000 compliances have been reduced and more than 3,800 provisions have been decriminalized.
- **Project Development Cells (PDCs):** An institutional mechanism in all concerned Ministries/ Departments to fast-track investments.
- **Technological interventions: National Single Window System (NSWS)** for simplified FDI approvals and **Foreign Investment Facilitation Portal (FIFP)** as an online single point interface to facilitate FDI.
- **State Investment Summits:** States like **Gujarat, Uttar Pradesh** etc. have organized **Global Investment Summits**, showcased economic potential and attracted FDI.
 - E.g., **Vibrant Gujarat Global Summit** has helped attract FDI worth USD 55 billion (2002-22).

Way Forward

- **Infrastructure and Skill Enhancement:** Strengthen competitiveness through multimodal connectivity, robust infrastructure (e.g., high-speed rail, expressways), and workforce upskilling in sunrise sectors like renewable energy, semiconductors, and EVs to attract FDIs.
- **Policy reforms for balanced inflow FDIs:** Formulation of separate rules and procedures for manufacturing and service Special Economic Zones (SEZs) to lay adequate emphasis on attracting FDI in manufacturing as well. (**Baba Kalyani Committee**)
- **Dispute resolution and contract enforcement:** Streamlining dispute resolution by setting up adequate number of arbitration and commercial courts.
 - **Strengthened contract enforcement** can also promote **legal certainty for foreign investors.**
- **Promote Tier-II and Tier-III cities:** Incentivize FDI in smaller cities and adopt **cluster-based development** (Bulk Drug Parks, Mega Food Parks, etc.) to attract sector-specific investments.
- **Bilateral Investment Treaties (BITs):** Strengthening and updating BITs can establish the terms and conditions for foreign investments and enhance investor confidence.

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

Weekly Focus #114- Investment Ecosystem in India



3.4. THE BANKING LAWS (AMENDMENT) BILL, 2024

Why in the News?

Recently, the Banking Laws (Amendment) Bill, 2024 was passed by the Lok Sabha which seeks to improve governance standards in India's Banking System.

More on the News

- The Bill proposes amendments to the **RBI Act, 1934; Banking Regulation Act, 1949; State Bank of India Act, 1955;** and the **Banking Companies (Acquisition and Transfer of Undertakings) Acts** of 1970 and 1980.
- **Key Provisions of the Bill**
 - **Definition of fortnight for cash reserves:** Fortnight for cash reserves redefined as either 1st to 15th or 16th to last day of each month, applicable to scheduled and non-scheduled banks.
 - **Substantial interest in a company:** Substantial interest threshold in a company raised from ₹5 lakh (or 10% of the paid-up capital of the company, whichever is less) to ₹2 crore, with revision possible via notification.
 - **Investor Education and Protection Fund (IEPF):** Enables transfer of unclaimed dividends, shares, and interest or redemption of bonds to IEPF when they remain unclaimed for **seven consecutive years**.
 - **Remuneration of Auditors:** Banks empowered to decide auditors' remuneration, replacing RBI-central government consultation.

Issues with the Governance of Banking System in India

- **Rise in Banking Frauds:** RBI's Report on Trend and Progress of Banking in India 2023-24 noted 18,461 frauds amounting to ₹21,367 crore.
 - Frauds pose risks including reputational, operational, and business risks, alongside customer confidence erosion and financial stability concerns. E.g., PNB Scam (2018).
- **Governance and autonomy of Public Sector Banks (PSBs):** PSBs face issues including lack of autonomy and inefficiencies in decision-making due to factors like government interference in board appointments and operational matters.
 - Also, there exists **duality of control over PSBs** from the **RBI** and the **banking division of the Union Ministry of Finance**.
 - Further, majority government stakes in PSBs results in **risk-aversion and delayed decision-making due to fear of 5Cs** (CAG, CBI, CVC, CIC, Courts).
- **Regulatory gaps and ambiguity:** Coexistence of multiple regulatory bodies like the RBI, SEBI, IRDAI, CCI, etc., creates overlaps and ambiguities.
 - Further, **cooperative banking sector** often suffers from weaker regulation due to dual control by RBI and state registrar of cooperatives resulting in sub-optimal regulatory control.
 - > **Closure of 17 cooperative banks** and a record number of license cancellations by RBI in 2023.
- **Structural issues:** Credit growth outpacing deposit growth due to shift in household savings from bank deposits to mutual funds, insurance, and pensions, leading to structural liquidity issues.
 - **Political considerations** in loan disbursement, debt waivers disrupting credit culture and balance sheets of banks, etc.
- **Cybersecurity and IT Risks:** Rising cyberattacks on banks and financial institutions necessitating enhanced IT governance and resilience.
 - **Digital Frauds:** Increase in social engineering attacks and misuse of mule accounts.

Recent measures taken to improve Banking Governance in India	
By the Union Government	By the RBI
<ul style="list-style-type: none"> • Reforms in PSBs: Consolidation of PSBs (merger of 10 PSBs into 4 in 2019) to improve scale, operational efficiency, and risk management; recapitalization of PSBs to Basel III norms, etc. • Legislative reforms: Amendments to the Banking Regulation Act, 1949 to empower RBI to supersede 	<ul style="list-style-type: none"> • Strengthened risk management framework: Risk-based Supervision, Asset Quality Review and Prompt Corrective Action Framework, Prudential Framework for Resolution of Stressed Assets Framework (2019) for time-bound resolution of NPAs, etc.

<p>boards in case of governance failures; implementation of IBC to streamline NPA resolution; etc.</p> <ul style="list-style-type: none"> • Reducing stress on Banks: Constitution of National Asset Reconstruction Company Ltd. (NARCL) and India Debt Resolution Company Ltd. (IDRCL) in 2021. 	<ul style="list-style-type: none"> • Regulatory reforms for Cooperative Banks: Enhanced RBI's regulatory control over cooperative banks under Banking Regulation (Amendment) Act, 2020; regulatory approval for umbrella organization for urban cooperatives, etc.
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Way Forward

- **Autonomy of PSBs:** Government can set up **Bank Investment Company** under the Companies Act, 2013 as a parent holding company to manage government stakes in PSBs. (P J Nayak Committee)
- **Performance-Based Incentives:** Align the compensation of bank executives with profits, fostering a results-driven approach focused on marketing, customer base expansion, and operational efficiency. (P J Nayak Committee)
- **Transparency and accountability:** Strengthen transparency in decision making and financial disclosure through real-time reporting of key financial metrics to the RBI and other stakeholders.
 - A robust whistleblower mechanism can be put in place to allow employees and stakeholders to report any suspicious activities or potential collusion without fear. (Narasimham Committee - II)
- **Regulatory coordination:** Simplify and streamline regulatory coordination by fostering collaboration RBI, SEBI, IRDAI, etc., for holistic and effective regulation of banking and finance sector in India. (Narasimham Committee – II)

3.5. PUBLIC-PRIVATE PARTNERSHIP (PPP) FRAMEWORK IN INDIA

Why in the News?

Benchmarking Infrastructure Development report released by **World Bank** analysing Public-Private Partnership (PPP) regulatory landscapes across 140 economies.

Key Highlights of the report

- **Public Fiscal Management System (PFMS):** Only 19 economies have adopted specific budgeting, reporting, and accounting provisions.
- **Lack of transparency:** Online publication of contract amendments was only carried out in 22 per cent of cases
- **Monitoring and Evaluation:** Only 37% of the economies require payments linked to performance.

About PPP and Various PPP Models in India

PPP is collaboration between governments and private companies **to provide public services or infrastructure.**

- **The Private Investment Unit** in the **Department of Economic Affairs** is responsible for policy-level matters concerning PPPs, including Policies, Schemes, programs, Model Concession Agreements, and Capacity Building in India.

Various PPP Models in India

- **Build Operate Transfer (BOT):** It is a model where the private entity receives a franchise **to finance, design, build and operate a facility (and to charge user fees)** for a specified period, after which ownership is transferred back to the public sector.
 - This type of arrangement involves **greatest level of private sector participation.**
- **Build Own Operate (BOO):** It is a model in which a private organization **builds, owns and operates a project or structure with some incentive from the government.**
 - Government may offer financial incentives such as **tax-exempt status.**
- **BOT-Annuity:** In this the government harnesses **private sector efficiencies through contracts based on availability/performance payments.**
 - The granting authority pays the **concessionaire annuities on scheduled dates** throughout the concession period.
- **Operations & Maintenance (Service Contract):** The government contracts a private entity for **specific services or maintenance of assets**, usually for shorter durations than concession contracts.

- **Engineering Procurement and Construction (EPC):** The private entity **manages construction, procurement and construction has no role in project management** and funded by government.
- **Hybrid Annuity Model (HAM):** It **combines EPC (40 per cent) and BOT-Annuity (60 percent)**. The government funds 40% of the project cost, while private developer secures the remaining 60%, often investing only 20-25% of the total cost, with the rest financed through debt.

Need of PPPs in India

- **Infrastructure Gaps:** India has major infrastructure deficits in transportation, energy, and urban development.
 - For example, **the Mumbai Coastal Road Project, developed under a PPP model**, aims to reduce traffic congestion and improve coastal access while attracting private investment.
- **Resource Mobilization:** The government often lacks enough funds for large projects. PPPs help **combine public and private financing**.
 - A 2023 RBI report highlights that many states **face fiscal deficits of over 3%**, limiting their infrastructure budgets.
- **Efficiency and Innovation:** Private sector involvement can enhance efficiency and innovation.
 - For instance, the Delhi International Airport uses advanced technology like **automated check-ins and improved baggage handling**.
- **Risk Sharing:** PPPs distribute risks between public and private entities, improving project sustainability.
- **Meeting SDGs:** PPPs are crucial for achieving Sustainable Development Goals (SDGs) in infrastructure.
 - SDGs directly linked to **social and economic infrastructure sectors**
- **Focus on Service Delivery:** Collaborating with the private sector allows the government to focus on regulation and oversight, enhancing service delivery.
 - For example, the redevelopment of railway stations, like Rani Kamalapati Station in Bhopal, is promoted through PPPs.

What are the challenges faced by PPPs in India?

- **Regulatory Issues:** According to the Ministry of Statistics and Programme Implementation (MoSPI), **449 infrastructure projects** faced **cost overruns totalling over Rs 5.01 lakh crore** due to **land acquisition issues, environmental clearance delays** etc. (In March 2024)
- **Financing Constraints:** High capital needs and perceived risks make securing financing difficult.
 - **For example**, the National Infrastructure Plan requires investment of INR 111 lakh crores over the next five years.
- **Long-Term Contract Issues:** Projects lasting 20-30 years can create "obsolescing bargains," where the private sector loses negotiating power due to economic or policy changes.
- **Dispute Resolution Mechanisms:** Lack of effective frameworks hampers project integrity and stakeholder commitment leading to cost overrun and delays.
- **Involvement of State-Owned Entities:** State-owned enterprises are often seen as government entities, discouraging their involvement in PPPs.

Government Steps to Boost PPP in India:



PPP Appraisal Committee: Recommended 77 central sector projects worth ₹2.4 lakh crore (FY15-FY24).



National Monetization Pipeline (NMP): Targets ₹6.0 lakh crore by monetising government assets (FY22-FY25).



Viability Gap Funding (VGF): Offers up to 40% of project costs as a capital grant to ensure viability.



Infrastructure Project Development Fund (IIPDF): Provides funding support for developing quality PPP projects.



Foreign Direct Investment (FDI): Permits up to 100% FDI in PPP sector SPVs on an automatic route for most sectors.

Way Forward to Improve PPP in India (According to Vijay Kelkar committee)

- **Service Delivery Focus:** Contracts should prioritize service delivery rather than just fiscal benefits.
- **Risk Management:** Assess risk management efficiency and cost-effectiveness with advanced modeling.
- **Expert Mechanisms:** Establish a PPP Project Review Committee and an Adjudication Tribunal to resolve complex issues and streamline projects awaiting clearances.
- **Legal Revisions:** Amend the **Prevention of Corruption Act, 1988** to distinguish between genuine errors in decision-making and acts of corruption.
 - Establish a PPP Institute and implement a **National Facilitation Committee** for timely project approvals.
- **Independent Regulation:** Establish independent regulators for various sectors, and enhance project development in roads and ports.

3.6. MOST-FAVOURED-NATION CLAUSE

Why in the News?

Starting **January 1, 2025**, **Switzerland** has suspended the **Most-Favoured-Nation (MFN)** clause in the **Double Taxation Avoidance Agreement (DTAA)** with **India**.

About Double Taxation Avoidance Agreement (DTAA)

- **About DTAA:** A treaty between **two or more countries** which ensures taxpayers (individuals or businesses) are not taxed on the same income.
 - India has signed DTAA's with over 90 countries, including major economies like the USA, UK, UAE, Singapore, and Mauritius.
- **How DTAA Works? Residence Country vs. Source Country**
 - **Residence Country:** This is the country where the taxpayer **lives or is based** (home country).
 - **Source Country:** This is the country where the **income is earned** (foreign country).
 - The DTAA ensures that the same income is not taxed twice—once in the **source country** (where it is earned) and again in the **residence country** (where the taxpayer lives).

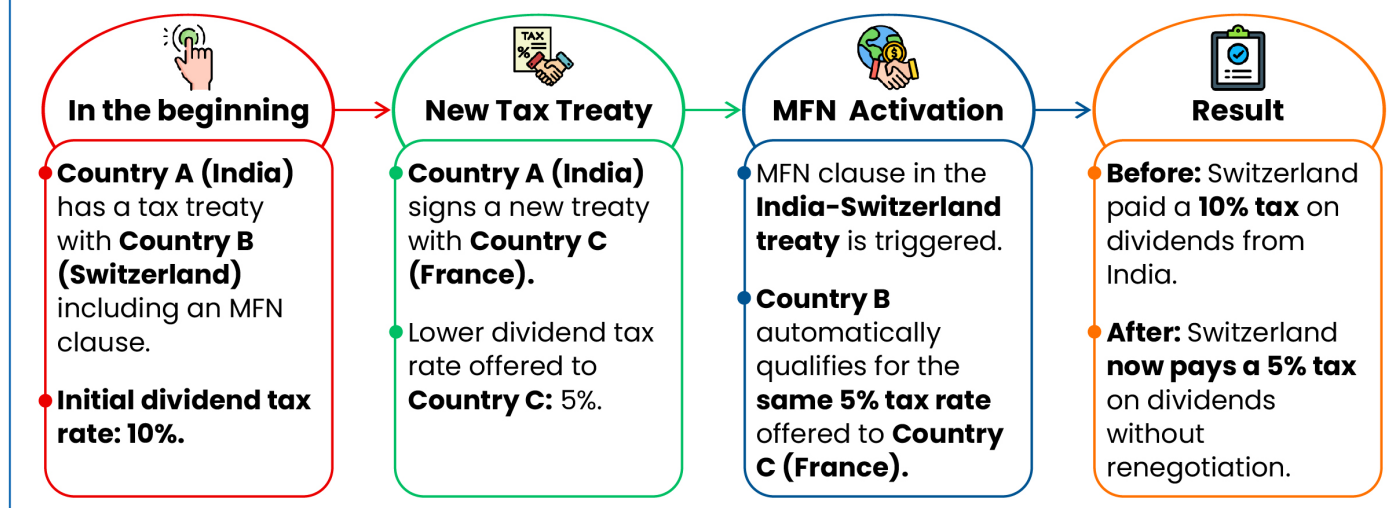
India-Switzerland DTAA MFN Issue

- India and Switzerland entered into DTAA **originally in 1994** and subsequently **amended in 2010**.
- **Nestle SA Judgment:** In 2023, the Supreme Court ruled on a case that affected the interpretation of the MFN clause in the India-Switzerland DTAA. **The ruling clarified the following:**
 - **The DTAA** (and therefore MFN clause within it) does not automatically grant the tax benefits that India extends to other countries with better tax rates.
 - **Instead, Double Taxation Avoidance Agreement (DTAA)** in order to be enforced has to be notified under **Section 90 of the Income Tax Act**.

MFN Clause in Double Taxation Avoidance Agreement (DTAA)

- **Definition:** The MFN clause within DTAA is a provision in tax treaties that ensures a country grants the same or better tax benefits to the other country as it provides to any of its other "most favored" treaty partners.
- If India offers a **better tax rate on dividends** or other income **to a third country (say France)**, **Switzerland** can also claim the **same favorable rate** for its taxpayers.
- **MFN Principle is also found within WTO Framework.**
 - **The DTAA MFN clause ensures equal tax benefits between treaty partners**, while the WTO MFN principle mandates equal trade treatment by extending any trade advantage granted to one WTO member to all others.
 - **WTO's MFN Principle:** It is codified in Article I of the **General Agreement on Tariffs and Trade (GATT)**, Article 2 of the **General Agreement on Trade in Services (GATS)**, and Article 4 of the Agreement on **Trade-Related Aspects of Intellectual Property Rights (TRIPS)**.

How the Most-Favoured-Nation (MFN) Clause Works?



Significance of DTAA in Global Tax Governance

- **Legal Certainty:** DTAA offers taxpayers clear guidelines on their tax duties, providing a sense of legal certainty and aiding in financial and business planning.
 - DTAA provides Mutual Agreement Procedures (MAP), e.g., resolving transfer pricing disputes between India and Japan.
- **Prevention of Fiscal Evasion:** These agreements help in curbing tax evasion by setting forth definitive tax compliance measures for cross-border income.
 - Certain DTAA includes anti-abuse clauses, e.g., India-Mauritius DTAA revised to prevent treaty shopping and round-tripping of funds.
- **Tax Savings:** By leveraging the DTAA, individuals and businesses can take advantage of the lower tax rates between the two countries, leading to tax savings.
- **Tax Refund Opportunities:** Companies operating internationally can receive tax refunds through DTAA when their home country offers reimbursement for taxes paid abroad, helping reduce the burden of double taxation.
- **Reduced TDS Rates:** The agreement also reduces TDS (Tax Deducted at Source) rates on dividends received in India. This can lead to significant savings, especially for those with substantial dividend income.

Do you know ?

- **Transfer pricing** is about how companies set prices when they buy and sell goods or services to their own branches in different countries. This matters because it affects how much tax they pay. If they set prices too low, they might pay less tax.
- **Treaty shopping** is the attempt to indirectly access the benefits of a tax treaty between two jurisdictions by a person who is not a resident of one of those jurisdictions, often through complex structures and arrangements.


Challenges in DTAA Architecture

- **Treaty Shopping and Abuse:** Companies exploit DTAA to reduce taxes by routing investments through countries with favorable treaties, even without substantial business operations.
 - **Example:** Mauritius was historically used by foreign investors to route funds into India to claim capital gains tax exemptions under the India-Mauritius DTAA.
- **Interpretation and Implementation Issues:** Differences in interpreting DTAA provisions between countries lead to disputes and double taxation.
- **Lack of Harmonization with Domestic Laws:** DTAA often conflict with domestic tax laws, creating confusion and compliance challenges.
 - **Example:** The recent 2023 Nestle issue between India-Switzerland.

- **Inadequate Dispute Resolution Mechanisms:** Delays and inefficiencies in resolving disputes under the Mutual Agreement Procedure (MAP) create uncertainty for taxpayers.
 - **MAP is an alternative available to taxpayers for resolving disputes** giving rise to double taxation whether juridical or economic in nature..

Conclusion

Switzerland's suspension of the MFN clause in the India-Switzerland DTAA reflects evolving global tax norms, emphasizing the need for clear treaty interpretations, compliance with domestic laws, and alignment with international tax standards.

India-Switzerland Relations: An Overview	
<ul style="list-style-type: none"> • Historical Ties: In 2023 Switzerland and India celebrated the 75th anniversary of the Treaty of Friendship signed between the two countries in 1948. • Economic Cooperation: India is Switzerland's 7th largest trading partner and Switzerland is 12th largest investor into India. <ul style="list-style-type: none"> ○ India is Switzerland's fourth-largest trading partner in Asia and the largest in South Asia. ○ Trade and Economic Partnership Agreement (TEPA): In March 2024, India and the European Free Trade Association (EFTA), which includes Switzerland, signed the TEPA. <ul style="list-style-type: none"> > This is the first comprehensive agreement concluded by India with European countries. > This agreement aims to reduce tariffs on nearly 95% of Swiss exports to India, covering products like chocolates, watches, and machinery. > The deal is expected to facilitate the creation of 1 million direct jobs in India over 15 years. • Cultural relations: Numerous Swiss artists and researchers had been actively engaged in the Indian subcontinent, notably Le Corbusier (architecture) and Alice Boner (painter, sculptor, art historian). 	

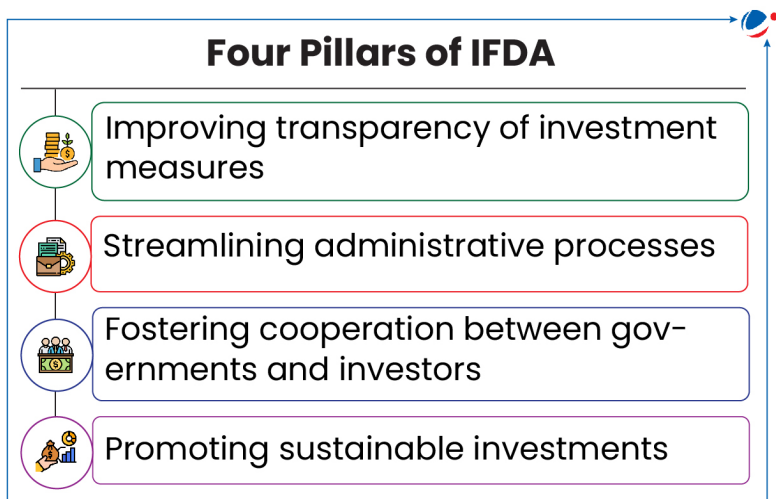
3.6.1. INVESTMENT FACILITATION FOR DEVELOPMENT AGREEMENT (IFDA)

Why in the News?

India and South Africa opposed the China-led IFDA proposal at the World Trade Organization (WTO).

About IFDA

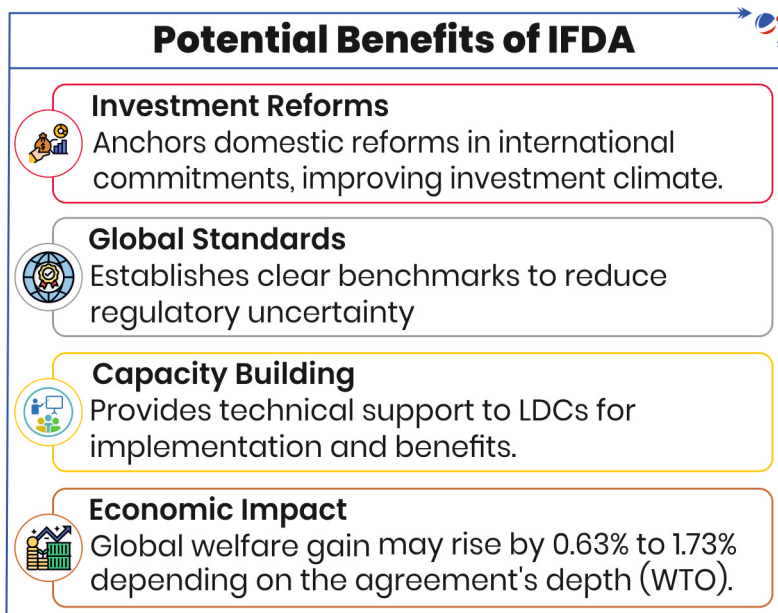
- **Genesis:** First mooted in 2017 by China and other developing and least-developed (LDCs) WTO member countries recognizing trade and investment as **twin engines of economic growth and sustainable development**.
- **Objective:** To create **legally binding provisions** to increase global **flows for Foreign Direct Investment (FDI)**, especially to developing economies and LDCs, to foster sustainable development.
- **Plurilateral agreement:** While the IFD Agreement will be plurilateral (binding only on those members that accept it), it is open for all WTO members to join.
 - Provisions for plurilateral agreements are **outlined in Annex 4** of the WTO Rule Book.



- **Based on Most-Favored-Nation (MFN) Principle:** “MFN” treatment requires Members to **accord the most favourable tariff and regulatory** treatment given to the product of any one Member at the time of import or export of “like products” **to all other Members. This is a founding principle of the WTO.**

Reasons for India's Opposition to IFDA

- **Jurisdictional and Structural Issues:** India maintains that Investment is not a trade issue and WTO lacks mandate over investment matters. Also, existing agreements (GATS and TRIMs) already cover trade-related investment aspects.
- **Opposition to Plurilateralism:** India views the plurilateral approach as a threat to WTO's multilateral foundation and also contradicts WTO's Doha Declaration requiring explicit consensus.
- **Chinese Leadership Issues:** Given China's history of debt-trap diplomacy and strategic investments through the Belt and Road Initiative, India sees potential risks in formalizing such investment frameworks.
- **Sovereignty Concerns:** Could boost foreign corporate lobbying and may put diplomatic pressure on weaker economies limiting national regulatory powers. Also, the agreement might prioritize foreign investors over domestic interests.



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Weekly Focus #87- Understanding India's Economic Diplomacy



3.7. MBRIDGE PROJECT

Why in the News?

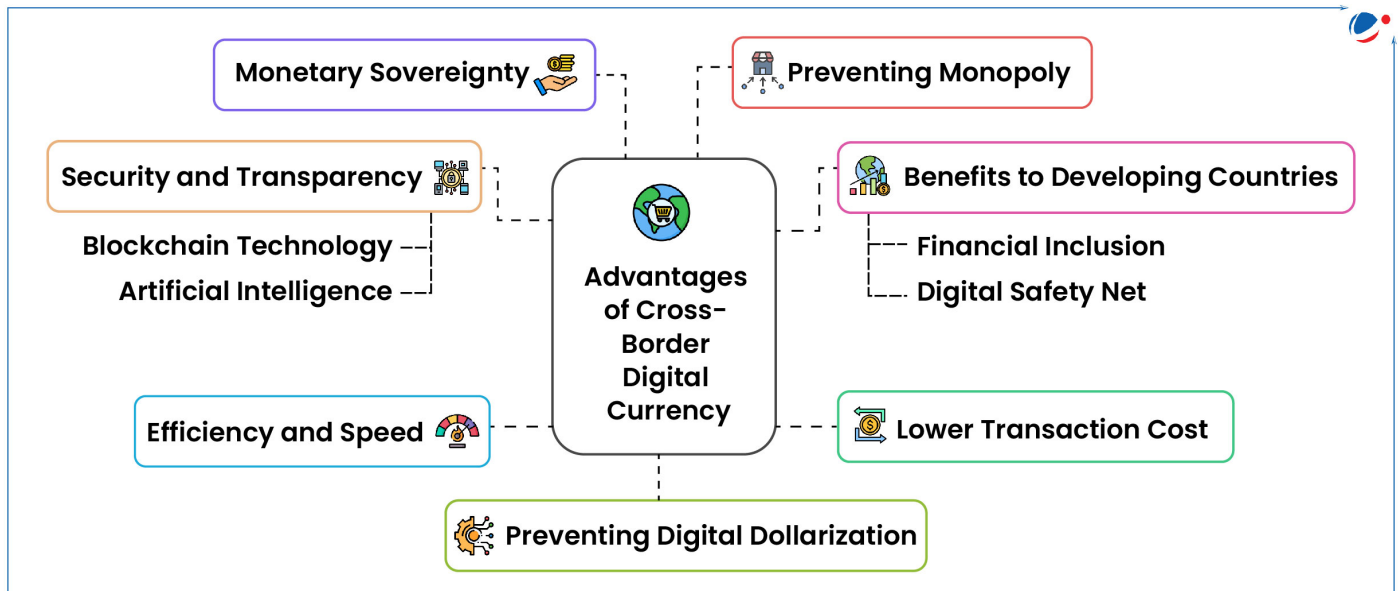
As per Bank for International Settlements (BIS), Project mBridge reached the minimum viable product (MVP) stage in mid-2024.

About Project mBridge

- **Launched in 2021**, mBridge is a **cross-border, decentralised, multiple central bank digital currency (mCBDC)** platform.
- A platform based on a new blockchain ‘**the mBridge Ledger**’ was also built to support real-time, peer-to-peer, cross-border payments and foreign exchange transactions.
 - It is built on **distributed ledger technology (DLT)**- a decentralized ledger network that uses the resources of many nodes to ensure data security and transparency.
- **Participants:** Initially led by the **BIS Innovation Hub**, in collaboration with the other **four central banks** of China, Thailand, the United Arab Emirates (UAE) and Hong Kong.
 - Saudi Central Bank joined in 2024.
 - There are more than **31 observing members** including **Reserve Bank of India**.


Know the terms

- **Central Bank Digital Currency (CBDC):** A **legal tender and a central bank liability in digital form** denominated in sovereign currency and appearing on central bank balance sheet. (RBI)
- **Legal tender:** Money issued by monetary authority and cannot be refused by any citizen of the country for settlement of any kind of transaction.




• **Significance of mCBDC:**

- **Lower Transaction Cost, Increased Efficiency and Transaction Speed.**
- **Enhanced Security and Transparency** through the use of Blockchain technology, AI.
- **Monetary Sovereignty, credibility,** and trust among countries.
- **Preventing Monopoly and Digital Dollarization** (replacement of other currencies by more influent one) etc.





BANK FOR INTERNATIONAL SETTLEMENTS

Bank for International Settlements (BIS)




Basel, Switzerland

 **Genesis:** Created in 1930 at the **Hague Conference**

 **Mandate:** Created in 1930 at the **Hague Conference**

- To support central banks' pursuit of monetary and financial stability through international cooperation
- Act as a bank for central banks.

 **Structure:** Owned by 63 central banks including **Reserve Bank of India**

Challenges associated with mCBDC

- **Global Acceptance and credibility** as BIS has announced backing out from project after involvement for about four years.
- **Regulatory Uncertainty** due to lack of a **coherent regulatory framework** across jurisdictions.
- **Volatility and Macroeconomic Stability** associated with digital currencies.
- **Security Concerns** regarding data breaches, Illegal uses such as money laundering, tax evasion or financing illegal activities, etc.
- **Risks of creating Parallel and unregulated structures** of transactions.

Similar Global Initiatives

- **BRICS Bridge:** Proposed payment system by BRICS nations.
- **Project Nexus:** Bank for International Settlements (BIS) initiative that aims to connect multiple domestic instant payment systems (IPS) globally.

Conclusion

mBridge represents a potential shift toward a more **multipolar global financial system**, where digital currencies backed by **local economies** can play a much larger role in international trade. mBridge promises to **enhance economic sovereignty** by giving countries more control over their financial transactions, mitigating the risk of sanctions or other forms of economic pressure but comes challenges.

3.8. RAILWAYS REFORMS

Why in the News?

Recently, the Railways (Amendment) Bill, 2024, has been passed in the Lok Sabha and Parliamentary Standing Committee on Railways released report on Railway Modernization and Financial Sustainability.

About Railways (Amendment) Bill, 2024

- **Simplified Legal Framework**
 - Repeals the **Indian Railway Board Act, 1905** and incorporates its provisions into the **Railways Act, 1989**.
 - > Indian Railway Board Act, 1905 constituted the **Railway Board as the central authority** to administer the Indian Railways.
 - Aims to avoid referencing two separate laws for railway administration.
- **Additional Power to Central Government on Constitution of Railway Board:** Central government will prescribe:
 - the number of members of the Board,
 - the qualifications, experience, terms and conditions of service, and
 - manner of appointment for the Chairman and members of the Board.

Data Bank

- **4th largest rail network** in the world with **>68,584 Km** route.
- **26% of the freight traffic in the country** is contributed by the Indian Railways.

The Railways (Amendment) Bill simplifies legal structures but retains the centralized framework, leaving many operational and financial challenges unaddressed. The recent Parliamentary Standing committee has also highlighted the need for Structural reforms crucial for improving efficiency, competitiveness, and service quality.

Key Highlights of the Report of Parliamentary Standing Committee

Parameters	Observations	Recommendations
Financial	<ul style="list-style-type: none"> • Most of the earnings of Indian Railways comes from its freight services. ○ In 2023-24, Indian Railways earned revenue of Rs 1,68,293 from freight and around Rs 70,000 was from passenger services • Low revenues from passenger segment results in very low net revenue 	<ul style="list-style-type: none"> • Make a comprehensive review of passenger fares in different trains and classes. <ul style="list-style-type: none"> ○ Review AC class fares by aligning it with costs incurred while keeping general class affordable. • Boost non-fare revenue to 20% by 2030 through advertising and commercial development.
Operational	<ul style="list-style-type: none"> • Average freight train speed has remained stagnant at 25 km/hr over past 11 years. 	<ul style="list-style-type: none"> • Creation and Expedition of new Dedicated Freight Corridors to increase speed, freight loading and earnings
Infrastructure and modernisation	<ul style="list-style-type: none"> • Investment <ul style="list-style-type: none"> ○ Increased capital expenditure (capex) mainly due to increase in Gross Budgetary Support. ○ Dependency on has reduced its dependence on Extra Budgetary Resources (EBR) for capex is reduced as 	<ul style="list-style-type: none"> • Investment: Boost private sector involvement in railway infrastructure and station redevelopment • Land acquisition: Consider policy changes to speed up land acquisition and ensure timely progress through

	<p>market borrowing increases financial liabilities due to debt servicing.</p> <ul style="list-style-type: none"> • Land acquisition: one of the primary factors contributing to delays in numerous projects is issues associated with land acquisition. • Road over Bridges (RoBs) & Road under Bridges (RuBs): Targets for RoB/RuB completion have not been met in the last three years. <ul style="list-style-type: none"> ○ Indian Railways has removed all unmanned level crossings and is replacing manned ones with RoBs and RuBs. 	<p>consistent engagement with state governments at higher levels.</p> <ul style="list-style-type: none"> • RoBs and RuBs: The Committee commends the new policy allowing Railways to fully fund stalled projects due to state inaction on cost-sharing, ensuring timely completion of pending works.
Research	<ul style="list-style-type: none"> • Low allocation and utilization of Railway Research Funds (E.g. budget estimates for railway research is merely 72 crore for 2024-25) 	<ul style="list-style-type: none"> • Increase scope of Research & Development to ensure modernisation and assimilation of latest technologies
Safety	<ul style="list-style-type: none"> • Slow expansion of KAVACH system with only 1,465 route km in South Central Railway and 80 route km in North Central Railway. 	<ul style="list-style-type: none"> • Ensure faster penetration of Kavach across Indian Railway Network.
Green Railways	<ul style="list-style-type: none"> • Indian Railways have set a target of making themselves Net Zero Carbon Emitter by 2030 • Electrification of railway lines, sourcing of energy requirements through renewable sources, water conservation, waste management etc. are key measure being taken in this spirit. 	<ul style="list-style-type: none"> • Incorporate 'Green Budgeting' methodologies in financial allocations. <ul style="list-style-type: none"> ○ Green budgeting refers to the use of budgetary policy-making tools to better understand environmental impact of spending choices, and ensure public budgets are aligned with climate and environmental objectives.

Conclusion

Although Indian railways has made considerable progress, it must embrace a strategic approach to modernize infrastructure by adopting advanced technologies, enhancing sustainability, and boosting operational efficiency to meet present and future requirements and meet global standards.

Amrit Bharat Station Scheme (2022) for development of railway stations and **National Rail Plan (2020)** to improve efficiency of freight transportation are steps in positive direction.

3.9. TOURISM SECTOR IN INDIA

Why in the News?

Recently, Union Ministry of Tourism has approved 40 Projects worth ₹ 3295.76 Crore for development of lesser-known Tourism sites in 23 States.

More on the News

- The initiative aims to **ease pressure on high-traffic sites**, promote **balanced tourist distribution**, enhance experiences, boost local economies, and ensure sustainable tourism growth by **enhancing tourism infrastructure in the country.**
- Projects are aligned with the Ministry of Tourism's guidelines for **Development of Iconic Tourist Centres to Global Scale** for developing Iconic Tourist Centres under

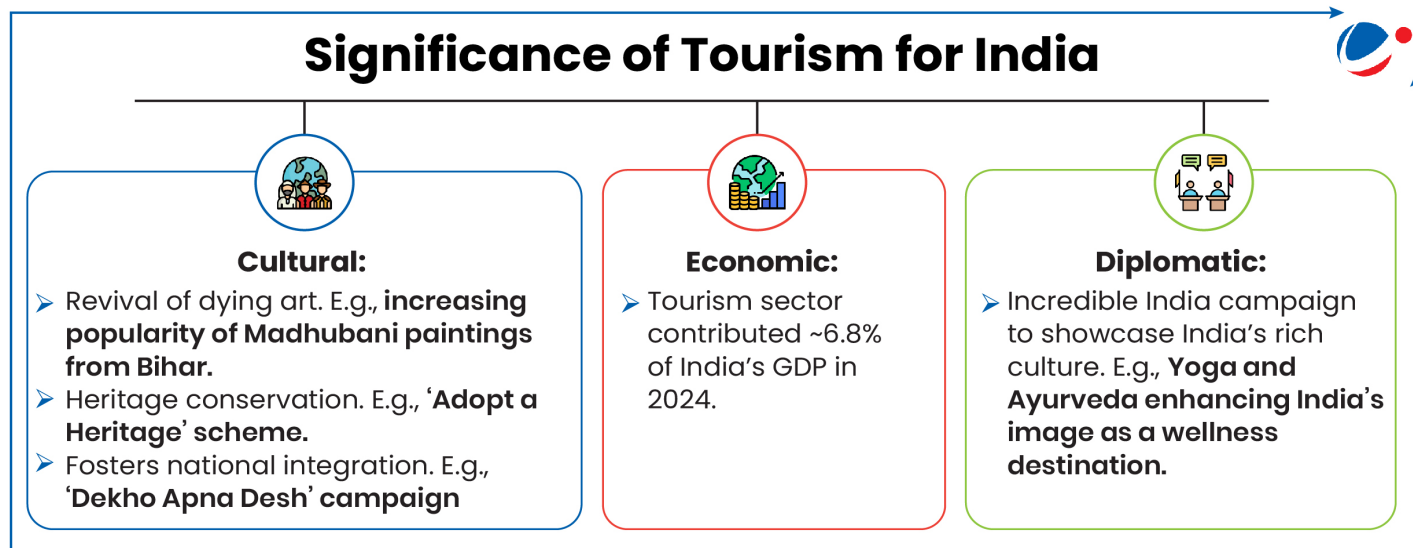
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Status of Tourism Sector in India

- **39th** India's rank in Travel and **Tourism Development Index 2024** published by **World Economic Forum.**
- **24** India's rank in International Tourist Arrivals in 2023. (**UN World Tourism Barometer**)
- **18.89 million International Tourist Arrivals** in India during 2023.
- **9.52 Million Foreign Tourist Arrivals (FTAs)** in India during 2023.

Special Assistance to States/Union Territories for Capital Investment (SASCI) Scheme of Department of Expenditure, Union Ministry of Finance.

- **SASCI Scheme**, first announced in the Union Budget 2020-21, provides **50-year interest-free loans to state governments for capital projects**, including developing iconic tourist centers and promoting them globally.



Challenges in Tourism Sector

- **Infrastructure bottlenecks:** **Inadequate** road, rail, and air connectivity to remote tourist destinations, sub-optimal availability of clean restrooms, drinking water, and signage at tourist sites, etc.
 - **E.g., 41% of stakeholders cite lack of infrastructure** as a key barrier to boosting tourist footfall in India. (Union Ministry of Tourism Assessment, 2023)
- **Safety and security concerns:** **Frequently reported incidents of harassment, theft, and scams targeting tourists; perceived risks to women's safety deter solo female travelers, especially international tourists; etc.**
- **Environmental degradation:** **Excessive and unregulated tourist footfall in eco-sensitive areas like Himalayan region** leads to habitat destruction, pollution, and strain on resources.
 - **Further, lack of proper waste disposal systems** in popular tourist destinations leads to degradation of watersheds and natural ecosystems. **E.g.,** Hill stations like Manali suffering from littering.
- **Seasonality of tourism:** High fluctuations in tourism activities in different seasons lead to various problem like overcrowding, lack of services, and sub-optimal utilization of facilities in off-seasons, affecting profitability.
 - **E.g., Char Dham Pilgrimage in Uttarakhand.**
- **Post-Pandemic Recovery Issues:** According to the **UN Tourism Barometer**, Asia and the Pacific reached only 85% of 2019 levels in international arrivals from January to September 2024.

Initiatives to promote Tourism in India

- **Infrastructure development:** **Swadesh Darshan 2.0** to develop sustainable and responsible tourism destinations, **PRASHAD Scheme** to develop infrastructure around pilgrimage sites, **RCS-UDAN** to boost regional connectivity, etc.
- **Policy and legal framework:** **National Tourism Policy** which focuses on sustainable and inclusive tourism growth, **E-Visa facility** for tourists under various categories, etc.
- **Niche tourism:** Promotion of traditional medicine for **medical and wellness tourism**, **Eco-tourism** in Sundarbans and Kaziranga National Parks, **Adventure Tourism** in Hill stations, etc.
- **Capacity building and training:** **Hunar Se Rozgar Tak**, launch of an online programme for **Linguistic Tourist Facilitators**, etc.
- **Campaigns:** **Incredible India Campaign**, **Dekho Apna Desh**, **Visit India Year 2023**, **Bharat Parv 2024**, **Travel for LiFE** for sustainable tourism, etc.
- **PPP: Adopt a Heritage Scheme**, **Luxury Trains** (Palace on Wheels, Deccan Odyssey, etc.) **operated via PPP model**, etc.

Way Forward

- **Enhancing connectivity and accessibility:** Promote transit-oriented development, make tourist destinations and cities walkable and cyclable, develop tourist-friendly amenities like multilingual signage, Wi-Fi zones, etc. to improve last-mile connectivity.
- **Promotion of Niche tourism:** Promote **farm stays and cultural tourism in rural areas** to empower local communities.
 - **Create wellness clusters** in states like Uttarakhand, Kerala, etc.; facilitate **single-window clearances for filming permissions** to global film industry, etc.
- **Sustainable tourism: Clear zoning of landscape** (Land Use Plan based on maps and stakeholder interests) to monitor and guide site specific interventions, if and when required.
 - **Environmental audit** of tourism service providers based on environment efficiency and carbon generation and certification.
 - **Pro-active monitoring and public reporting** of environmental, economic, social, and tourism strategies, milestones and issues in sync with SDG Targets and Indicators.
- **Leveraging technology:** Develop **AI-powered tourist platforms for personalized travel planning** and real-time assistance. E.g., **Integrating Augmented Reality for virtual walkthroughs of monuments.**
 - **Use IoT, Big Data, satellite-mapping**, etc., for better management of tourist flow, multi-hazard zonation, and optimal resource allocation.

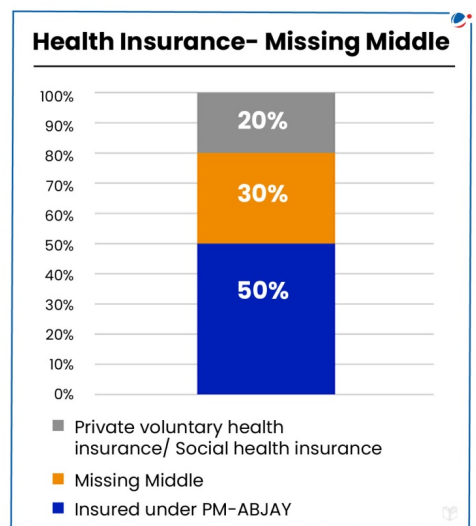
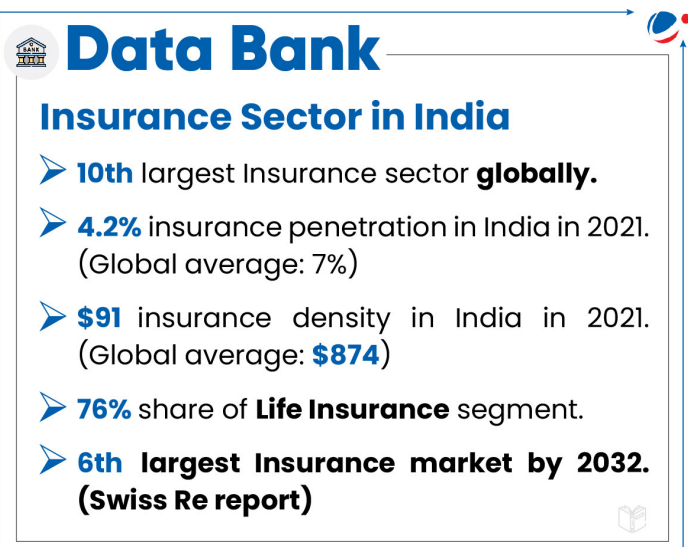
3.10. INSURANCE SECTOR IN INDIA

Why in the News?

The **Standing Committee on Finance** recently tabled an action taken **report** in the Parliament on observations and recommendations on the subject '**Performance Review and Regulation of Insurance Sector**'.

Key Observations by the Committee

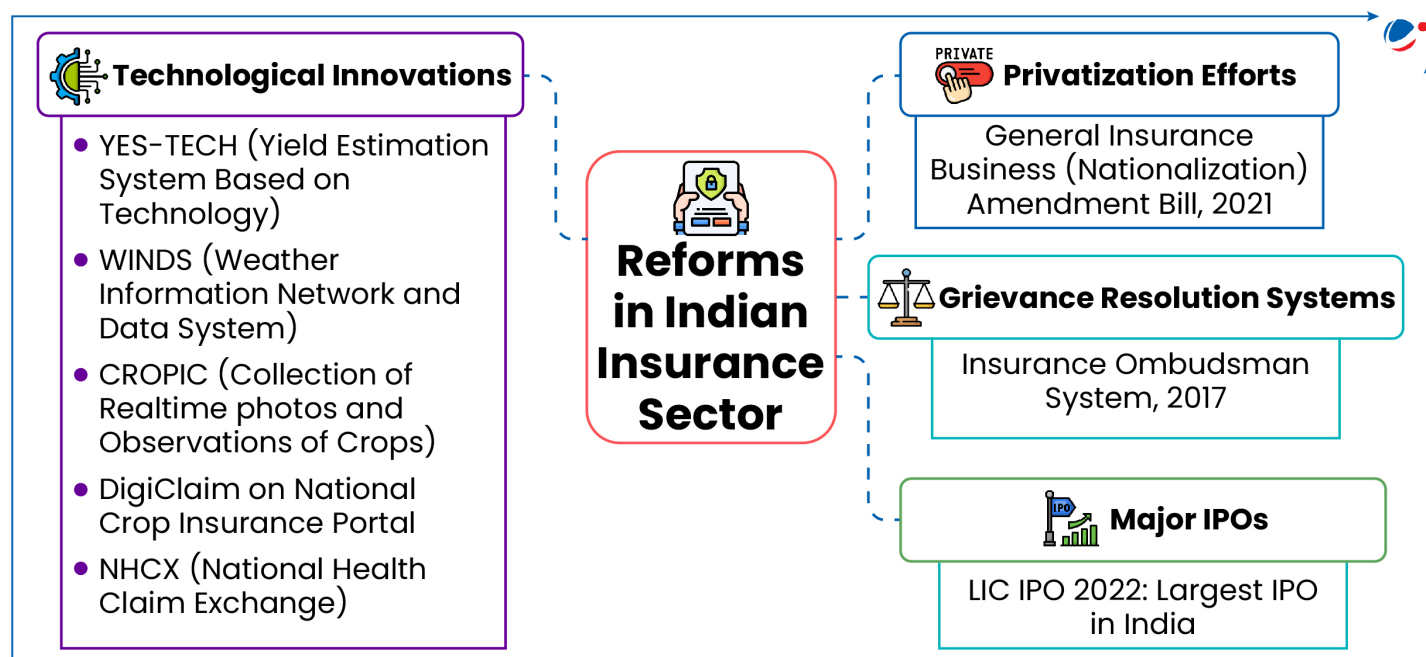
- **Government policies on insurance:** Imposition of **18% GST** and Tax Deducted at Source acts as a deterrent to improving insurance penetration.
 - **IRDAI** has **recommended exemption** from taxation in line with developed countries like **Canada and European Union**.
- **Public Sector Insurance Companies:** They face challenges of **inadequate capital, lack of level playing field** with private companies, **overexposure to health insurance** and lagging insolvency ratios (~₹ 26,000 crore financial losses).
 - E.g., **Public Companies** are mandated to **deduct TDS** on commissions, claims or bonuses paid to insurance agents and policyholders while **private companies are exempted**.
- **Increased private sector participation:** The **market share of private companies in the general and health insurance market** increased from 48.03% in FY20 to **62.5% in FY23**.
 - India allowed **private companies in insurance sector** in **2000**, setting a limit on FDI to **26%**, which was increased to **49% in 2014** and further increased to **74% in 2021**.
- **Missing Middle in Health Insurance:** A significant portion of the population **lacks adequate health insurance coverage**. (See infographic)
- **Microinsurance:** Challenges such as **high transaction costs**, lack of **awareness**, and the absence of a viable business model for intermediaries hinders growth of microinsurance.



- **Rising need for disaster coverage:** India ranks 3rd, after the US and China, in the **frequency of natural disasters since 1900** causing significant **infrastructure and economic damage**.
- **Repudiation/delay of large claims:** Due to the **competition**, some **private companies offer heavy discounts on premiums** leading to **inadequate fund for claim settlement**. This leads to insurance companies **deliberately avoiding claims settlement**.

Micro insurance

- **Micro insurance** is specifically intended for the protection of **low -income people**, with **affordable insurance products** to help them cope with and recover from financial losses.
- **IRDAI (Micro Insurance) Regulations, 2015** define the **eligibility criteria, product features, distribution channels, and reporting requirements for microinsurance**.
 - As per Regulations, the sum assured under an Insurance product offering Life or pension or Health benefits shall **not exceed Rs 200000**.
- **Challenges:** **Small ticket size** coupled with **high transaction and service delivery costs**, **absence of a business model** that can **attract intermediaries**, **capacity building** of intermediaries, and **lack of basic awareness and knowledge** on how insurance works.
- **Current micro-insurance products** include **PM Suraksha Bima Yojana, PM Jeevan Jyoti Bima Yojana, Pradhan Mantri Fasal Bima Yojana, Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, etc.**



Key Recommendations of the Committee

- **Promote Microinsurance:** **Developing new products** and **reducing the capital requirement** for smaller insurance companies to promote financial inclusion.
 - It proposes to amend the **Insurance Act, 1938**, to **remove the fixed capital requirement of Rs. 100 crore** and enable IRDAI to set capital requirements through regulations.
- **Composite Licensing:** **Allow composite licensing** for insurers to offer **both life and non-life insurance products** under one entity to **reduce costs** and improve customer **choice**.
- **Parametric Insurance in disaster-prone areas:** The government may provide insurance for **homes and properties**, particularly in **vulnerable areas** and among **economically weaker sections**.
 - E.g., **incentivize insurance programme with subsidized premiums for disaster-prone areas** like in **Florida (USA)**
- **Filling the Health Insurance gap:** Constituting a **multi-stakeholder Inter-Ministerial Working Group** for long-term planning, developing simple and **standardized products**, **sharing government data** and infrastructure, ensuring the



Know the term

Parametric Insurance

It is an **index-based insurance** that covers the **probability (or likelihood) of a loss-causing event** happening (like an earthquake) instead of indemnifying the **actual loss incurred** from the event.

➤ **Payment** is made upon **occurrence** of the event meeting or **exceeding a pre-defined intensity threshold** i.e., a **parameter**. E.g., magnitude of earthquake, wind speeds of a cyclone, etc.

quality of services, and **partial** financing of health insurance should be initiated to increase health insurance coverage.

- **Reduce GST for health insurance and microinsurance products:** GST rates applicable to health insurance products, particularly retail policies for **senior citizens and microinsurance policies (up to limits prescribed under PMJAY, presently Rs. 5 lakh)**, and term policies may be **reduced**.
- **Level Playing Field for Public Sector Companies:** **Policy Roadmap White Paper** be prepared with comprehensive **stakeholder consultation** for designing equitable insurance products.
- **Unclaimed Policies: Central Portal** for unclaimed policies in line with **UDGAM (Unclaimed Deposits: Gateway to Access information)** of RBI to improve processing of a significant number of unclaimed policies that are currently being transferred to the **Senior Citizen Fund**.
- **Capital availability:** The RBI on behalf of the Government may issue '**on-tap**' bonds of various maturities up to **50 years** as against the current maximum tenure of 40 years for investment by insurance companies.

The Insurance Regulatory and Development Authority India (IRDAI)

- **Statutory body** under the **Insurance Regulatory and Development Authority (IRDA) Act, 1999**.
- **Objectives:** Protecting the interests of the policyholders and regulating, promoting and ensuring orderly growth of the insurance industry in India.
- The **powers and functions** of the Authority are laid down in the **IRDA Act, 1999** and **Insurance Act, 1938**.
- **IRDAI is taking steps like Bima Sugam** (e-marketplace platform), **Bima Bharosa Grievance Redressal Portal**, **Bima Vahak** (a women-centric dedicated distribution channel) and **Bima Vistaar** amongst other to fulfil its vision of '**Insurance for All by 2047**'.

3.11. OILFIELDS (REGULATION AND DEVELOPMENT) AMENDMENT BILL, 2024

Why in the News?

Recently, the Oilfields (Regulation and Development) Amendment Bill, 2024 was passed in the Rajya Sabha to amend the **Oilfields (Regulation and Development) Act, 1948**.

More on the News

- The Bill seeks to **encourage domestic production of petroleum and mineral oils**, attract private investment in these sectors, and reduce import dependence to enhance energy self-reliance.
- **Key Provisions of the Bill**
 - **Expanded definition of mineral oils:** Expands 'mineral oils' to include hydrocarbons, coal bed methane, and shale gas/oil, excluding coal, lignite, and helium.
 - **Introduction of Petroleum lease:** It seeks to replace the **mining lease with a petroleum lease**, covering similar activities like exploration, prospecting, production, and disposal of mineral oils.



Data Bank



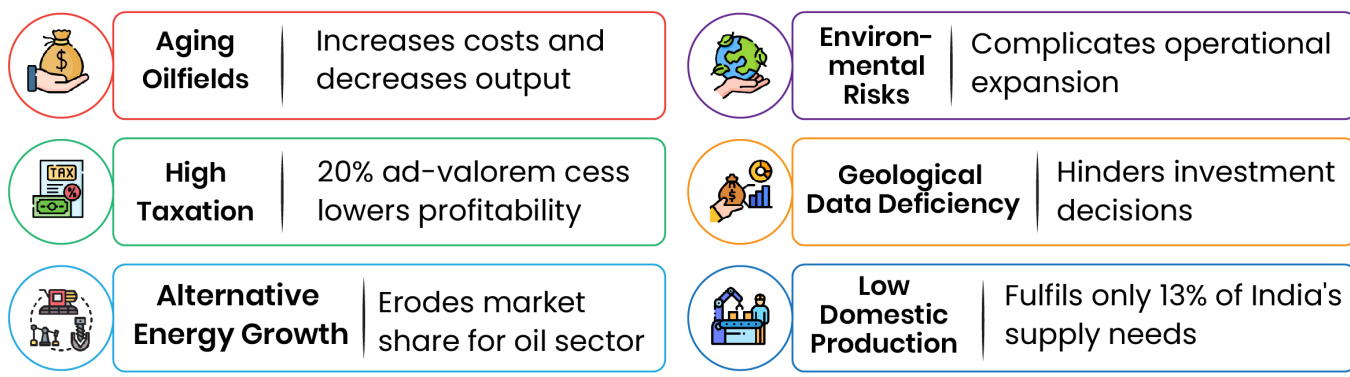
Domestic Oil and Natural Gas Sector in India

- **651.8 million Metric tons (MMT) of recoverable crude oil reserves** within India's sedimentary basins.
- **1,138.6 billion Cubic meters of recoverable natural gas reserves** within India's sedimentary basins.
- **1 million square kilometers** government's aim to expand exploration acreage by 2030.



- **Rule-making powers of Central Government:** Grants powers for merging petroleum leases, sharing production/ processing facilities, environmental protection and emission reduction, alternative dispute resolution mechanisms.
- **Decriminalization of offences:** Replaces imprisonment and minor fines with a penalty of ₹25 lakh for violations.
- **Adjudication of penalties:** Designates a Joint Secretary or above as Adjudicating Authority; appeals handled by Petroleum and Natural Gas Board Regulatory Board (PNGRB) Tribunal under the 2006 Act. PNGRB regulates refining, transport, storage, and sale of petroleum and natural gas.

Challenges in Domestic Oil Exploration and Production



How Will the Oilfields Amendment Bill Shape the Future of Oil Exploration?

- **Encourages domestic production and reduce import dependency:** Currently, India imports over 85% of its crude oil needs. Introduction of petroleum leases and the broadening of mineral oil definitions to include various hydrocarbons aim to boost domestic output and reduce imports.
- **Attracts private investment:** Includes provisions to foster private sector participation while protecting the rights of existing lessees.
- **Policy modernization:** Aligns regulatory provisions with contemporary energy needs and practices to enhance governance in the petroleum sector.
 - **Clear legislative demarcation:** Establishes a clear distinction between the Oilfields Act (for petroleum and mineral oils) and the Mines and Minerals Act (for other minerals).

To know more about offshore mining, refer to Article 3.8. Offshore Minerals in India in June 2024 Monthly Current Affairs Magazine.

3.12. NEWS IN SHORTS

3.12.1. 55TH GST COUNCIL MEETING

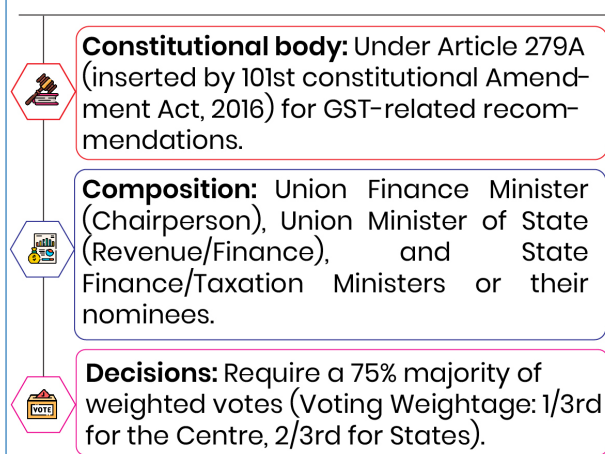
55th Goods and Services Tax (GST) Council meeting was held in Jaisalmer, Rajasthan.

- The meeting resulted in several significant decisions aimed at tax rate changes, trade facilitation, and compliance streamlining under GST.

Key-recommendations by GST Council

- Full exemption of GST on **gene therapy**.
- Exemption of GST on contributions by general insurance companies from **third-party motor vehicle premiums for Motor Vehicle Accident Fund**.
- Reduction in the GST rate on **Fortified Rice Kernel (FRK) to 5%**

About GST Council



- **Others**
 - **Pepper:** whether **fresh green or dried and raisins when supplied by an agriculturist is not liable to GST**
 - **Popcorn:** when popcorn is mixed with sugar (e.g. caramel popcorn), it would **attract 18% GST**.

3.12.2. ALL-INDIA HOUSE PRICE INDEX (HPI)

Reserve Bank of India released its quarterly House Price Index (HPI)

- **HPI: Increased by 4.3% year on year in quarter 2: 2024-25**, up from 3.3% in the previous quarter.
- **Bengaluru** saw the highest growth at 8.8%, while **Kanpur** experienced a decline of -2.0%.

About All-India Home Price Index (HPI)

- **Base:** 2010-11 = 100
- **Data Source:** Transaction-level data from registration authorities in 10 major cities.
- **Cities Covered:** Ahmedabad, Bengaluru, Chennai, Delhi, Jaipur, Kanpur, Kochi, Kolkata, Lucknow, Mumbai.

3.12.3. CONSUMER CONFIDENCE SURVEY (CCS)

Latest RBI survey shows weakened consumer confidence in India's economy, employment, and spending.

About CCS

- It is an economic indicator reflecting **optimism** or **pessimism** about the economy and personal finances.
- It gauges the economy's health from the **consumer's perspective**. **High confidence** typically leads to increased consumer spending.
- The **Reserve Bank of India (RBI)** measures it through a bi-monthly CCS.
- CCS responses are measured through two indexes:
 - **Current Situation Index (CSI):** Consumer sentiment about the economy, employment, and prices compared to a year ago.
 - **Future Expectation Index (FEI):** Expectations about the economy, employment, and prices a year ahead.

3.12.4. SFBS TO EXTEND CREDIT LINE THROUGH UPI

Reserve Bank of India (RBI) has recently decided to permit **Small Finance Banks (SFBS)** to **extend pre-sanctioned credit lines through Unified Payment Interface (UPI)**.

Credit Line through UPI by SFBS

- Under this facility, **payments through a pre-sanctioned credit line** issued by a Bank to individuals, with prior consent of the individual customer, **are enabled for transactions using UPI System**.
 - Previously, in **September 2023**, RBI allowed operations of **pre-sanctioned credit limits through UPI by Scheduled Commercial Bank** to individuals.
- **Significance:** Aims to deepen **financial inclusion** and **enhance formal credit**, particularly for **'new to credit' customers**.

About SFBS

- **Origin:** Announced in **Union Budget 2014-15**.
- **Objective:** To further financial inclusion by –
 - **provision of savings** vehicles primarily to **unserved and underserved sections of the population**, and
 - **supply of credit** to small business units; small and marginal farmers; micro and small industries; and other 47 focusing 47io sector entities, through **high technology-low cost operations**.
- **Registration:** As a **public limited company** under **Companies Act, 2013**.
- **Licensed under:** **Section 22 of Banking Regulation Act, 1949**.
- **Regulated by:** RBI.
- **Applicability of CRR and SLR:** Similar to CRR and SLR requirements for Scheduled Commercial Banks (SCBs).
- **Capital requirement:** Minimum paid-up voting equity capital of **₹200 crore** (except for such SFBS which are converted from Urban Cooperative Banks).

- **Priority Sector Lending (PSL) norms:** Required to extend **75% of its Adjusted Net Bank Credit (ANBC)** to the priority sectors, as classified by RBI.

3.12.5. UNIFIED PAYMENTS INTERFACE (UPI) LITE

RBI has revised transaction limits to ₹ 1,000 from ₹ 500 earlier for UPI Lite to encourage use of UPI.

- RBI also raised the total limit for offline transactions on UPI Lite to ₹ 5,000 from ₹ 2,000.

About UPI Lite

- It is a **payment solution** that leverages trusted NPCI Common Library application to **process low value transactions** without utilizing a Remitter bank's core banking systems in real-time, while **providing adequate risk mitigation**.
- With the consent of its UPI registered customer, an issuing bank can create an escrow on the customer's account up to a set limit.

3.12.6. INDEX OF EIGHT CORE INDUSTRIES (ICI)

The **Index of Eight Core Industries (ICI)** increased by 3.1% in October 2024 compared to October 2023.

About ICI

- The ICI measures combined & individual performance of production of **eight core industries** viz. Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement & Electricity.
 - The Eight Core Industries comprise **40.27 %** of the weight of items included in **Index of Industrial Production (IIP)**.
- **The Office of Economic Adviser**, Department for Promotion of Industry and Internal Trade (DPIIT), Union Ministry of Commerce is responsible for Compiling and releasing monthly ICI.

3.12.7. WORLD BANK RELEASED ANNUAL INTERNATIONAL DEBT REPORT (IDR) 2024

The IDR features external debt statistics and analysis for low- and middle-income countries (LMICs) that report to the **World Bank's Debtor Reporting System (DRS)**.

Key highlights

- **Rising External Debt:** Total external debt of LMICs rose by 2.4% in 2023, **reaching \$8.8 trillion**.
- **Factors Driving Indebtedness**
 - **High Interest Rates:** Tight monetary policies in high-income countries pushed interest rates to a 20-year high.
 - > **Bangladesh and India** experienced over **90% increases in interest payments in 2023**.
 - **Other Factors:** Inflation, depreciating currencies, and global economic uncertainty due to armed conflicts and trade fragmentation.
- **Impact of rising debt:** Budget strain impacted critical sectors like health, education, and environmental programs.

Way Ahead

To **promote sustainable and inclusive debt solutions**, the **UN Trade and Development** earlier proposed the following measures:

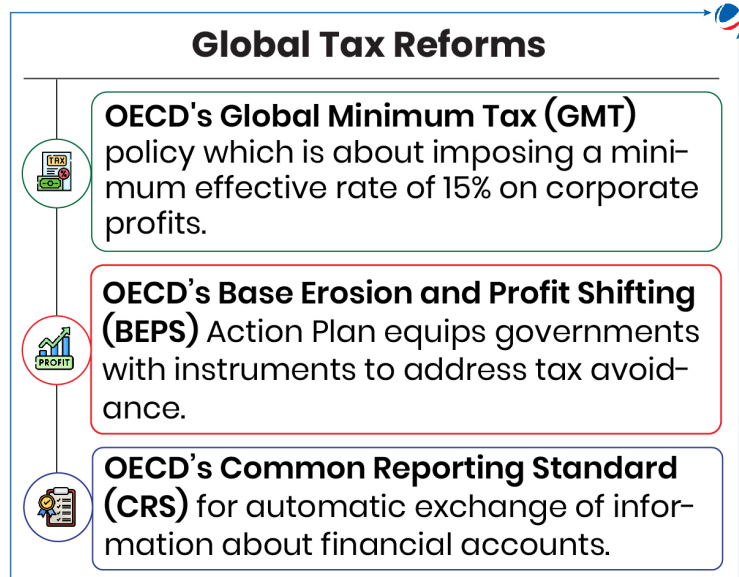
- **Global Financial Reforms:** Comprehensive reforms to prevent a widespread debt crisis and create an inclusive financial system.
- **Mitigating Predatory Lending:** Increase **concessional financing** and **reduce information asymmetry** (between lender and borrowers) and discourage exploitative lending practices.
- **Crisis Resilience:** Implement climate-resilient debt clauses and standstill rules to pause repayments during crises.
- **Improved Restructuring Mechanisms:** Establish **automatic restructuring rules** and a **Global Debt Authority** to guide and coordinate sovereign debt management.

3.12.8. TAX JUSTICE NETWORK RELEASED 'STATE OF TAX JUSTICE 2024' REPORT

Report highlights tax losses to global tax abuse and provides assessment of global tax reforms.

Key Observations of Report

- Countries are losing **US\$492 billion a year** to global tax abuse.
 - Out of this, **two-third (US\$347.6 billion) is lost to multinational corporations shifting profit offshore** to underpay tax.
 - Remaining one-third (US\$144.8 billion) is lost to **wealthy individuals hiding their wealth offshore**.
- **Nearly half the losses (43%)** are enabled by the eight countries (all OECD members) that remain opposed to a UN tax convention: Australia, Canada, Israel, Japan, New Zealand, South Korea, UK and US.
- Countries of **Global North lose largest amount of tax revenues** in absolute terms while countries of **Global South endure the deepest losses as a share of their tax revenues**.
 - Such tax loss results in **foregone public services, increased inequalities** between countries, and limited domestic businesses.



Policy recommendations

- Adopt a **UN tax convention**, which would establish **globally inclusive international tax rules**, combat cross-border tax evasion, and restore the potential for progressive national taxation.
 - A UN framework convention on international tax cooperation will be **negotiated from 2025-2027**.
- **Having excess profits and wealth taxes** as it can reduce economic inequality, limit monopoly power, and ensure that those who benefit most from society contribute proportionately to the social good.

3.12.9. GLOBAL WAGE REPORT RELEASED BY ILO

Global Wage Report (2024-25) by **International labour organization (ILO)** provides detailed look at wage trends across the globe highlighting changes in wage inequality and real wage growth.

Key Findings

- **Trends in wage growth**
 - **Global:** After falling in 2022, **global real wage growth recovered in 2023**.
 - **Regional:** Average wages are increasing faster in **Asia and the Pacific, Central and Western Asia, and Eastern Europe** compared to the rest of the world.
 - > Around 9.5% of the Indian workers are low paid wage workers
- **Trends in labour income inequality**
 - **Wage inequality:** Overall it has witnessed a declining trend globally.
 - > **However, it is highest in low-income countries and lowest in high-income countries.**
 - **Informal Economy:** Women and workers are overrepresented at the low end of the wage distribution.
 - > Moreover, **informal employment has increased in absolute terms** due to insufficient formal job creation
- **Labour Productivity (1999-2024):** It has increased more rapidly in high-income countries than real wages.

Way forward

- **Increased research:** Robust data and statistics should be used for measuring and estimating change in inequality.
- **National strategies to reduce wage inequality:** Wages should be set with consideration of economic factors as well as needs of workers and their families and should promote gender equality, equity and non-discrimination

- **Redistribution of Income through system of taxes and social transfers:** It should be followed with policies promoting productivity, decent work and the formalization of the informal economy.

3.12.10. WINDFALL TAX

Government abolishes windfall tax on crude oil, ATF, petrol, and diesel exports.

About Windfall Tax

- A windfall tax is a tax imposed **by governments on certain industries that experience significantly above the average profits** due to favorable economic conditions.
 - E.g., India imposed windfall tax on domestic crude oil production in July 2022, following a sharp rise in global crude oil prices.
- These taxes are **designed to capture a portion of these unexpected gains** to fund public projects, reduce deficits, or redistribute wealth.

3.12.11. ATMANIRBHAR CLEAN PLANT PROGRAMME (CPP)

Asian Development Bank (ADB) and India signed a \$98 million loan agreement for developing regulatory framework and institutional systems to effectively implement the CPP for horticulture.

About CPP

- **Genesis:** Approved under the **Mission for Integrated Development of Horticulture (MIDH)**.
 - MIDH is a **Centrally Sponsored Scheme** for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, etc.
- **Purpose:** Provide farmers access to virus-free, high-quality planting material, leading to increased crop yields.
- **Key Components**
 - 9 world class **state-of-the-art Clean Plant Centers (CPCs)** equipped with advanced diagnostic therapeutics and tissue culture labs.
 - **Certification Framework**, supported by a regulatory framework under the **Seeds Act 1966**.
 - Support for large-scale nurseries for the development of infrastructure.
- **Implementing Agencies:** Ministry of Agriculture and Farmers Welfare through the **National Horticulture Board (NHB)** and the **Indian Council of Agricultural Research**.
 - It will be **Implemented from 2024-30** with 50% assistance from ADB.

Other Key Initiatives for Horticulture Sector

- **Coordinated programme on Horticulture Assessment and Management using Geoinformatics (CHAMAN)**, develop and firm up scientific methodology for estimation of area and production under horticulture crops.
- **Kisan Rail services**, for transporting perishables including fruits and vegetables.
- **Capital Investment Subsidy Scheme** by NHB.

India's horticulture sector at a glance



Contributes about 33% of the gross value to the **agricultural GDP** and **covers 18%** of agricultural land.



Contributes over Rs. 4 lakh crore annually in agricultural exports.



India is the **second-largest producer** of vegetables and fruits in the world (Food and Agriculture Organisation (FAO))



Country ranks first in the production of a number of crops like Banana, Lime & Lemon, Papaya and Okra.

3.12.12. RBI INCREASES LIMIT FOR COLLATERAL-FREE AGRICULTURAL LOAN

The move aims to provide **enhanced financial access to farmers**, ensuring they have **sufficient resources** to meet their **operational and developmental needs** without the burden of providing collateral.

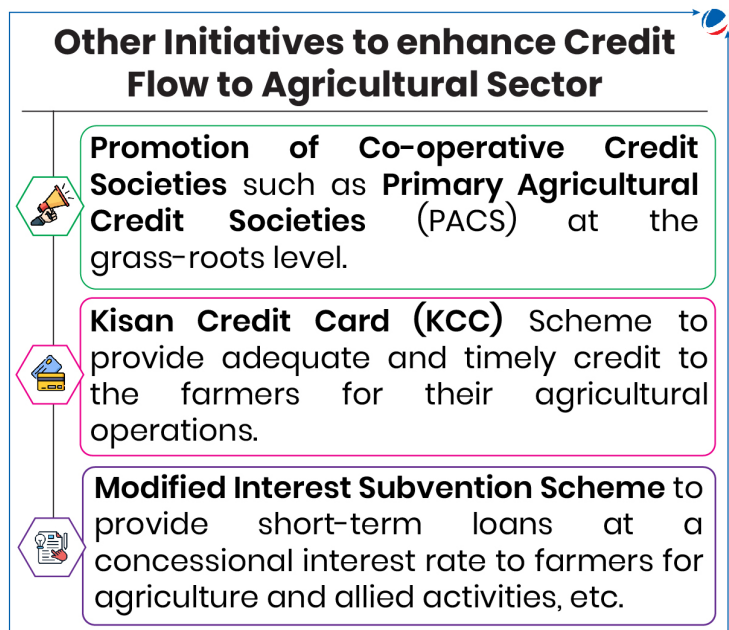
Key directives to banks include:

- Enhanced limit for collateral-free agricultural loans, **including loans for allied activities**, from the **existing loan limit of ₹1.6 lakh per borrower to ₹2 lakh**.
- **Timely implementation** (from January 01, 2025) of revised guidelines to ensure swift financial assistance.
- **Awareness campaigns** to inform farmers and stakeholders of the new directive.

Significance of the Enhanced Limit

- **Enhanced Credit Accessibility:** Increases access to loans, particularly for small and marginal farmers (over 86% of the sector).
- **Streamlined Loan Disbursement:** Simplifies the loan process, encouraging higher uptake of Kisan Credit Card (KCC) loans.
- **Promotion of Financial Inclusion:** Expands formal financial access to the rural farming community and fosters credit-driven economic growth, aligning with the government's long-term vision for sustainable agriculture.

Key issues in disbursement of Agricultural Credit: Skewed focus on short-term crop loans, rising fiscal burden due to loan waivers, over-reliance on non-institutional credit, etc.



3.12.13. CREDIT GUARANTEE SCHEME FOR E-NWR BASED PLEDGE FINANCING (CGS-NPF) LAUNCHED

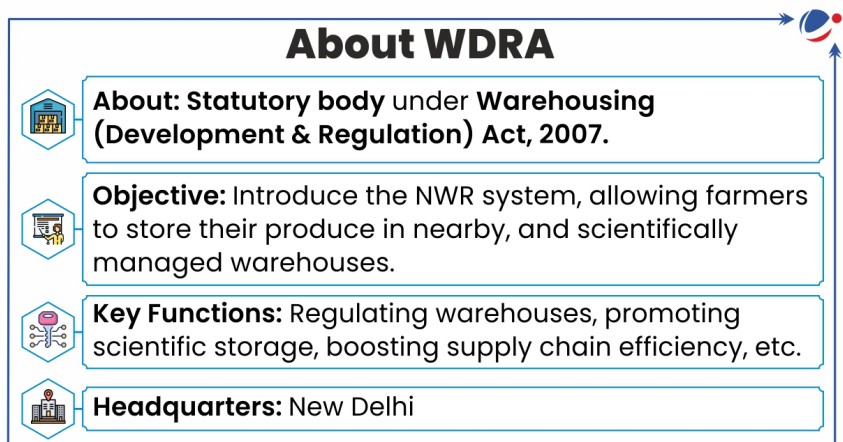
It allows farmers to **avail loans** against **electronic Negotiable Warehouse Receipts (e-NWRs)** after depositing their commodities in **Warehousing Development and Regulatory Authority (WDRA)** accredited warehouses.

About e-NWRs

- It is a **digital version** of the traditional warehouse receipt, governed by the **Warehousing (Development and Regulation) Act of 2007**.
- It allows goods deposited in a registered warehouse to be transferred or sold through endorsement.
- Since 2019, WDRA has made the issuance of **NWR mandatorily** in electronic form.

Key Features of the Scheme

- **Ministry:** Ministry of Consumer Affairs, Food & Public Distribution
- **Total Corpus:** **Rs 1,000-crore** for post-harvest finance
- **Coverage:** Loans up to Rs. 75 lakhs for agricultural purpose and up to Rs. 200 Lakhs for non-agricultural purpose.
- **Eligible Institutions:** All scheduled banks and cooperative banks.



- **Eligible Borrowers:** Small and marginal farmers, women, SC/ST/PwD farmers, MSMEs, traders, FPOs, and farmer cooperatives.
- **Risks Covered:** Credit and warehouseman risks.
- **Guarantee coverage:** 85% for loans up to Rs. 3 lakh and 80% for loan between 3 to 75 lakhs for small and marginal farmers/women/SC/ST/PwD.
 - 75% for other borrowers.

Significance of the Scheme

- **Minimise distress selling by farmers:** Ensuring availability and accessibility of finances for the targeted beneficiaries.
- **Instill confidence in bankers,** addressing the default arising out of both credit and warehouseman risk.

3.12.14. KISAN PEHCHAN PATRA

Centre has advised states to adopt a ‘**camp-mode approach**’ to facilitate inclusive, efficient, and rapid farmer registration.

About Kisan Pehchan Patra

- It is an **Aadhaar-linked unique digital identity** that is **linked dynamically to state’s land records**, besides having information e.g. demographic, crops sown and ownership details.
- ID will form the **core** of the ‘**Farmers Registry**’, one of the three registries under the ‘**Agri Stack**’.
 - Agri Stack is one of the components of the **Digital Agriculture Mission**, Other being Krishi Decision Support System
 - Agristack Consists of **3 databases: Farmers’ Registry, Geo-referenced Village Maps, and Crop Sown Registry.**

3.12.15. KISAN KAVACH

Scientists affiliated to the Department of Biotechnology (DBT) have developed an Indigenous ‘**anti-pesticide**’ suit called Kisan Kavach.

About Kisan Kavach

- Developed by **BRIC-inStem, Bangalore**, it is designed to protect farmers from the harmful effects of pesticide exposure.
- The kit consists of a **trouser, pullover, and a face-cover** made of ‘**oxime fabric**’.
 - Oxime fabric can **chemically breakdown any of the common pesticides that get sprayed onto cloth** or body during spraying operations

3.12.16. INITIATIVE FOR RESHAPING SUPPLY CHAINS OF FASHION AND CONSTRUCTION SECTORS

Recently, **India along with 7 other countries** launched a **new initiative** with respect to the fashion and construction industries.

About the Initiative

- It will be funded by **Global Environment Facility (GEF)-funded Integrated Programme on Eliminating Hazardous Chemicals from Supply Chains** launched for 6 years.
- **Members:** Cambodia, Costa Rica, Ecuador, India, Mongolia, Pakistan, Peru, and Trinidad and Tobago.
- **Objectives:** To transform **fashion (textile) and construction industries** to reduce their environmental impact by reshaping supply chains.
 - This effort will promote **regenerative design, the replacement of non-renewable materials, resource-efficient production, etc.**

3.12.17. SMILE PROGRAM

India and Asian Development Bank (ADB) recently signed a \$350 million policy-based loan under the second subprogram of SMILE (Strengthening Multimodal and Integrated Logistics Ecosystem) program.

About SMILE Program

- It is a **programmatic policy-based loan (PBL) by ADB** to support the government of India to undertake wide ranging reforms in the logistics sector.
- **Objective**
 - To **strengthen the institutional and policy framework** for inter-ministerial coordination and planning for **incentivizing private sector participation** in multimodal logistics projects (MMLPs)
 - To improve **efficiencies in external trade logistics** and encourage the **use of smart and automated systems** for improved service delivery.

3.12.18. NATIONAL LEGAL METROLOGY PORTAL (EMAAP)

Department of Consumer Affairs is developing eMaap to **integrate State Legal Metrology Departments and their portals into a unified National System.**

- Presently, State Governments are using their own portals for registration of packaged commodities, issue of licenses and verification/stamping of weighing & measuring instruments

About eMaap

- **Aim:** Streamline processes for issuing licenses, conducting verifications and managing enforcement and compliance.
- **Benefits:**
 - **Foster ease of doing business and Transparency in trade practices** by minimizing compliance burdens, reducing paperwork under Legal Metrology Act, 2009.
 - **Enables data-driven decision-making**, streamlines enforcement activities, and facilitates policy formation, ensuring a robust and efficient regulatory framework.

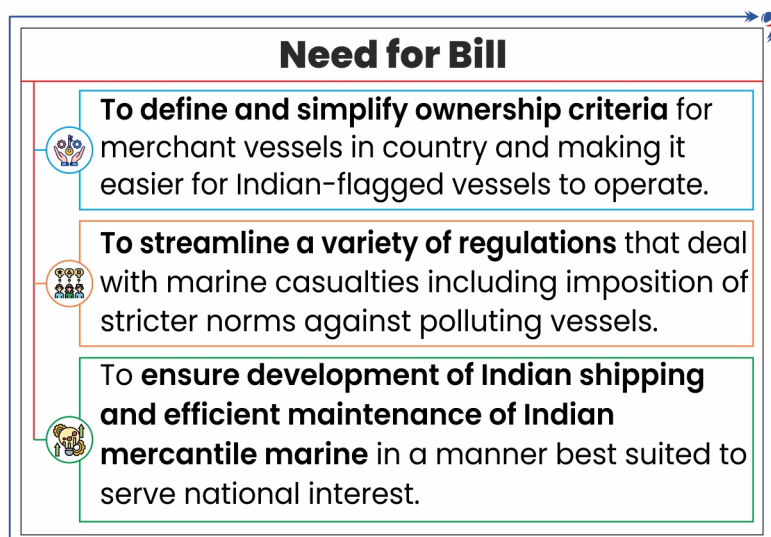
3.12.19. MERCHANT SHIPPING BILL, 2024

Ministry of Ports, Shipping and Waterways introduced Merchant Shipping Bill, 2024 in Lok Sabha.

- Bill seeks to **repeal Merchant Shipping Act, 1958.**
- Bill aims to **consolidate and amend law relating to merchant shipping** to ensure compliance with India's obligation under maritime treaties and international instruments to which India is a party.

Key Highlights of Bill

- **Establishment of National Shipping Board:** To advise Central Government on matters relating to Indian shipping.
 - It shall have **power to regulate its own procedure** for conduct of its business.
- **Maritime Administration:** Central Government appoint a person to be Director-General of Maritime Administration.
- **Registration of Vessels:** Ownership allowed by
 - **Citizen of India including Non-Resident Indian or an Overseas Citizen of India;**
 - **Company/ body established by any Central Act or State Act** having its registered office of business in India.



- **Transfer of Indian vessel or share:** No person shall transfer/acquire any Indian vessel at any time during which India's security or any part of territory is threatened by sanction, war or external aggression and proclamation of emergency.
- **Prevention and containment of pollution:** Every vessel shall comply with provisions of international conventions, as applicable, namely MARPOL Convention; Anti-Fouling Systems Convention; etc. to prevent pollution.

3.12.20. COASTAL SHIPPING BILL, 2024 INTRODUCED IN THE LOK SABHA

Bill's purpose is to **consolidate and amend laws governing coastal shipping (Uniformity in regulation)**, promote coastal trade, connectivity and encourage domestic participation.

- Coastal shipping in India holds great potential owing to its vast **coastline (~ 7,500 km)** and proximity to **important global shipping routes**.

Key Highlights of Bill

- **Prohibition of coasting trade:** Prohibition of trade in coastal water without license by vessels other than Indian vessels.
 - **Permitting Inland vessels** to engage in coastal trading.
- **National Coastal and Inland Shipping Strategic Plan:** For development, growth and promotion of coastal shipping.
- **National Database of Coastal Shipping:** To ensure transparency of procedures and aid in information sharing.
- **Licensing of chartered vessels:** Empower the **Director-General** to issue a license after taking into consideration certain factors including **citizenship of crew** and **building requirements of vessel**.
 - No license granted shall be suspended, revoked or modified, unless the license has been given a **reasonable opportunity** of being heard.
- **Other Provisions:** Provision for **compounding of certain offences and imposition of penalty by the principal officer**; and provision for empowering the Director-General to call for information in respect of certain matters.

About Coastal Shipping Industry in India:



Refers to **movement of goods and passengers along coastlines** within territorial waters, extending up to 12 nautical miles from baseline.



Regulation of Coastal Shipping: The Directorate General of Shipping regulates coastal activities, guided by Coastal Regulation Zone norms.



India's cabotage policy: restricts operation of foreign-flagged vessels for transporting goods within country's territorial waters.



Tariffs and charges: Tariff Authority for Major Ports (TAMP) regulates tariffs and charges for services provided by major ports involved in coastal shipping.

3.12.21. 'JALVAHAK' SCHEME TO BOOST INLAND WATERWAYS

Union Government unveiled 'Jalvahak' Scheme which aims to encourage business enterprises with safe and timely delivery of cargo through inland waterways, in a cost effective manner.

Scheme aims to incentivize cargo movement via inland waterways, promoting sustainable and cost-effective transportation across **National Waterways (NW)-1, NW-2, and NW-16**.

About the Jalvahak scheme

- **Ministry:** Union Ministry of Ports, Shipping & Waterways.
 - To be **jointly implemented by the Inland Waterways Authority of India (IWAI)** and **Inland & Coastal Shipping Ltd (ICSL)**, a subsidiary of the Shipping Corporation of India.
- **Aim:** Schemes aim at Incentivizing Modal Shift of 800 Million Tonnes KMs with an investment of ₹95.4 crores.

- **Time frame:** Valid for an initial period of 3 years.
- **Route:** Fixed Day Scheduled Sailing Service will ply vessels between **Kolkata – Patna – Varanasi – Patna – Kolkata stretch of National Waterways (NW)-1**, between **Kolkata and Pandu in Guwahati on NW 2**, and **NW 16 via Indo Bangladesh Protocol Route (IBPR)**.
- **Incentive:** Offers **reimbursement upto 35% of total operating expenditure** incurred while transporting cargo.
- **Criteria:** Provides **direct incentive** to transport their **goods** via inland waterways for a distance of **more than 300 km**.
- **Significance:** Reduced logistics costs, decongestion of road and railways, and adapting to a sustainable mode of transportation.

Inland Waterways in India

National Waterways: To promote Inland Water Transport, 111 waterways were declared National Waterways under the National Waterways Act, 2016, including NW-1 (Haldia-Allahabad), NW-2 (Dhubri-Sadiya), and NW-16 (Barak River).

Institutional Structure: Inland Waterways Authority of India (IWAI) established through **IWAI Act, 1985** is responsible for the regulation and development of National Waterways in India.

3.12.22. NETWORK READINESS INDEX (NRI) 2024

The 2024 edition of the Network Readiness Index (NRI) has officially launched.

- The theme of this year is “**Building a Digital Tomorrow: Public-Private Investments and Global Collaboration for Digital Readiness.**”
- India climbed 11 ranks, securing the **49th position in NRI 2024**.
- **The report maps the network-based readiness landscape** of 133 economies based on their performances in four different pillars: **Technology, People, Governance, and Impact**.
- It is co-published by **Portulans Institute and Saïd Business School, University of Oxford**.

3.12.23. FIRST EVER AUCTION OF MINERALS IN OFFSHORE AREAS

Ministry of Mines Launched first ever tranche of auction of mineral blocks in offshore areas

- It is a major step forward in exploring India’s extensive **offshore mineral resources** within its **Exclusive Economic Zone (EEZ)**.

Key Details of the Offshore Mining Auction

- **Mineral Blocks:** Auction includes 13 mineral blocks spanning across the **Arabian Sea and Andaman Sea**.
- **Types of Mineral and corresponding Region:** Construction sand (**Off the coast of Kerala, Arabian Sea**), lime-mud (**Off the coast of Gujarat, Arabian Sea**) and polymetallic nodules and crusts (**Off Great Nicobar Islands, Andaman Sea**).

Offshore Mining or Deep Sea Mining

- It is the process of **retrieving mineral deposits from the deep seabed**, at a depth of more than 200 meters.
 - **Geological Survey of India (GSI)** has identified about **six lakh sq. kms of offshore area** having potential for offshore mining.

Step Taken for Offshore Mining

National Geological Data Repository (NGDR) portal: by GSI covering exploration data.

Deep Ocean Mission: To explore and extract polymetallic nodules.



Offshore Areas (Existence of Mineral Resources) Rules, 2024: defines the stages of exploration, classification of mineral resources and reserves etc

Significance of Offshore Mining for India

- India's offshore mineral reserves **include gold, diamond, copper, nickel, cobalt, copper, manganese, and rare earth elements** essential for development.
- Offshore mining will **increase availability of minerals (Atmanirbharta in critical minerals), unlock India's blue economy and reduce dependence** on imports.
- These minerals are critical for **infrastructure development, high-tech manufacturing and green energy transition.**

Challenges in Offshore Mining

- Lack of private participation, requirement of highly skilled labour and capital, environmental challenges like habitat destruction, disruption of marine ecosystems etc.

 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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4. SECURITY

4.1. NATIONAL INVESTIGATION AGENCY (NIA)

Why in the news?

Supreme Court in *Ankush Vipran Kapoor vs. NIA* clarified that the powers of the agency are not restricted to probing offences mentioned in the schedule of the NIA Act or accused committing such “scheduled offences”.

More on the news

- This ruling came while **upholding the Punjab & Haryana High Court's decision** to cancel bail granted to an accused in a case involving the smuggling of heroin from Pakistan into India.
- In the case, offences under the **Narcotic Drugs and Psychotropic Substances Act (NDPS Act)**, which are not scheduled offences, were involved.
- The case involved connections to **drug trafficking, hawala channels, and links to terrorism funding.**

Supreme Court Ruling

- The Apex court ruled **in favor of the NIA's authority to investigate non-scheduled offences linked to scheduled offences.**
- SC interpreted **Section 8 of the NIA Act in holistic view.**
 - **Section 8 of NIA Act:** While investigating any Scheduled Offence, the Agency may also investigate any other offence which the accused is alleged to have committed if the offence is connected with the Scheduled Offence.
- NIA can **investigate another accused, although not being investigated for any scheduled offence** on following condition
 - **Opinion of NIA:** It believe **any other accused who has alleged to have committed an offence** having a connection with the scheduled offence has also to be investigated.
 - **Central Government Approval:** The **NIA must report its opinion to the central government**, who can authorize the investigation.
 - **Joint Investigation:** Investigation of any other accused must be carried out jointly as far as practicable with the investigation of the accused already under progress owing to the connection between the scheduled offence.

Schedule of Offences Under the NIA Act

The NIA investigates offences under the following laws:

1. The Explosive Substances Act, 1908.
- 1A. Atomic Energy Act, 1962.
2. Unlawful Activities (Prevention) Act, 1967.
3. Anti-Hijacking Act, 2016.
4. Suppression of Unlawful Acts against Safety of Civil Aviation Act, 1982.
5. Suppression of Unlawful Acts against Safety of Maritime Navigation and Fixed Platforms on continental shelf Act, 2002
6. Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005
7. The SAARC Convention (Suppression of Terrorism) Act, 1993
8. Offences under—
 - (a) Chapter VI of the Indian Penal Code.
 - (b) Sections 370 and 370A of Chapter XVI of the Indian Penal Code.
 - (c) Sections 489-A to 489-E (both inclusive) of the Indian Penal Code.
 - (d) Sub-section (1AA) of section 25 of Chapter V of the Arms Act, 1959.
 - (e) Section 66F of Chapter XI of the Information Technology Act, 2000.

About National Investigation Agency (NIA)

- Establishment: Under the **National Investigation Agency Act, 2008**, which was enacted in the aftermath of the **26/11 Mumbai terror attacks.**

- **Objective:** To investigate and prosecute offences that **threatens India's sovereignty, security, and integrity**, friendly relations with foreign States, matters relating to international treaties etc
- **Schedule of Offences:** The Act includes **a schedule of laws under which the NIA can investigate** and prosecute offences (given in the box above).
- **Headquarters:** New Delhi with 2 Zonal offices at Guwahati & Jammu.
- **Headed by: Director-General (DG)**, who is a senior Indian Police Service (IPS) officer.
- **Jurisdiction:** It extends to the **whole of India** and it applies also
 - To citizens of India outside India.
 - To persons in the service of the Government wherever they may be.
 - To persons on ships and aircrafts registered in India wherever they may be, and
 - To persons who commit a Scheduled Offence beyond India against the Indian citizen or affecting the interest of India.
- **Powers of NIA:**
 - **Investigation:** Central Government can direct NIA to investigate when it is of the opinion that a Scheduled Offence has been committed.
 - **Prosecution:** The NIA can prosecute cases in specially designated NIA courts.
 - **Coordination with State Police:** It collaborates with state law enforcement agencies during investigations.
 - **Extraterritorial Operations:** The agency can investigate and prosecute offences committed outside India, subject to international cooperation agreements.
- **Conviction rate:** NIA has registered 640 cases from inception in which judgment has been pronounced in 147 cases with a conviction rate of 95.23%.

Initiatives taken to enhance the capacity of NIA



- **National Terror Data Fusion & Analysis Centre (NTDFAC)** has been established for enabling of Big Data Analytics and facilitating the automation and digitization.
- **NIA Amendment act, 2019** has enlarged its mandate
- It has been made **Nodal Agency at Central level** for investigation of Terror Funding and Fake Indian Currency Notes cases.
- MoU between **NIA and NFSU (National Forensic Science University)** for capacity building of NIA officers in the field of forensic expertise.

Conclusion

As the NIA evolves, its capacity to adapt to new challenges and coordinate with state and foreign organizations will be critical to effectively countering organized crime and terrorism.

4.2. UNITED NATIONS CONVENTION ON CYBERCRIME

Why in the News?

Recently, UN General Assembly adopted landmark United Nations Convention on Cybercrime.

More on the News

- It is the **first legally binding UN instrument on cybercrime**.
- The convention has been **adopted by 193 UN Member States by consensus**.
- The convention will **open for signature in Hanoi, Vietnam in 2025**, with the United Nations Office on Drugs and Crime (**UNODC**) serving as **secretariat**.
- It will take effect after **40 states become parties to the agreement**.

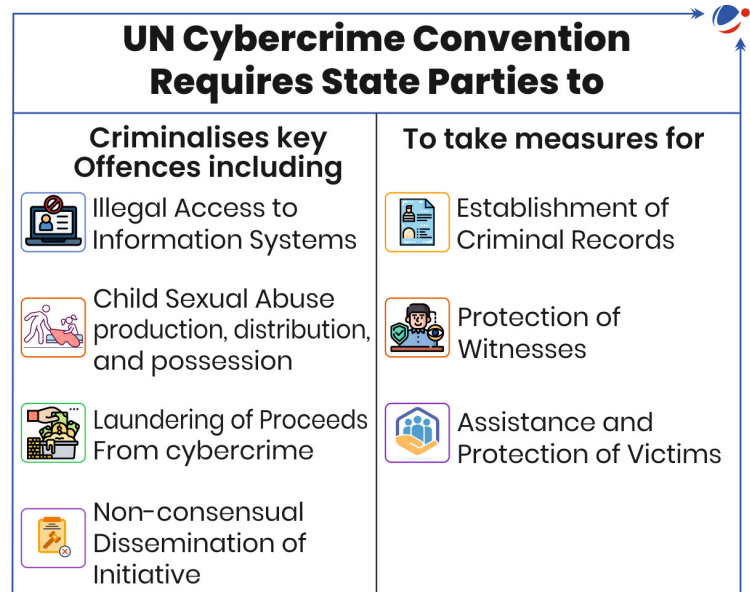
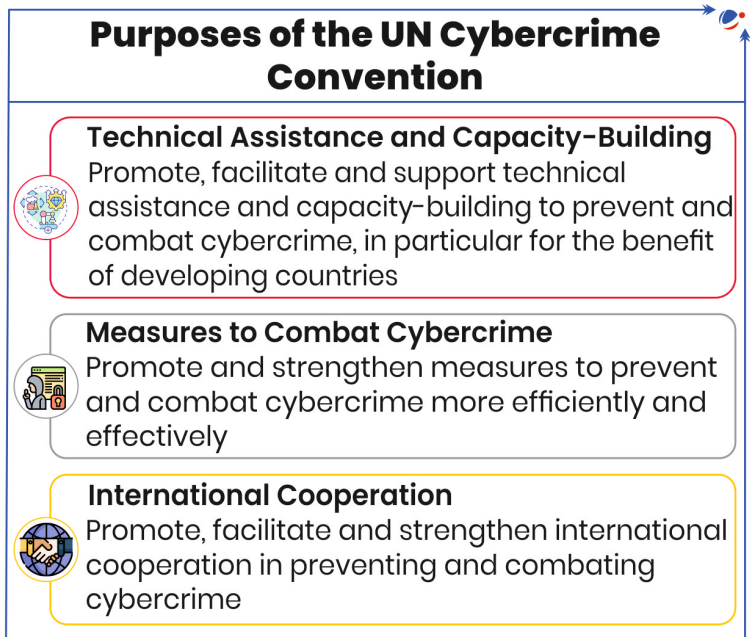
- **Scope of Application**
 - Focuses on preventing, investigating, and prosecuting cybercrimes, including **freezing, confiscating and returning crime proceeds**.
 - Involves **collecting and sharing electronic evidence** for criminal investigations.

Key Provisions of the Convention

- **International Cooperation & Data Sharing:** It includes **mutual legal assistance, extradition and establishment of a 24/7 network** for immediate assistance, cooperation for the purpose of confiscation etc.
- **Procedural Measures:** Sets guidelines for law enforcement, including preserving, searching, and seizing electronic data.
- **Protection of personal data:** Data transfer must comply with applicable domestic privacy laws and include safeguards. Also, convention encourages bilateral or multilateral agreements to ease data sharing.
- **Protection of Human Rights:** It ensures human rights and freedoms are upheld during implementation.
- **Other provisions:** Provisions for extradition, Transfer of sentenced persons, Transfer of criminal proceedings, Joint investigations.

Why the Convention against Cybercrime matters?

- **Increased Connectivity and associated Vulnerability:** With over 67% of the global population now online (World Bank), cybercrime risks are widespread.
 - Southeast Asia has emerged as a **“ground zero”** for **organized cybercrime**, with sophisticated operations threatening economies and infrastructure.
 - The **threat is escalating, undermining economies, disrupting critical infrastructure, and eroding trust in digital systems**.
- **Around-the-Clock Cooperation:** Transnational crime investigations rely on **electronic evidence**, which is often decentralized and spread across jurisdictions.
 - **Quick access is crucial to prevent tampering or deletion.** The Convention establishes frameworks for accessing and sharing electronic evidence to support investigations and prosecutions.
- **Transnational Nature of Cybercrime:** Cybercrimes often involves **cross- border transactions and targeting** wherein criminals operate from one country while targeting victims in another.
 - Thus, handling transnational and focusing crime **requires a coordinated global law enforcement response** to dismantle their networks and prevent the spread of their activities.
- **Adapting to Rapid Technological Advancements:** Technologies like AI and 3D printing pose dual-use risks, outpacing policymakers’ ability to adapt (UNIDIR).
 - **EXAMPLE:** While the 1880s electric grid took 50 years to reach 100 million homes, ChatGPT achieved this in just two months (2022).
- **Protecting children:** Online platforms such as social media, chat apps and games offer anonymity that predators can exploit to **groom, manipulate, or harm children**.



- By focusing on these offenses, the **Convention equips governments with stronger tools** to protect children and bring perpetrators to justice.
- **Rehabilitation and Justice for Victims:** Treaty acknowledges the growing number of cybercrime victims and emphasizes securing justice while addressing the needs of vulnerable individuals in prevention and response measures.

Conclusion

As UNGA adopts the **first international criminal justice treaty in over 20 years**, it demonstrates success of **multilateralism** during difficult times and reflects the collective will of member states to promote international cooperation to prevent and combat cybercrime.

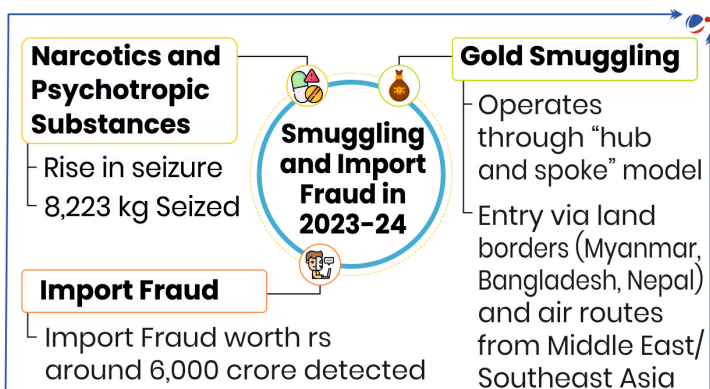
4.3. SMUGGLING IN INDIA REPORT 2023-24

Why in the News?

Recently, Directorate of Revenue Intelligence (DRI) released 'Smuggling in India' report 2023-24.

Key Highlights of the Report

- The report provides insights into trends, challenges, and measures in combating smuggling.
- The DRI's interception of **illegal drugs, wildlife products such as elephant tusks (~53 kg), foreign currencies, insecticides**, etc. showcases a rising trend of smuggling activities (refer to the infographics).



Directorate of Revenue Intelligence (DRI)

- It is a premier intelligence and **enforcement agency on anti-smuggling matters**.
- **Working:** under **Central Board of Indirect Taxes & Customs (CBIC), Ministry of Finance**
- **Objective:**
 - **Detect and curb smuggling of contraband**, including drug trafficking and **illicit international trade in wildlife** and environmentally sensitive items.
 - **Combating commercial frauds related to international trade** and evasion of customs duty.

Reasons behind increased cases of Smuggling in India

- **Geography and Borders:** India's extensive coastline and porous borders with Bangladesh, Myanmar, and Nepal create multiple entry points for smugglers.
 - India's North-Western borders to **Death Crescent** (Afghanistan, Iran, and Pakistan) and North-Eastern borders to the **Death Triangle** (Myanmar, Laos, Thailand).
- **Market Demand:** High demand for items like gold, especially from Gulf states like UAE and Saudi Arabia, drives illegal trade.
- **Sophisticated Techniques:** Smugglers use advanced concealment methods such as hiding drugs in machinery parts, ingestion by carriers (known as 'mules') etc.
 - Moreover use of technologies such as **Darknet, and Crypto Currencies** leveraging anonymity complicates law enforcement efforts.
 - E.g. Anti-national elements/smugglers are using drones for smuggling of Arms/Narcotics across India-Pakistan border in Punjab State
- **Misuse of legal loopholes:** E.g. Smugglers exploit Free Trade Agreements (FTAs) and produce Invalid Certificates of Origin and Misrepresentation of goods and causes loss to the government
- **Transnational Networks:** Smuggling is challenging to detect and dismantle due to intricate international networks.

Nexus of Smuggling and India's Security Risks

India faces multiple security challenges due to smuggling activities that threaten both national security and social stability:

- **Narco-Terrorism:** India's location between the Death Crescent and Death Triangle makes it particularly vulnerable to narco-terrorism, where drug smuggling directly funds insurgent activities.
 - Terrorist organizations rely on smuggling drugs, weapons, gold, and counterfeit currency to finance their operations.
- **Financial instability: Foreign currency smuggling** weakens India's financial system, while **money laundering** and tax evasion distort markets and undermine economic stability.
 - These activities allow criminal enterprises to expand their operations while **depriving the government of legitimate revenue.**
- **Commercial Fraud: It includes** misuse of **Free Trade Agreements (FTAs)**, **misclassification of goods**, and **undervaluation of imports** leading to significant **revenue losses for the government.**
- **Wildlife and Environmental Crimes:** Smugglers trade in endangered species, traffic hazardous materials and e-waste, and engage in illegal **logging of valuable trees like Red Sanders**, all of which **threaten India's biodiversity.**
- **Human Trafficking: Smuggling** often overlaps with human trafficking, as smugglers use the same transportation routes, document forgery networks, and safe houses for multiple illegal operations.
 - This creates a complex web of organized crime that poses significant challenges for law enforcement and border security.

Steps Taken to prevent smuggling and associated crimes

- **By India**
 - **Strengthening Enforcement:** India has intensified its surveillance and intelligence-gathering efforts leading to significant seizures of contraband goods.
 - **Amendment to Wildlife Protection Act in 2023** empowers customs officers to seize illegally traded wildlife items.
 - **Directorate General of Foreign Trade (DGFT)** is empowered to specify procedures to be followed by exporters, importers, and licensing or regional authorities.
 - **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985:** Prohibits, except for medical or scientific purposes, the manufacture, production, trade, use, etc., of narcotic drugs and psychotropic substances.
 - **Use of Technology:** E.g. **Data Analytics on Advance Passenger Information** has enabled targeted passenger controls for interdiction of contraband.
 - **Customs Mutual Assistance Agreements (CMAAs):** India has signed CMAAs with over 65 countries to enhance information sharing and cooperation.
 - **International Collaborations:** India works with institutions such as **World Customs Organization (WCO)**, **Interpol** to tackle transnational smuggling networks.
 - India also participates in global operations like **Operation SSHA (illegal timber trade).**
- **Global Level**
 - **United Nations Office on Drugs and Crime (UNODC):** Works across various regions of the world to tackle production and trafficking of illicit drugs
 - **United Nations Convention against Transnational Organized Crime:** to **PROMOTE COOPERATION TO PREVENT** and combat transnational organized crime more effectively
 - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** To ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species.

Conclusion

As current trend points towards increased sophistication and modernization of crime, it calls for multifaceted response by enforcement agencies such as use advanced detection technologies (Artificial Intelligence, Machine learning, Advance data analytics and use of Open-Source Intelligence) coupled with traditional methods of gathering and generation of actionable intelligence.

Related News: Un Commission On Narcotic Drugs (UNCND)

Recently, India has been chosen to chair the **68th Session of the UNCND** for the 1st time.

About UNCND

- **Origin:** Established by **UN Economic and Social Council (ECOSOC)** resolution in **1946** to **assist in supervising the international drug control treaties.**
- **Members: 53 member states** elected by ECOSOC.

- **Functions:** Act as the **governing body** of the **United Nations Office on Drugs and Crime (UNODC)**.
- **Mandate:** Reviews and analyses the global drug situation, considering supply and demand reduction.

4.4. NEWS IN SHORTS

4.4.1. UNITED NATIONS PEACEBUILDING COMMISSION

India has been re-elected to U.N. Peacebuilding Commission for 2025–2026.

About U.N. Peacebuilding Commission

- **Genesis:** Established in 2005, it is an intergovernmental advisory body that supports peace efforts in conflict-affected countries.
- **Composition: 31 Member States**, elected from General Assembly, Security Council, & Economic and Social Council.
 - Top financial contributing countries & troop-contributing countries to United Nations system are also members.
- **Mandate:** To bring together all relevant actors to marshal resources, advise on strategies for **post-conflict peacebuilding** & ensure **recovery from conflict**.
- India is **among largest contributor of uniformed personnel to UN Peacekeeping**, with more than **6,000 personnel** currently deployed in missions worldwide.

To know more about India's role in global peacekeeping, refer to Article 2.1. India: Global Peacemaker in June 2024 Monthly Current Affairs Magazine.

4.4.2. KAVERI ENGINE

Kaveri engine, developed by Gas Turbine Research Establishment under DRDO, has been cleared for inflight testing, marking a major step in India's aerospace self-reliance.

About Kaveri Engine project

- **Initiation:** The Kaveri engine project began in the **late 1980s** to power the **Light Combat Aircraft (LCA) Tejas**.
 - Later, DRDO focused on developing a dry version of the Kaveri engine **for UAV applications**.
- **Current Capability:** The dry Kaveri engine produces 49-51 kN of thrust, suitable **for UAVs like the Ghatak stealth UCAV**.
- **Significance:** Marks a strategic achievement, enhancing **India's self-reliance in aero-engine technology**.

4.4.3. 'SATAN 2'

Russia is set to deploy the RS-28 Sarmat **intercontinental ballistic missile**, known as 'Satan 2'

About Satan 2

- It is a next-generation **intercontinental ballistic missile (ICBM)** considered **one of the most powerful nuclear weapons** globally.
- Equipped with **Multiple Independently Targetable Re-Entry Vehicles (MIRVs)**, allowing it to **strike multiple targets simultaneously**.
- The missile also has a range of **10000- 18,000 km** and can carry a 10 ton payload.

4.4.4. SEARCH AND RESCUE AID TOOL (SARAT)

Indian National Centre for Ocean Information Services (**INCOIS**) develops an advanced version of SARAT.

- It will **enhance accuracy and support Indian Search and Rescue (SAR) agencies**, like Indian Coast Guard, in sea operations.

About SARAT

- Developed under **Make in India in 2016**, it **aims to facilitate search and rescue operations at sea**, locating individuals or vessels in distress quickly.
- This **tool is also available as a mobile application** for the users.

About INCOIS

- **Genesis:** Established as an autonomous body in **1999** under **Ministry of Earth Sciences (MoES)**.
- **Mandate:** To provide best possible **ocean information and advisory services** to society.
- **Activities:** Provides round-the-clock **monitoring and warning services for coastal population** on tsunamis, storm surges, high waves, etc.

4.4.5. EXERCISES IN NEWS

Exercises	Description
SAREX- 24	Indian Coast Guard (ICG) conducted 11 th Edition of National Maritime Search and Rescue Exercises & Workshop (SAREX-24) under National Maritime Search and Rescue (NMSAR) Board at Kochi. <ul style="list-style-type: none"> • Theme: Enhancing Search and Rescue capabilities through Regional collaboration.
SLINEX	Bilateral naval exercise ' SLINEX ' between Sri Lanka and India conducted under aegis of Eastern Naval Command.
Desert Knight	India, France, and UAE have concluded " Desert Knight " exercise over Arabian Sea. <ul style="list-style-type: none"> • Desert Knight Exercise is a trilateral air combat exercise aims to foster better interoperability among air-forces of three nations during complex combat scenarios.
Harimau Shakti 2024	India- Malaysia Annual Joint Military Exercise ' Harimau Shakti ' conducted in Malaysia. <ul style="list-style-type: none"> • In 2023 it was conducted at Umroi Cantonment in Meghalaya, India.
Agni Warrior	13 th edition of Joint Military Exercise Agni Warrior (XAW-2024) concluded in Maharashtra. <ul style="list-style-type: none"> • It is a bilateral exercise between Indian Army and Singapore Armed Forces.
CINBAX	1 st edition of Joint Table Top Exercise, CINBAX between Indian Army and Cambodian Army conducted in Pune, Maharashtra. <p>About CINBAX</p> <ul style="list-style-type: none"> • CINBAX is a planning exercise aimed to wargame conduct of joint Counter Terrorism operations under Chapter VII of UN Charter. • It also involves discussion on information operations, cyber warfare, hybrid warfare, logistics and casualty management, HADR operations etc.



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Performance and Progress Analysis

5. ENVIRONMENT

5.1. INDIA STATE OF FOREST REPORT (ISFR) 2023

Why in the News?

The Ministry of Environment, Forests and Climate Change (MoEFCC) recently released the India State of Forest Report (ISFR) 2023.

About ISFR

- **Overview**
 - Prepared by Forest Survey of India (FSI)
 - Published every two years since 1987
- **Assessment Method**
 - Used satellite data
 - National Forest Inventory data
 - Field verification
 - Covered 751 districts (up from 636 in previous report)

Do you know?

According to the **National Forest Policy, 1988** the national goal is to maintain **at least one-third** of the **country's land** under **forest or tree cover**, and **two-thirds** in **hilly and mountainous regions**.

Key Definitions Used in ISFR 2023

- **Tree Cover:** Comprises all tree patches outside the forest area, which are less than one hectare in extent including all the scattered trees found in the rural and urban settings, and not captured under the forest cover.
- **Forest Cover:** Defined as all lands, more than one hectare with a tree canopy density of more than or equal to 10% including orchards, bamboo and palm, irrespective of ownership, legal status and land use. Such lands may not necessarily be a recorded forest area (RFA).
- **Forest Area:** Also known as the Recorded Forest Area (RFA), it is defined as “all such lands which have been notified as forest under any Government Act or Rules or recorded as ‘forests’ in the Government Records”.
 - Thus, the term ‘forest area’ denotes the legal status of the land as per the government records, whereas the term ‘forest cover’ indicates presence of trees over any land.

Forest Cover Classifications

Very Dense Forests

Tree canopy density: 70% and above



Moderately Dense Forests

Tree canopy density: 40% to less than 70%



Open Forests

Tree canopy density: 10% to less than 40%



Scrub

Forest lands with canopy density less than 10%

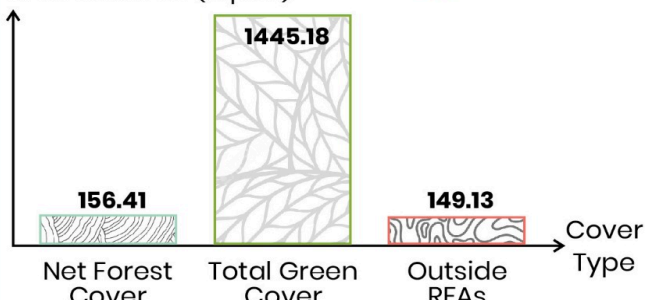


Key Highlights of ISFR 2023

Forest and Tree Cover



Area Covered (sq km)

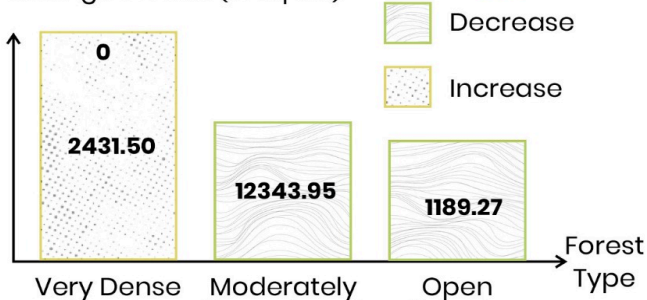


Changes in Forest and Green Cover in India (2021-2023)

Changes in Forest Density



Change in Area (in sq KM)

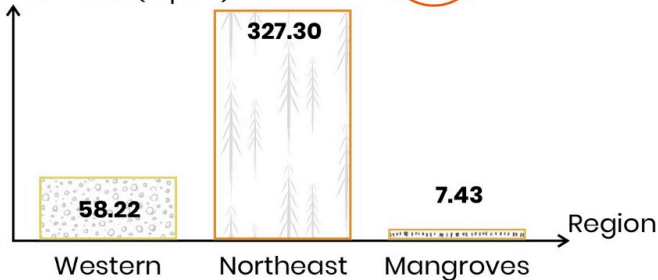


Changes in Forest Density

Regional Trends



Area Lost (sq km)

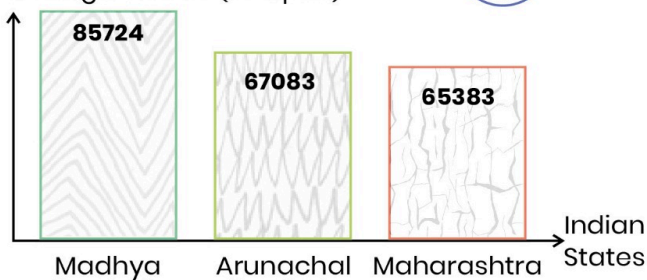


Forest Cover and Mangrove Loss by Region

States' Performance

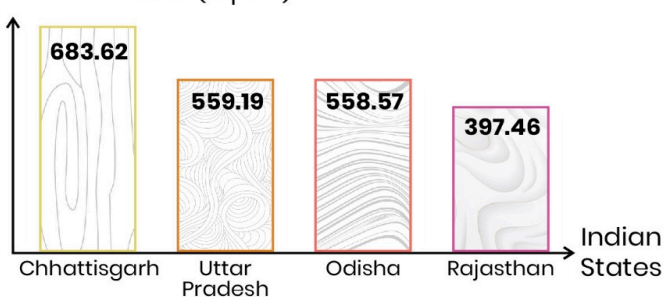


Change in Area (in sq KM)



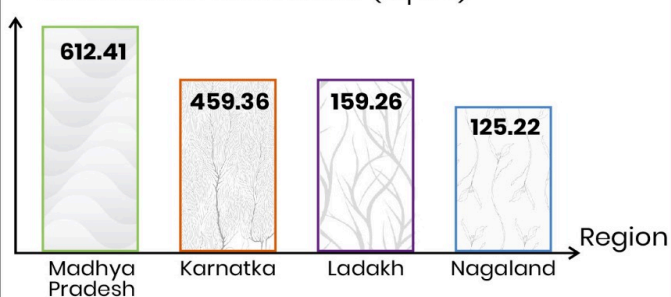
Top Forest and Tree Cover States

Area Increase (sq km)



Largest Increase in Forest and Tree Cover

Decrease in Forest Cover (sq km)



Largest Decrease in Forest and Tree Cover

Other Key findings



- **Carbon Stock:** Increased by 81.5 million tonnes compared to the previous assessment.
- **Top Bamboo Resources states:** Madhya Pradesh, Arunachal Pradesh and Maharashtra
- **Top 3 States/UTs for Mangrove Cover:** West Bengal, Gujarat and Andaman & Nicobar Islands
- **Top 3 States for Agroforestry:** Maharashtra, Karnataka and Odisha
- **Forest Fire:** Forest Fire has decreased during 2021-22 season.
 - **Tiger Reserves with highest Forest Fires:** Nagarjunsagar Srisaigram Tiger Reserve (Andhra Pradesh), Indravati Tiger Reserve (Chattisgarh) and Valmiki Tiger Reserve (Bihar)

Conclusion

The ISFR 2023 Report demonstrates **India's commitment to forest monitoring**. However, its **broad definition of 'forest cover'**, which includes urban green spaces and plantations, **may overestimate forest coverage while overlooking internal degradation**, raising questions about data reliability. This underscores the **need for more precise forest assessment criteria**.

5.2. SACRED GROVES

Why in the news?

SC pronounced direction on an application for identification of sacred groves such as **Orans** by the Rajasthan Government in accordance with the **T.N. Godavarman judgment (1996)**.

About Sacred Groves

- Sacred groves comprise of **patches of forests or natural vegetation that hold deep religious and spiritual meaning** to indigenous communities.
- These spaces are **protected by local communities because of their religious beliefs and traditional rituals**.
- India is estimated to have around **100,000 to 150,000 sacred groves (IUCN)**.
- **Living Root Bridges (Jingkieng Jri)** of **Meghalaya** a sacred grove is part of the tentative list of **UNESCO World Heritage Site**.

Do you know?

T.N. Godavarman judgment expanded definition of "forest" to include:

- **All areas recorded as "forest" in any government (Union and State) record**, irrespective of ownership, recognition, and classification.
- **All areas that conformed to the "dictionary" meaning of forest.**
- **Areas that are identified as "forest" by expert committees set up by the State governments following the 1996 order.**



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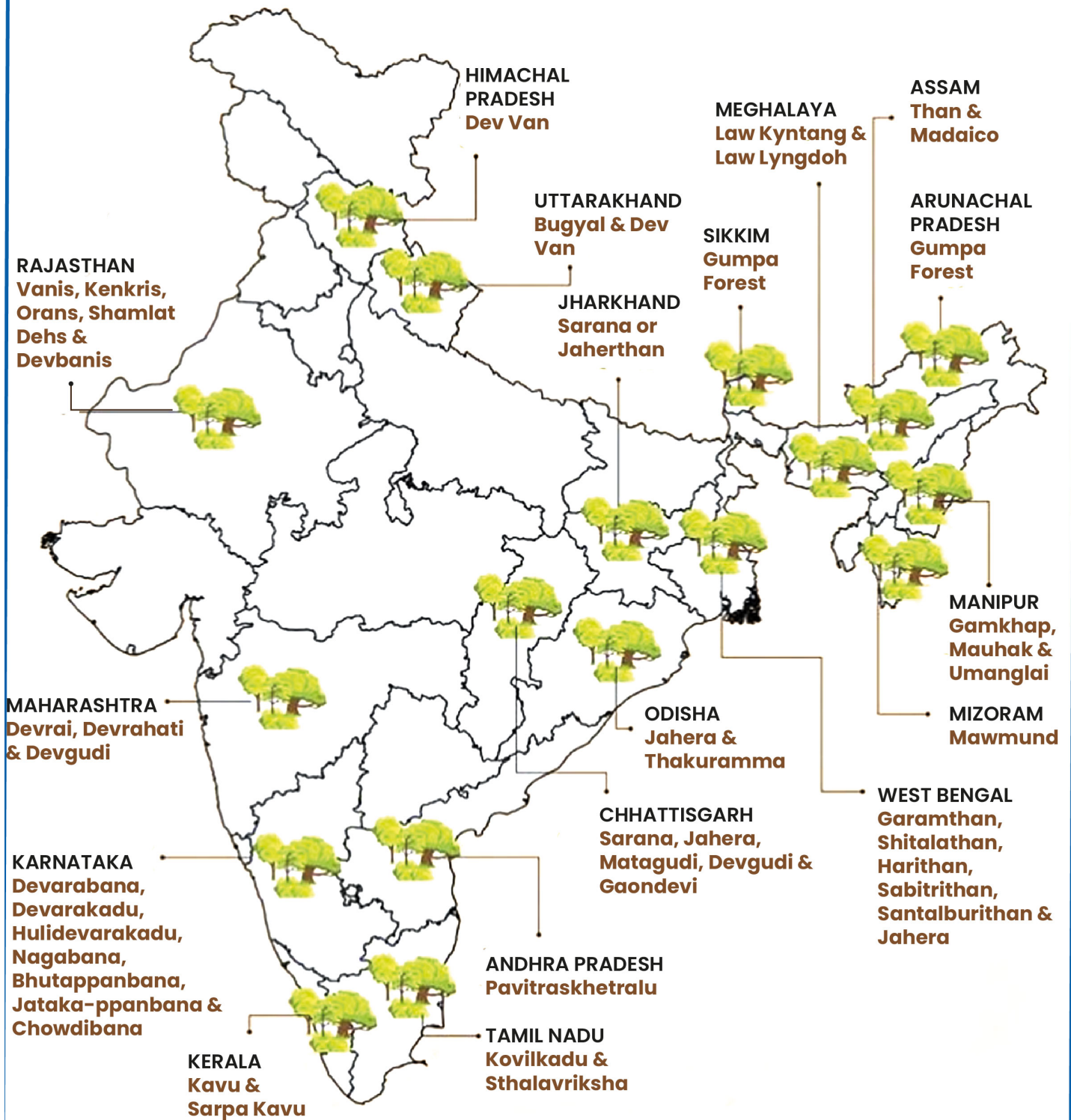
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INDIA'S 'SACRED' GEOGRAPHY

Sacred groves are spread across the country, known by various names



Key Directives/Suggestions of the Supreme Court

- **Legal protection to Sacred Groves:** Grant protection to Sacred Groves under **the Wildlife Protection Act, 1972, especially through Section 36I** (declaration of community reserves).
- **Comprehensive policy:** The MoEFCC shall create a **comprehensive policy for the governance and management of sacred groves** across the country.
- **Survey:** The Ministry shall also develop a **plan for nation-wide survey of sacred groves**, identifying the area, and extent of the groves.
- **Community Participation:** The MoEFCC should create policies and programmes that **protect the rights of the communities and involve them in sacred groves and forest conservation**.
 - The court has also suggested the Rajasthan government to **empower traditional communities as custodians of sacred groves under the Scheduled Tribes And Other Traditional Forest Dwellers (Recognition Of Forest Rights) Act, 2006**.
- **Promotion of Piplantari model:** **Governments must take proactive measures to promote** sustainable development and gender equality through the implementation of **ideas like the Piplantri model** in other regions.
 - **Piplantri** is a village in the **Rajsamand district of Rajasthan**, which went on to gain international recognition for its unique model where the **villagers plant 111 trees whenever a girl child is born**.

Why Sacred Groves need protection?

- **Cultural:** Sacred groves are **deeply rooted in cultural traditions**, often associated with deities who are believed to protect the community and the groves. These groves also **serve as venues for festivals, weddings, and youth socialization**.
 - E.g. Sabarimala in Kerala and Hariyali in Garhwal.
- **Conservation of Biodiversity:** They often serve as the **last refuge for endemic species** in the region.
 - E.g. At least **50 rare and endangered plant species of Meghalaya** are confined to sacred groves.
- **Soil conservation:** The vegetation cover of the sacred groves **enhances the soil stability** and also **prevents soil erosion** in the area.
 - Highland groves (eg. Western Ghats and Himalayan region) are important for their soil conservation.
- **Economic and Medicinal benefits:** The sacred groves help indigenous communities by **providing edible fruits, leaves, fibers, gums, resins and medicinal plants**. Thus sacred groves act as a **nursery and storehouse of many of the ayurvedic and traditional medicines**.
- **Growth of livestock-based economies:** About 41% livestock in Barmer district of Rajasthan is dependent on the sacred groves “Orans”.

Threats and challenges

- **Disappearance of the traditional belief systems:** Traditional belief systems, which were fundamental to sacred groves, have disappeared, and their rituals are now considered superstition.
- **Development activities:** Rapid urbanization and developmental interventions, including roads, railways, dams, and commercial forestry, **have led to the destruction of sacred groves** in many parts of the country.
 - E.g. Development projects such as the Ambi Valley Township project in the Western Ghats, destroyed acres of community owned land.
 - Due to encroachment, dry deciduous and light loving species invade the area, thus changing the floral composition as well as microclimate.
- **Livestock: Overgrazing and trampling** by livestock leads to soil erosion. Grazing animals can **also outcompete native herbivores for food resources**, further threatening local fauna.
 - In Punjab, sacred forests are shrinking due to **over-grazing and agriculture expansion**.
- **Invasive species: Invasion by exotic weeds** such is a serious threat to endemic species of the groves.
 - **Eupatorium odoratum, Lantana camara and Prosopis juliflora** have caused menace to native biodiversity.

Way Forward

Alongwith the SC’s latest guidelines, the following steps can be taken:

- **Monitoring:** Monitoring of the sacred groves through ‘**Bio-diversity monitoring committees**’.

- **Security:** Ensuring security **through fencing and by establishing “buffer zones”** around the sacred groves.
- **Community Participation:** Village communities should be educated and guided to preserve the grove’s sanctity, and the grove conservation programs can include the **provision for small incentives for young people.**
- **Restoration of sacred groves:** Restoration activities including **planting native species, protection for seedlings and saplings, nursery establishment for rare, endemic plants, measures for soil and water conservation etc.** can be undertaken.

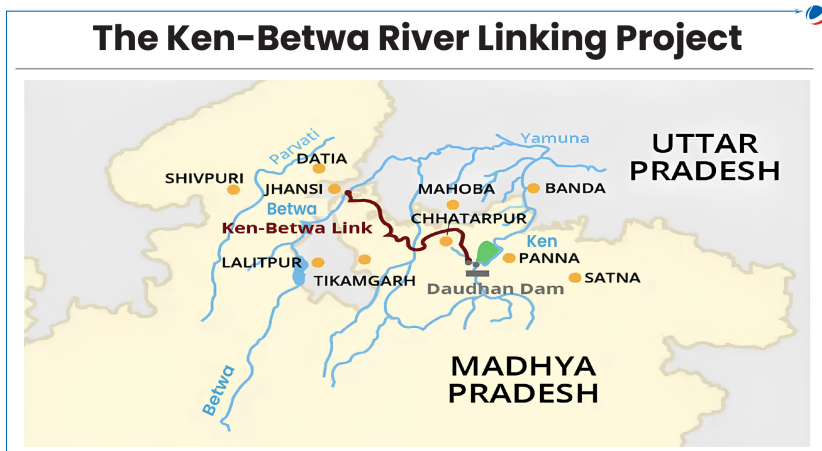
5.3. RIVER LINKING PROJECT

Why in the News?

Prime Minister laid the foundation stone of the **Ken- Betwa River Linking National Project.**

About Ken-Betwa Link Project

- **Overview:** Part of India’s **National River Linking Project (NRLP)**, aimed to divert surplus water from the **Ken basin** to water-scarce areas in the **Betwa basin.** Completion is targeted by **2030.**
- **Location:** Spans **Madhya Pradesh** and **Uttar Pradesh**, focusing on the drought-prone **Bundelkhand region.**
- **Key Components:**
 - **Phase I:**
 - > **Daudhan Dam** (77 m high) in **Panna Tiger Reserve** for irrigation and power generation.
 - > **Ken-Betwa Link Canal** (221 km) to transfer water.
 - **Phase II:**
 - > **Lower Orr Dam, Bina Complex, and Kotha Barrage** to address water scarcity in the Betwa basin.



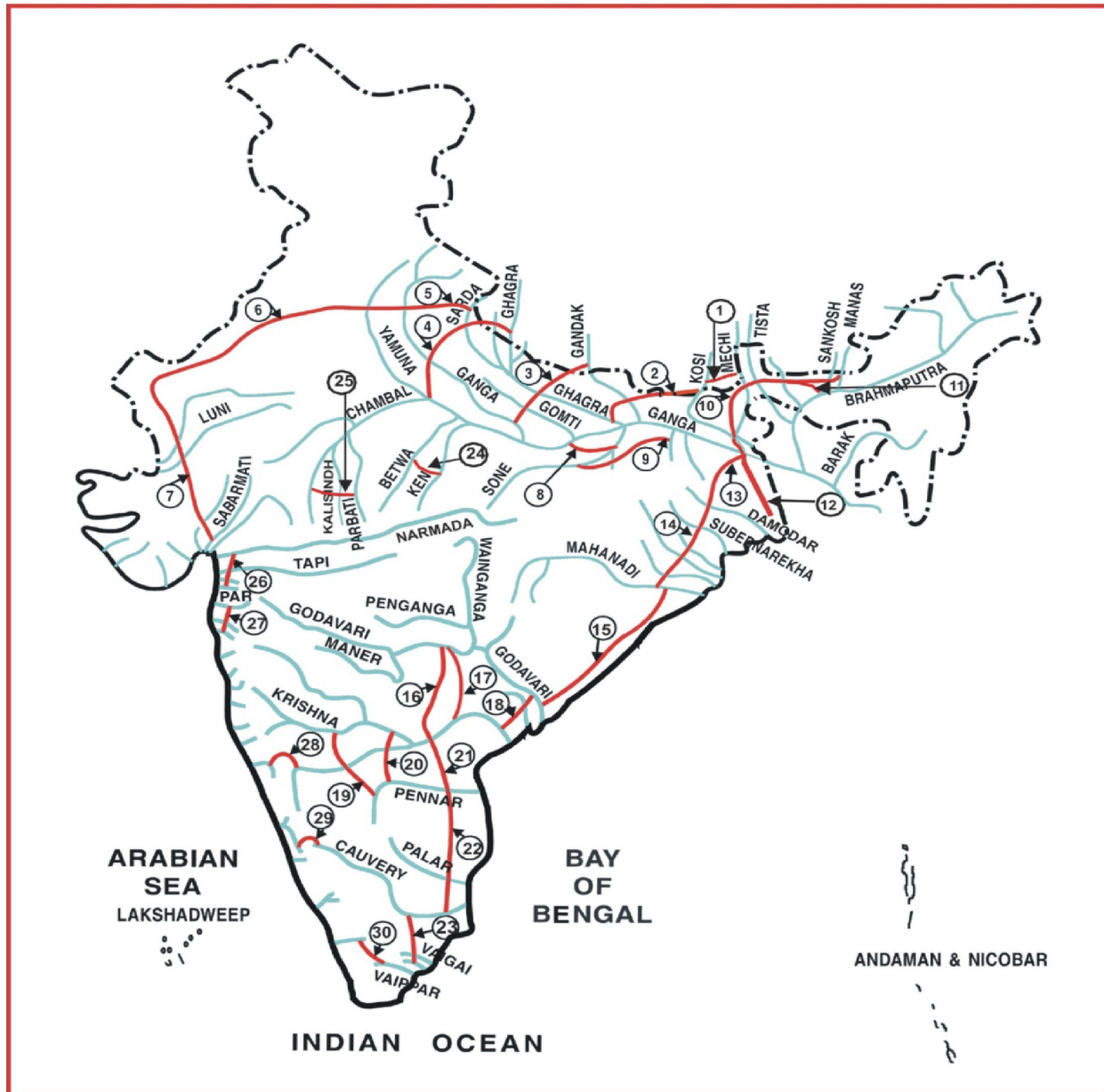
National River Linking Project (NRLP)

- **Background:**
 - The idea of interlinking of rivers was first proposed by **Sir Arthur Cotton in 1850s.** It was **then revived in 1972 by K.L. Rao**, then India’s minister of power and irrigation.
 - Initiated in the **1980s** under the **National Perspective Plan (NPP)** and in 1982 **National Water Development Agency (NWDA)** was set up to study the feasibility of the river linking.
 - > In **2021**, the Centre proposed **National Interlinking of Rivers Authority (NIRA)** as the apex implementing body for NPP and to **replace NWDA.**
- **Objectives:**
 - The program **aims to transfer water from surplus to deficit regions**, potentially **irrigating 30 million hectares** and **generating 20,000-25,000 MW of power.**
 - It is seen as a way to **mitigate floods and droughts, increase rural income, and aid navigation.**
- **National Water Development Agency (NWDA)** has identified following components:
 - **Himalayan Rivers Development:** 14 links, focusing on northern rivers like **the Ganga and Brahmaputra.**
 - **Peninsular Rivers Development:** 16 links, including the **Ken-Betwa link.**
 - **Intra-State Links:** For within-state water management.

Significance of Ken-Betwa River Linking Project

- **Economic Growth:** Promoting agro-industries and tourism, reducing migration.
- **Flood & Drought Management:** Balancing water distribution to mitigate floods and droughts
- **Renewable Energy:** Generate 103 MW hydropower and 27 MW solar
- **Drinking Water Supply:** Provide water for 62 lakh people, improving health and living standards.
- **Agriculture:** Irrigate 10.62 lakh hectares in Bundelkhand, reducing monsoon dependency

PROPOSED INTER BASIN WATER TRANSFER LINKS



HIMALAYAN COMPONENT

1. Kosi – Mechi
2. Kosi – Ghagra
3. Gandak – Ganga
4. Ghagra – Yamuna *
5. Sarda – Yamuna *
6. Yamuna – Rajasthan
7. Rajasthan – Sabarmati
8. Chunar- Sone Barrage
9. Sone Dam – Southern Tributaries of Ganga
10. Manas –Sankosh – Tista – Farakka
11. Jogighopa – Tista – Farakka (Alternate)
12. Farakka – Sunderbans
13. Ganga (Farakka) – Damodar – Subernarekha
14. Subernarekha – Mahanadi

* FR Completed

PENINSULAR COMPONENT

15. Mahanadi (Manibhadra) – Godavari (Dowlaiswaram) *
16. Godavari (Inchampalli) – Krishna (Nagarjunasagar) *
17. Godavari (Inchampalli) – Krishna (Pulichintala) *
18. Godavari (Polavaram) – Krishna (Vijayawada) *
19. Krishna (Almatti) – Pennar *
20. Krishna (Srisailem) – Pennar *
21. Krishna (Nagarjunasagar) – Pennar (Somasila) *
22. Pennar (Somasila)–Palar- Cauvery (Grand Anicut) *
23. Cauvery (Kattalai) – Vaigai – Gundar *
24. Ken – Betwa *
25. Parbati – Kalisindh – Chambal *
26. Par – Tapi – Narmada *
27. Damanganga – Pinjal *
28. Bedti – Varda
29. Netravati – Hemavati
30. Pamba – Achankovil – Vaippar *

Challenges of River Linking Projects

- **Environmental Impact**
 - Major **disruption to wildlife habitats**, with projects like Ken-Betwa submerging 98 sq. km. of Panna Tiger Reserve, threatening tigers, gharials, and various species.
 - **Extensive deforestation** causing local climate changes.
 - Studies by IIT-Bombay indicate **potential rainfall deficits due to water transfer**.
- **Economic Concerns**
 - **High implementation costs** (e.g., Ken-Betwa at ₹44,605 crore) raising questions about viability.
 - Significant ongoing **maintenance costs** adding to financial burden.
- **Social Implications**
 - **Large-scale displacement** of local populations.
 - **Complex rehabilitation and compensation** challenges affecting communities.
 - **Disruption of traditional livelihoods** and social structures.
- **Technical Challenges**
 - **Uncertainty in water availability**, especially with non-perennial rivers.
 - **Water quality concerns** during transfer between river systems.
 - **Question of sustainable alternatives** like rainwater harvesting **versus large-scale linking**.

Way Forward to Address Regional Water Disparity

- **Interstate Cooperation**
 - Create clear **frameworks for water sharing** between states.
 - Establish effective **dispute resolution mechanisms**.
 - **Regular interstate consultations** to prevent delays.
- **Stakeholder Engagement**
 - **Enable community participation** in planning and implementation and establish transparent communication with local populations.
 - **Incorporate indigenous knowledge** in water management.
- **Technological Integration**
 - **Deploy smart irrigation systems** and real-time monitoring tools.
 - Utilize advanced water management technologies.
 - Integrate sustainable solutions like the **Mangal Turbine**.
 - > Mangal Turbine, invented by Bundelkhand farmer Mangal Singh in 1987, harnesses flowing water's kinetic energy to lift water for irrigation without using diesel or electricity.
- **Environmental Protection**
 - **Strengthen Environmental Impact Assessment (EIA)** with comprehensive hydrological studies.
 - Implement **effective compensatory measures** for ecological damage.
 - **Develop monitoring systems** to track environmental changes.

5.4. DRAFT SOLID WASTE MANAGEMENT RULES, 2024

Why in the News?

The Ministry of Environment, Forest and Climate Change (MoEFCC) has released the Draft Solid Waste Management (SWM) Rules, 2024 for wider public consultations.

More on the News

- **Statutory Provisions:** The SWM Rules, 2024 amend and expand upon the **Solid Waste Management (SWM) Rules of 2016**.
 - SWM Rules are issued under the **Environment Protection Act (EPA), 1986**.
 - **The Central Pollution Control Board (CPCB)** and **State Pollution Control Boards (SPCBs)** are responsible for **enforcing the pollution control guidelines** including the rules under the EPA, 1986.
- **Implementation Date:** The rules are set to come into force on **October 1, 2025**, providing a transition period for stakeholders.

Key Features of Draft Solid Waste Management Rules 2024



Monitoring and Compliance: CPCB to establish centralized online registration and annual reporting system.



Circular Economy Focus: MoHUA is the apex coordinating body to drive circular economy initiatives while CPCB shall drive and monitor the circular economy initiatives.



Waste Segregation into biodegradable and non- biodegradable: Safai Karamcharis authorized to fine violators and refuse unsegregated waste collection.



Extended Producer Responsibility (EPR): EPR covers all waste generators including Bulk generators. Environmental compensation based on "polluter pays" principle.



Agricultural Waste Management: Local bodies, including Gram Panchayats, mandated to prevent burning of agricultural waste.



Processing Requirements: Encourages on-site waste processing. Stricter implementation timelines and responsibilities for local bodies.

About SWM in India

- **Definition:** Any discarded material including garbage, trash, and refuse.
- **Categorisation:** India legally classifies **waste into 6 types:** Municipal, Hazardous, Electronic, Biomedical, Plastic, and Construction waste.
- **Current Status** (according to the TERI):
 - **Annual waste generation:** 62+ million tons
 - **Collection:** 43 million tons
 - **Treatment:** Only 12 million tons
 - Remaining **31 million tons dumped in wasteyards**

Solid Waste Management Challenges in India

- **Basic Service Issues**
 - Poor collection systems, especially in rural areas.
 - Limited waste separation at source.

Consequences of Improper Waste Management Practices



Water Pollution: Contaminates water sources affecting ecosystems and human health.



Air Pollution: Releases harmful substances like ozone-depleting chemicals, dioxins, and furans. Methane emissions contribute to climate change



Soil Pollution: Hazardous waste in landfills contaminates soil, hinders plant growth and risks human health through the food chain.



Ecosystem Disruption: Toxins harm biodiversity and disrupt natural habitats.



Economic Consequences: Increases waste management costs due to contamination.

- Shortage of trained workers.
- Low public awareness about proper disposal.
- Limited land for disposal leads to **illegal dumping**.
- **Financial constrains**
 - Local bodies struggle with limited budgets.
 - Outdated practices continue, including unsafe waste handling.
- **Overlapping Jurisdiction**
 - Multiple agencies share oversight responsibilities.
 - > For example, **MoEFCC develop rules and guidelines** while the **Ministry of Housing and Urban Affairs (MoHUA)** oversees ground-level enforcement, which can lead to challenges in coordination, funding, and enforcement.
- **Technology Gap**
 - Modern solutions (blockchain, IoT, AI) exist but they are not widely used.
 - High costs and low awareness prevent adoption.

Key Initiatives for Promoting Effective SWM

- **India**
 - **Smart Cities Mission:** Over 60 cities are managing solid waste with **increased technology use**, improving route management, efficiency of collection, and daily management.
 - **Swachh Bharat Mission (Grameen): Phase-II of the mission** focuses on proper management of solid waste **at the village level**.
 - **Swachh Bharat Mission (Urban): Launched in 2014** for **scientifically managing municipal solid waste (MSW)** throughout India.
 - > **SBM-U 2.0** and aims to achieve a **“Garbage Free” status for all urban areas by 2026**.
- **Global**
 - **UNEP International Environmental Technology Centre (IETC) in Japan:** Its work focuses on the proper treatment of special wastes (electronics, agricultural biomass, plastics) in developing countries.

Way forward for Effective SWM in India

- **Policy Implementation:** Ensure **strict enforcement of new rules** with clear guidelines **and support for local bodies with adequate funding**.
- **Technological Innovation:** For instance, **Bhopal Municipal Corporation** (Madhya Pradesh) has developed a **strong GPS-enabled vehicle tracking system** for door-to-door collection of waste.
- **Enhanced Public-Private Partnerships:** Leverage **private sector capabilities** for better waste management infrastructure and technology adoption.
 - **E.g.** City of **Mumbai, Bhopal, Bangalore**, etc. have entered into a **contractual arrangement with private sector** for setting up **compost plants**.
- **Strengthening Monitoring:** E.g. strengthening of regulatory bodies like **CPCB and SPCBs** with adequate **infrastructure, trained staff and law enforcers** can pave the way in this direction.
- **Public Awareness:** Effective implementation of initiatives like SBM which have played a major role in **generating awareness and community-level engagement for waste segregation, proper disposal, etc.**

5.5. URBAN AIR POLLUTION

Why in the News?

As per **World Cities Report 2024: Cities and Climate Action** of **UN-Habitat**, urban air pollution accounted for 6.7 million premature deaths in 2019, making it the world’s largest environmental risk factor for disease and premature death.

More on the News

- **6th Annual World Air Quality Report by IQAir** found New Delhi to be the most polluted capital city in the world.
 - **9 out of the 10 most polluted cities in the world** were found to be located in India.

Reasons for urban air pollution in India

- **Meteorological and Geographical Factors**

- **Low Rainfall and Winds:** Low rainfall in September-October and sluggish winter winds contribute to stagnant pollutant levels in north India.
- **Airshed Dynamics:** Regional air pollution spreads through wind patterns; e.g., 50% of Delhi's PM_{2.5} originates from Haryana and Uttar Pradesh.
- **Dust Storms:** Dust from the Sahara and Thar deserts, rich in nitrates, contributes to surface ozone formation;
 - > During Gurugram's dust storms, 57% of days record ozone levels above US's National Ambient Air Quality Standards (NAAQS) limits.
- **Topography:** Northern India's low-lying terrain traps pollutants, with the Himalayas blocking dispersion.
- **Temperature Inversion:** Winter conditions trap cooler air near the ground, preventing pollutant dispersal.

Do you know?

➤ **Uttar Pradesh is first Indian state to adopt airshed management to reduce PM_{2.5} levels to 45 µg/m³ by 2027.**

- **Agricultural practices: Stubble Burning** in Punjab and Haryana produces toxic haze, impacting air quality in adjacent regions.

- **Urban and Industrial Factors**

- **Construction and Demolition Waste:** Dust from these activities contributes significant particulate matter and volatile organic compounds.
- **High Vehicle Density:** The total number of vehicles sold has increased from around 178 lakh in 2010-11 to around 215 lakh in 2019-20 (MoRTH)
- **Unscientific Waste Disposal:** Open burning of waste and landfill fires emit pollutants, e.g., Mumbai's landfill fires produce 22,000 tons pollutants annually.
- **Industrial Emissions:** Industries like iron and steel, cement, sugar, and onceptual are major polluters, with Rajkot (42%) and Pune (30%) most affected by industrial PM_{2.5} emissions.

- **Additional Sources**

- **Biomass Burning:** Cooking stoves, brick kilns, and factory exhausts contribute to local air pollution.
- **Cultural and Festive Practices:** Increased firecracker usage during Diwali exacerbates pollution levels.
 - > In November 2024, **overall level of PM_{2.5}** in Delhi was 401.1 ug/m³ – **about 26 times the WHO's permissible limit** of 15 ug/m³ for a 24-hour period.

Concerns and issues arising because of urban air pollution

- **Health Impacts:** Urban air pollution contributes to respiratory infections, lung diseases, and cardiovascular conditions.
 - In Delhi alone, **over 30,000 deaths are attributed to air pollution annually**, with approximately 2 million deaths nationwide.
- **Economic Losses:** Premature deaths and morbidity resulted in an economic loss of about \$36.8 bn annually, equating to 1.36% of India's GDP in 2019 (World Bank).

National Air Quality Index (AQI)

Launched by Ministry of Environment, 2014

One Number - One Colour - One Description

Good	0-50
------	------

Satisfactory	51-100
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Moderately Polluted	101-200
---------------------	---------

Poor	201-300
------	---------

Very Poor	301-400
-----------	---------

Severe	401-500
--------	---------

Monitored Pollutants:

•PM₁₀ •PM_{2.5} •NO₂ •SO₂ •CO •O₃ •NH₃ •Pb

- **Damage to Materials and Structures:** Emissions of SO₂ and NO₂ harm flora, fauna, and materials, causing damage to iconic structures.
 - For instance, the Taj Mahal's white marble is yellowing due to industrial SO₂ emissions and acid rain.
- **Urban Heat Island (UHI) Effect:** Built-up urban areas experience higher temperatures than rural surroundings due to greenhouse gas emissions, exacerbating urban warming.
- **Ecosystem and Biodiversity Degradation:** Air pollution leads to acidification of lakes, eutrophication, and mercury accumulation in aquatic food chains.
 - **Impact on Plants:** Nitrogen deposition from acid rain causes defoliation, discoloration, weakened crowns, and increased vulnerability to pests.
 - **Ozone Damage:** Reduces photosynthesis and slows plant growth, impacting overall vegetation health.

Steps Taken by the Government of India to Curb Air Pollution

- **National Air Quality Index (refer to the infographics)**
- **Policy and Regulatory Framework**
 - **National Clean Air Programme (NCAP), 2019:** Aims to reduce particulate matter concentrations by 40% by 2026 in 131 cities.
 - **Graded Response Action Plan (GRAP):** Emergency measures to combat air pollution in Delhi-NCR.
 - **Commission for Air Quality Management (CAQM), 2021:** Established for improved air quality management in the National Capital Region.
 - **Central Pollution Control Board (CPCB):** Issues directions under the **Air (Prevention and Control of Pollution) Act, 1986**, addressing vehicular emissions, solid waste burning, etc.
- **Air Quality Monitoring and Awareness: System of Air Quality and Weather Forecasting and Research (SAFAR) Portal** provides air quality updates to enhance public awareness and mitigation actions.
- **Pollution Control and Sustainable Transport**
 - **National Electric Mobility Mission Plan (NEMMP) 2020:** Promotes electric vehicles under the FAME India Scheme.
 - **Vehicular Pollution Control:** Cleaner fuels (CNG, LPG, BS-VI standards), ethanol blending, and promotion of public transport.
- **Clean Energy Initiatives:** Targets **50% non-fossil fuel electricity generation by 2030** under Nationally Determined Contributions (NDCs); promotes LPG usage under **Pradhan Mantri Ujjwala Yojana** for rural households.

Ways to curb urban air pollution in India

- **Urban Planning and Green Initiatives:**
 - **Green Spaces:** Promote vegetation in urban areas through urban gardens, living plant walls to combat greenhouse gas emissions and counter urban heat island effect.
 - **Clean Air Zones:** Establish clean air zones with strict emissions standards in high-pollution areas.
 - > For eg., London's Ultra-Low Emission Zone (ULEZ) reduced NO₂ by 44% and PM2.5 by 27%.
- **Sustainable Transportation:** Reallocate road space, invest in public transport, designate pedestrian-only areas, and enhance cycling facilities.
 - For eg., Copenhagen's **Green Wave technology** coordinates traffic lights for cyclists, to promote cycling.
- **Technological and Scientific Solutions**
 - **Technology Modifications:** Adopt cleaner technologies such as fuel cell vehicles, ultra-low sulfur fuels, or alternative fuels like methanol (Brazil) and hydrogen fuel (Japan).
 - **Artificial rain via cloud seeding:** It involves dispersing materials such as silver iodide, into the clouds; which act as nuclei around which moisture can condense and fall as rain; helping settle pollutants and smog.
- **Waste Management:** Use methods like bio-remediation (drying of waste) and biomining to process landfill waste.
 - For eg: Dhapa landfill of Kolkata has reduced landfill fires and improved air quality.
- **Integrated Policy Approaches**
 - **Airshed Management:** Address pollution holistically by focusing on natural flows and dispersion patterns across regions.
 - **International Cooperation:** Revive agreements like the Malé Declaration (1998) to tackle transboundary pollution with regional partners (Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, Sri Lanka).

Related News

Air Quality Dashboard By ICIMOD

International Centre for Integrated Mountain Development (ICIMOD) has unveiled an **Air Quality Dashboard**.

About Air Quality Dashboard:

- It **combines ground sensor data** with satellite imagery to provide a comprehensive view of air pollution across local, sub-regional and regional scales.
- It is powered by the **Weather Research and Forecasting model coupled with Chemistry (WRF-Chem)**.
- This model reveals the **alarming spread of PM2.5 plumes across the region**, including hotspots like Lahore, New Delhi and Kolkata.

About PM 2.5 & 10

- **PM10:** Particles that are **10 microns or less** in diameter.
- **PM 2.5:** Particles that are **2.5 microns or less** in diameter.

5.6. NEWS IN SHORTS


5.6.1. IPBES NEXUS ASSESSMENT REPORT

Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) released Nexus Assessment Report


- Report is also known as the **Assessment Report on the Interlinkages Among Biodiversity, Water, Food and Health**.
- It offers a scientific **assessment of complex interconnections among nexus elements – biodiversity, water, food, health and climate change** – and explores response options to maximize co-benefits.

Key findings

- **Unaccounted-for costs** of current economic activity – reflecting impacts on nexus elements – are at least **\$10-25 trillion per year**.
 - Existence of such unaccounted-for costs, alongside direct public subsidies, enhances **private financial incentives to invest in nature damaging economic activities**.
- **Biodiversity decline per decade** for last 30-50 years is **2-6%**, reducing ability of ecosystems to sequester carbon and accelerating climate change.
- In last 50 years, **global trends in indirect socio-economic drivers of biodiversity loss** such as increasing waste, overconsumption and population growth **intensify the direct drivers** like land and sea-use change, pollution, invasive alien species etc.
- **Unsustainable freshwater withdrawal**, wetland degradation and forest loss have decreased water quality and climate change resilience.
- Around **50% of emerging infectious diseases** are driven by **interconnections between ecosystem, animal and human health**.



About Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)



Genesis: Established in 2012 to strengthen the **science-policy interface** for biodiversity and ecosystem services for conservation and sustainable use of biodiversity, human well-being and sustainable development.

Membership: Independent intergovernmental body comprising 150 member Governments

India is a founding member ✓

Secretariat Service: It is not a UN body but UN Environment Programme provides secretariat services to IPBES.

Way ahead

- **Adopting synergistic approaches** restoring carbon-rich ecosystems forests, mangroves etc.
- **Management of biodiversity** to reduce risks of diseases spreading from animals to humans.
- **Others:** Reliance on urban nature-based solutions, knowledge of indigenous peoples, adopting sustainable agricultural practices, one health approach etc.

5.6.2. GLOBAL STATUS OF SALT-AFFECTED SOILS REPORT BY FAO

FAO's first major assessment of soil 'Global Status of Salt-Affected Soils', report released

- **Salt-affected soils** either have **elevated amounts of soluble salts (saline soils)** or **exchangeable sodium ions (sodic soils)** measured in terms of high electrical conductivity, adversely affecting the soil fertility & growth of plants.

Factors increasing focusing on and sodification

- **Anthropogenic factors:**
 - **Inefficient agricultural practices:** Overuse of fertilizers, poor-quality water & overexploitation of aquifers for irrigation, inadequate drainage systems etc.
 - **Deforestation:** Removal of **deep-rooted vegetation** (dryland salinization).
 - **Others: Excessive water pumping** in coastal and inland areas, **mining activities**, etc.
- **Natural factors: Climate crisis** increasing aridity; **permafrost thawing**; etc.

Key findings of the report

- **Global**
 - **Coverage: ~10% (~1.4 billion ha) of global land area** is affected, with probable increment to 24-32%.
 - **Most affected countries: Australia** (area wise), and **Oman** (percentage wise).
- **India specific**
 - **Coverage: ~2.1% (~6.72 million ha) of its total geographic area** is affected.
 - **Most affected states (area wise): Gujarat** followed by **U.P, Maharashtra, West Bengal** and Rajasthan.
 - **~17% of irrigated agricultural land** due to use of **brackish groundwater for irrigation**.
- **Sustainable management practices** includes mitigation efforts like mulching, adaptation efforts like breeding salt-tolerant plants, bioremediation, etc.

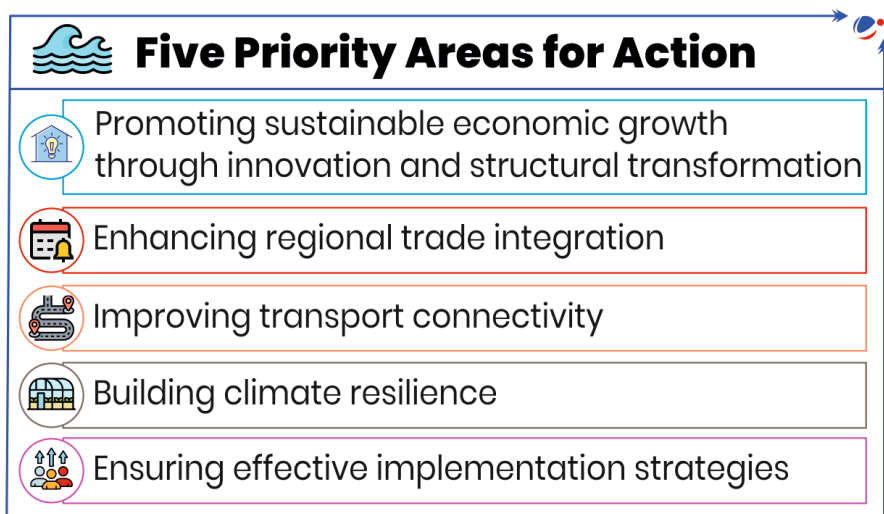
5.6.3. PROGRAMME OF ACTION FOR LANDLOCKED DEVELOPING COUNTRIES FOR DECADE 2024-2034

UN General Assembly adopted Programme of Action for Landlocked Developing Countries for Decade 2024-2034

- It builds on **Vienna Programme of Action** (2014-2024) & **Almaty Programme of Action** (2003), which laid groundwork for addressing challenges faced by **Landlocked Developing Country (LLDCs)**.
- It identifies **5 priorities** (refer Infographic) & sets various targets under it.

Key Targets

- **Boost labour productivity & job opportunities** across all sectors by 50% by 2034.
- **Provide support** to develop special economic zones, industrial parks, etc.
- **Reduce/eliminate arbitrary & unjustified non-tariff barriers** & double their global merchandise exports by 2034.



- **Effective implementation of WTO Agreement on Trade Facilitation in all LLDCs.**
- Reduce disaster risk in LLDCs through full implementation of **Sendai Framework for Disaster Risk Reduction 2015–2030**.

About (LLDCs)

- Landlocked countries are countries that **do not have direct access to the sea**. There are **32 LLDCs** with a population of about 570 million.
- **Liechtenstein & Uzbekistan** are **doubly landlocked countries** (surrounded by other landlocked countries).

Challenges faced by LLDCs

- **Hurdles in Trade:** Relying on transit nations, leads to higher trade costs, delays & reduced competitiveness in global markets.
- **Slower Economic Growth:** Due to **limited trade & export opportunities, reduced FDI** etc.
 - Global merchandise exports from LLDCs accounts for just **1.1% of total global exports (2022)**.

5.6.4. BUSINESS4LAND INITIATIVE

The Business 4 Land Forum at COP16 of UNCCD highlights the private sector's key role in promoting sustainable land use.

- UNCCD (United Nations Convention to Combat Desertification), 1994 is the sole legally binding international agreement linking environment and development to sustainable land management.

About Business 4 Land Forum (2024)

- It is the **UNCCD's main initiative** to engage the private sector in sustainable land and water management.
- **Aim:** Restore 1.5 billion hectares of land by 2030, supporting **Land Degradation Neutrality (LDN)** and improving drought resilience.

5.6.5. PLASTIC POLLUTION TREATY NEGOTIATIONS ADJOURN IN BUSAN, SOUTH KOREA

Countries **negotiating a legally binding instrument on plastic pollution** concluded their fifth session **without finalization of a treaty**.

- The Treaty being negotiated, has been mandated by a **2022 UN Environment Assembly resolution**.
 - It seeks to **addresses the full life cycle of plastic**, including its production, design and disposal.

Factors leading to non-finalization of treaty

- **Production Capping:** Demand for **production cap goals** by European union, Latin American and African countries was opposed by countries including **India and China**.
- **Unclear definition: Lack of clear language** on elimination of certain plastic chemicals and products.
 - Draft text clearly defined plastic and plastic products but **did not reflect definitions of** microplastics, nanoplastics, primary plastic polymers, and recycling.

India's stance

- **Impact on Development:** India stated its **inability to support any measures to regulate the production of primary plastic polymers** as it could impact development rights of nations.
- **Defining Scope:** Scope of instrument should be **limited to addressing plastic pollution only** without overlapping with the mandate of other multilateral environmental agreements.
- **Phase out period:** India did not support **inclusion of any list with phase out dates**, at this stage.
- **Assistance:** Due consideration to national circumstances and capabilities should be given and **provision of financial and technical assistance**, including technology transfer to developing countries, should be included.

5.6.6. CHAMPIONS OF EARTH AWARD, 2024

UNEP has announced **Champions of Earth Award, 2024**.

- 2024 **Lifetime Achievement category** is awarded to Indian ecologist **Madhav Gadgil** for protecting people and planet through research and community engagement.
- He is **renowned for his work in ecologically fragile Western Ghats region of India**, a unique global biodiversity hotspot.

About Champions of Earth Award

- **Awarded annually** since its inception in 2005, it is **UN's highest environmental honour**.
- In 2024, UNEP honours **individuals and organizations working on innovative and sustainable solutions to restore land**, enhance drought resilience, and combat desertification.
- **Given in categories like** Policy leadership; Inspiration and action; Entrepreneurial vision; Science and innovation.

5.6.7. AMENDMENT TO ALMM ORDER, 2019

Ministry of New and Renewable Energy (MNRE) approved amendment to ALMM Order, 2019

- The amendment to the **Approved Models and Manufacturers of Solar Photovoltaic Modules (ALMM) Order, 2019** aimed at boosting domestic solar manufacturing.

Key Highlights of Amendment:

- **Introduction of ALMM List-II (Solar PV Cells):** All solar PV modules used in government-backed projects, net-metering projects, & open-access renewable energy initiatives must source their solar cells from ALMM List-II.
 - **List I under ALMM framework was issued in 2021** mandating to source PV modules from models & manufacturers included in ALMM List I.
- **Exemption: Projects** that have already been awarded/completed their bidding process before the issuance of this order.
- **Promoting Technology Innovation: Thin-film solar modules** manufactured in integrated solar PV module manufacturing units will be considered in compliance with requirement to use solar PV cells from List-II.
- **Implementation:** From **1st June 2026**.

Challenges for India's solar Manufacturing Sector:

- **Inadequate manufacturing capacity:** India imports solar equipment from **China (62%), Vietnam, Malaysia** etc.
- **Limited access to affordable technology** for mining & processing of **critical minerals** hampers **solar cell & module production**.
- **Other: Low R&D**, difficulties of sourcing of raw materials, skilled labour shortage etc.

Initiatives Promoting Domestic Solar Manufacturing



Production Linked Incentive (PLI) Scheme for High Efficiency Solar PV Modules.



Scheme for "Development of Solar Parks and Ultra Mega Solar Power Projects" extended up to **FY2025-26**.



Foreign Direct Investment (FDI) up to 100 percent under the **automatic** route.



Other: Domestic Content Requirement (DCR), imposition of **Basic Customs Duty** on import of solar PV cells & modules.

5.6.8. CORPORATE AVERAGE FUEL EFFICIENCY (I) NORMS

Centre is likely to impose penalties on some carmakers in violation of Corporate Average Fuel Efficiency (I) norms.

About I Norms

- These norms were first notified by the **Government in 2017**, under the **Energy Conservation Act, 2001**.
- **Aim:** mitigate fuel consumption by lowering CO₂ emissions, reduce oil dependency and air pollution.

- Norms relate the **gasoline equivalent corporate average fuel consumption (in litres/100 km)** to the corporate average kerb weight of all the cars sold by any **original equipment manufacturer (OEM)** in a fiscal year.
- **Applicability:** for **petrol, diesel, liquefied petroleum gas, CNG, etc** with gross vehicle weight less than **3500kgs**.

5.6.9. INDIA LAUNCHED THE WORLD'S FIRST GREEN STEEL TAXONOMY

Taxonomy (or classification) was launched by the **Union Ministry of Steel**.

Key features of Green Steel Taxonomy

- **Definition of Green Steel:** Steel with CO₂ equivalent emission intensity of **less than 2.2 tonnes of CO₂e per tonne of finished steel**.
- **Star Rating System** (based on greenness): The **threshold limit** for star ratings will be **reviewed every three years**. And the current threshold is
 - **Five-star green-rated steel:** Emission intensity lower than 1.6 tonnes.
 - **Four-star green-rated steel:** Emission intensity between 1.6 and 2.0 tonnes.
 - **Three-star green-rated steel:** Emission intensity between 2.0 and 2.2 tonnes.
- **Nodal Agency:** **National Institute of Secondary Steel Technology (NISST)** will be nodal agency for measurement, reporting, and verification (MRV) and issuance of **greenness certificates (issued annually)** and **star ratings**.

Importance of Green Steel Taxonomy

- **Advancing National Mission on Green Steel:** A proposed ₹15,000 crore mission under the **upcoming 'Green Steel Policy'** to support 80% of steel industry.
- **Boosting Global Competitiveness** Helps Indian steel remain competitive amid global policies like the EU's Carbon Border Adjustment Mechanism (CABM). Positions India as a leader in green steel manufacturing.
- **Promoting Innovation and Growth:** Represent a transformative framework in steel production that will **foster innovation, and create a market for low-carbon products in India**.

Key Initiatives to decarbonise steel sector in India



National Mission for Enhanced Energy Efficiency: It is one of the eight missions under the National Action Plan for Climate Change (NAPCC).



Perform Achieve & Trade (PAT) Scheme: Market-based mechanism under NMEER to enhance energy efficiency through **Energy Saving Certificates (ESCs)**.



Other initiatives: Green Hydrogen Energy Mission, National Solar Mission, Steel Scrap Recycling Policy, 2019, etc.

5.6.10. INDIA CONDUCTS FIRST-EVER GANGES RIVER DOLPHIN TAGGING IN ASSAM

The tagging exercise has been conducted under **Project Dolphin**.

- Tagging involves attaching a device, marker, or tag to an animal for identification or tracking.

About the Tagging initiative

- **Objective:** It will help in understanding their **migratory patterns, range, distribution, and habitat utilization**, particularly in fragmented river systems.
- It was conducted by the **Ministry of Environment, Forest and Climate Change (MoEFCC)**, and implemented by the **Wildlife Institute of India (WII)** in collaboration with the Assam Forest Department.
 - It was funded by the **National CAMPA Authority**.
 - > **National CAMPA Authority**, established under the **Compensatory Afforestation Fund (CAF) Act, 2016**, manages the **National Compensatory Afforestation Fund (under the Public Account of India)**.

About Project Dolphin

- A MoEFCC-funded project launched in 2020 modelled after Project Tiger.
- It aims at conserving the Ganges River dolphins and the riverine ecosystem.

About Ganges River dolphin (*Platanista gangetica*)

- It is **India's National Aquatic Animal** and is **endemic** to the **Indian sub-continent**.
- **Habitat:** Restricted to **freshwater** (**Ganges-Brahmaputra-Meghna** and **Karnaphuli-Sangu** river systems of **Nepal, India, and Bangladesh**)
 - Presently, **India** houses about **90%** of the global population of the dolphins.
- **IUCN Status:** Endangered

Key Features of Ganges River dolphin



Essentially blind, rely on **Echolocation** (determining the location of objects using reflected sound) for biological needs.



Physical appearance includes long thin snout, rounded belly, stocky body, and large flippers. **Females are larger than males.**



Umbrella species, known as the **"Tiger of the Ganges"**



Locally called 'Susu' due to the unique noise it makes while breathing.

To know more about Ganga River Dolphin, refer to Article 5.6. Ganga River Dolphin in March 2024 Monthly Current Affairs Magazine.

5.6.11. RATAPANI WILDLIFE SANCTUARY DECLARED AS TIGER RESERVE

Ratapani Wildlife Sanctuary declared as the 8th Tiger Reserve of Madhya Pradesh

- The **other tiger reserves** in Madhya Pradesh are Kanha, Satpura, Bandhavgarh, Pench, Sanjay Dubri, Panna and Veerangana Durgavati.

About Ratapani Wildlife Sanctuary

- **Location:** Situated in Raisen and Sehore district of Madhya Pradesh.
- **Major sites:** Encompasses a World Heritage Site **"Bhimbetka Rock Shelters"** and many other sites like Ginnourgarh Fort, POW camp, Keri Mahadeo, Jholiyapur dam etc.
- **Flora and Fauna:**
 - The forest in Ratapani is **dry deciduous and moist deciduous type**, with **55 percent of area covered by teak**.
 - **Major animals** are tigers, leopard, sloth bear, hyena, spotted deer, sambar deer etc.

Indian Government efforts to protect Tigers



Project Tiger: it is an ongoing Centrally Sponsored Scheme of the Ministry of Environment, Forests and Climate Change to provide assistance to the tiger States.



Conservation Assured' Tiger Standards (CAITS) accreditation of Tiger Reserves: Till December 2023, a total of **23 tiger reserves of India have received CAITS accreditation.**



International Big Cat Alliance (IBCA): India has launched IBCA to secure the future of **big cats and the landscapes they thrive in.**

Process of declaring Tiger Reserves in India

- **Tiger Reserves are notified by State Governments** as per provisions of **Section 38V of the Wildlife (Protection) Act, 1972** on the advice of the National Tiger Conservation Authority.

- **The following steps are involved in the notification:**
 - The proposal is **obtained from the State**.
 - In-principle approval is communicated from the **National Tiger Conservation Authority**, soliciting detailed proposals under section **38V of the Wildlife (Protection) Act, 1972**.
 - **National Tiger Conservation Authority** recommends the proposal to the State after due diligence.
 - The **State Government notifies** the area as a Tiger Reserve.

5.6.12. MADHAV NATIONAL PARK

National Tiger Conservation Authority (NTCA) approves Madhav National Park as the newest Tiger Reserve of Madhya Pradesh.

- **NTCA** is a statutory body constituted under **WPA, 1972**, as amended in 2006 to **administer Project Tiger**.

About Madhav National Park

- **Location:** Situated in northern part of **Madhya Pradesh in Shivpuri District (Upper Vindhyan Hills)**.
- **Background:**
 - Park was **hunting ground of Mughal emperors and Maharaja of Gwaliora** and got the status of a National Park in 1958.
- **Fauna:** Antelopess (Nilgai, Chinkara), Deer (Chital, Sambar and Barking Deer), Leopard, Wolf, Jackal, Fox, Wild Dog, Wild Pig etc
- **Flora:** Represents **Northern Tropical dry deciduous mixed forest** as well as **Dry thorn forest**.
- **Other Feature:** Sakhya Sagar and Madhav Sagar are the two lakes in the park.
 - **Madikhera dam** is situated in the North Western part of the Park.

5.6.13. SPONGE CITY

The emerging concept and construction of **“sponge cities”** is an effective approach to solving urban floods.

About Sponge city:

- A sponge city refers **to sustainable urban development including flood control**, water conservation, water quality improvement and natural ecosystem protection.
 - **E.g.**, green roofs, constructed wetlands, increased tree cover etc.
- **Benefits:** Sponge cities increase air humidity, regulate urban microclimates, and reduce public health risks.
- **Sponge cities around the world:** Tirana in Albania is creating a ring forest to clean the air; Berlin’s use of green roofs and vertical gardens

5.6.14. DENALI FAULT

New research shows that three sites **spread along Denali Fault** were once a smaller united geologic feature.

- **Location:** It is a **major strike-slip fault** located in Alaska, USA, part of broader **tectonic dynamics of Pacific Ring of Fire**.

Fault and its Types:

- A fault is a **sharp break in the Earth’s crustal rocks**.
- **Types:**
 - **Normal fault:** When two plates, one on top of other, slide past each other
 - **Reverse faults:** When one plate slides under the other, creating a vertical offset.
 - **Strike-slip faults:** When two plates move horizontally past each other.
 - **Oblique slip fault:** Two blocks on either side of fault move in two different directions simultaneously, combining both normal or reverse faulting with a strike-slip component.

5.6.15. KILAUEA VOLCANO

Recently, **Kilauea volcano** erupted on **Hawaii's Big Island**.

- **99%** of gas molecules emitted during a volcanic eruption are **Water Vapor (H₂O), Carbon Dioxide (CO₂), and Sulfur Dioxide (SO₂)**.
- Remaining 1% is comprised of small amounts of hydrogen sulfide, carbon monoxide, hydrogen chloride, hydrogen fluoride etc.

About Kilauea volcano

- **About:** Among one of world's most active volcanoes.
- **Location:** Southeastern part of the island of Hawaii, Hawaii state, U.S.
- **Features:**
 - The **Volcano's summit has collapsed to form a caldera**, a broad shallow depression.
 - Its **slopes merge with those of the nearby volcano Mauna Loa** (present in Hawaii's Volcanoes national park).



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6. SOCIAL ISSUES

6.1. DIGITAL CONTENT CREATORS (DCC)

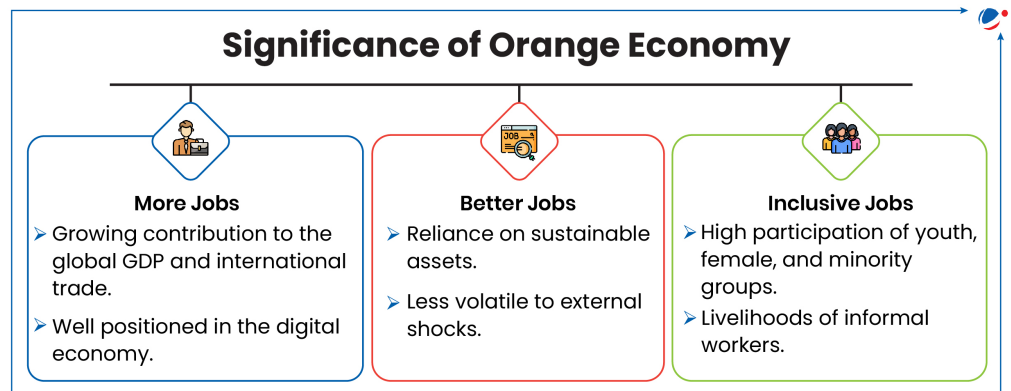
Why in the News?

A UNESCO “**Behind the Screens**” survey highlighted the growing influence of **Digital Content Creators (DCCs)** while raising a question on their credibility.

About Digital Content Creators (DCCs)

- They are individuals who **produce and share digital content** such as text, videos, images, podcasts, and interactive media across platforms like YouTube, Instagram, and TikTok.

- DCCs play a crucial role in the broader Creator Economy (or **Orange Economy**), which includes cultural and creative industries producing goods, services, and content rooted in cultural or artistic origins.



- Globally, the creative economy generates **over**

\$2 trillion annually and supports nearly **50 million jobs worldwide**, according to the ‘**Creative Economy Outlook 2024**’ report of **UN Trade & Development**.

- In India, the creative industry is valued at **\$30 billion**, employing **8% of India’s workforce**.

Risks and Implications Posed by Digital Content Creators

- **Social and Ethical Risks:**

- **Misinformation and Fake News:** The ease of creating digital content accelerates misinformation, manipulating opinions, inciting harm, and eroding public trust.
 - > E.g., **62% DCCs do not carry out rigorous and systematic fact-checking** of information prior to sharing it (behind the screen report).
- **Privacy Violations:** Content creators often share personal information, **either intentionally for engagement or unintentionally due to lack of awareness**, leading to privacy breaches.
 - > E.g., the **Cambridge Analytica scandal (2018)** revealed Facebook harvested millions of users’ data, including that of content creators, to target political ads and influence elections.
- **Algorithmic Amplification:** Social media algorithms often prioritize engagement over accuracy, creating an **echo chamber that amplifies disinformation** and reinforces **misleading narratives**.
 - > When creators prioritize popularity (**41.6% use likes and views as a credibility metric**), they’re incentivized to create sensational content rather than verified information.
- **Lack of training and literacy:** DCCs are not fully aware of their **rights and responsibilities** as well as **legal frameworks** governing their content (patent, copyright laws etc.).
- **Other issues:** Promotion of unrealistic standards; Lack of Transparency in Sponsored Content; Online harassment etc.

- **Regulatory Challenges**

- **Lack of a Unified Regulatory Framework:** Although the **Information Technology Act, 2000**, and **Consumer Protection Act, 2019**, govern digital content, there is **no unified framework** specifically designed to address the unique challenges of the creator economy.
- **Regulatory Overlaps and Jurisdictional Conflicts:** Various agencies, including MeitY, the Department of Consumer Affairs, and TRAI, regulate digital content.

- **Economic Risk**
 - **Losses in Conventional Media:** The shift in news consumption from traditional media (print, TV) to digital platforms has led to financial losses for conventional media.
 - > Online platforms gain from traditional media content **without investing in journalistic processes** like training, editorial checks, or news verification, giving them an unequal bargaining edge.

Ways to Mitigate Risks Posed by Digital Content Creators

- **Promote media literacy programs and fact-checking initiatives** to combat misinformation.
 - **E.g., Google News Initiative (GNI):** Google has partnered with fact-checking organizations worldwide to provide training and tools for journalists and content creators to verify information.
- **Implement data protection laws and privacy education** for content creators.
 - **E.g., General Data Protection Regulation (GDPR):** In the European Union, GDPR enforces strict data protection rules, requiring platforms and creators to handle user data responsibly.
 - **E.g., India's Digital Personal Data Protection Act, 2023:** It aims to protect user privacy and hold platforms accountable for data breaches.
- **Establish fair revenue-sharing models** and support for traditional media.
 - **E.g., Australia's News Media Bargaining Code:** It requires tech giants like Google and Facebook to pay news publishers for using their content.
- **Ensure a legislative balance** between Digital Content Creator's right to freedom of speech and expression and excising state's right to regulate content through sanctions.
 - **E.g., redrafting Broadcasting Services (Regulation) Bill, 2024** (it was withdrawn due to lack of support).
- **Enforce advertising regulations** and promote **clear disclosure practices**.
 - **E.g.,** In India, the **Advertising Standards Council of India (ASCI)** has called out influencers for not using clear disclaimers like **#ad** or **#sponsored** in promotional posts.
- **Encourage ethical content creation** and transparency to rebuild public trust.
 - **E.g., UNESCO's Media and Information Literacy (MIL) Program:** UNESCO has launched initiatives to educate content creators and the public on critical thinking and media literacy.
 - **E.g., India's Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (See box)**

The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.

- The Rules are a comprehensive set of regulations to **govern digital intermediaries, social media platforms, online gaming intermediaries, and digital media publishers**.
- They were created to address concerns about **transparency, accountability, and user rights in digital media**
- **Key aspects of the Rules:**
 - Social Media Platforms must inform users not to host or **share unlawful content**, including content that is **defamatory, obscene, or harmful to children**.
 - They must appoint a **Grievance Officer** to address user complaints and resolve them **within 15 days (72 hours for certain complaints)**.
 - **News and Current Affairs:**
 - > Publishers must adhere to **the Norms of Journalistic Conduct** and the **Programme Code** under the **Cable Television Networks Regulation Act, 1995**.
 - > Content prohibited **by law must not be published**.

To know more about influence of social media influencers, refer to Article 9.2. Social Influence and Persuasion in times of Social Media and Influencers in August 2024 Monthly Current Affairs Magazine.

6.2. SOCIAL MEDIA ADDICTION IN CHILDREN

Why in the news?

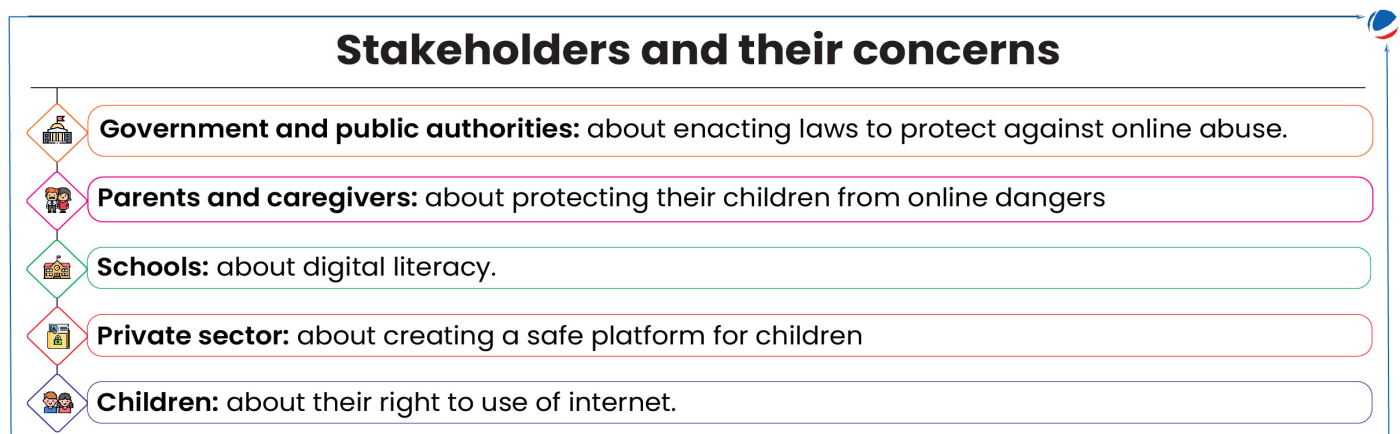
Australia has become the first country to pass a law banning social media use for children under the age of 16.

Key Provisions of the Online Safety Amendment (Social Media Minimum Age) Bill 2024

- **Minimum Age Requirement:** Require age-restricted social media platforms to take reasonable steps to prevent Australians under 16 years old from having accounts.
- **Responsibility of Social Media Providers:** Companies are responsible for ensuring children under the minimum age cannot access their platforms.
- **Fines for Non-Compliance:** Impose maximum penalties of up to \$49.5 million for a breach of the minimum age obligation.

Reasons for Childs addiction to Social Media

- **Peer Influence:** Children are influenced by peers and social media’s validation system (likes, **comments, shares**).
- **Instant Gratification:** Social media offers immediate rewards, **releasing dopamine**, which can lead to addictive behavior as children crave these instant rewards.
- **Parents:** In modern society, especially in urban society where both parents are working, parents are unable to provide adequate attention to a child, leading to a modern phenomenon of the “iPad kid”.
- **Escapism:** Children turn to social media to escape real-world issues **like loneliness and stress**, developing emotional dependency on the platforms.
- **Algorithm-Driven Engagement:** Algorithms tailor content to keep children engaged longer, making it harder to stop using social media.



Arguments supporting and opposing the ban

Supporting the ban	Opposing the ban
<ul style="list-style-type: none"> • Cyberbullying: Social media can spread harmful content, causing depression, anxiety, and even suicide. • Excessive Screen Time: it can lead to reduced physical activity, poor sleep patterns, and other health-related issues. • Attention Problems & Academic Impact: Constantly switching between digital content reduces focus, affecting school performance. • Impaired Social Skills: Excessive social media use limits face-to-face interactions, impairing relationship-building and emotional understanding. <ul style="list-style-type: none"> ○ For E.g., use of filters and Photoshop creates a distorted sense of reality. • Dangerous Viral Trends: Risky viral challenges like the “Blackout Challenge” (breath-holding) and “Devious Lick” (stealing) can result in injuries, legal trouble, and other harmful outcomes. 	<ul style="list-style-type: none"> • Socialization and Learning: Social media helps teens stay connected, collaborate on homework, and develop skills like creativity and problem-solving. • Ineffectiveness of Banning: Banning social media is hard to enforce and may push teens to unsafe spaces, like the Dark Web. • Impractical Age Limits: Setting age limits (like 13 or 16) for social media doesn’t guarantee readiness, as maturity levels vary. • Focus on Improving Platforms: Instead of banning, the focus should be on making social media platforms safer and more child-friendly. • Learning from Mistakes: Banning social media prevents teens from learning how to navigate online risks, hindering their ability to build confidence and resilience in the digital world.

Government initiative to protect children online

- **Section 67B of the Information Technology (IT) Act, 2000:** Provides stringent punishment for publishing, transmitting, or viewing Child sexual abuse material online.
- **Digital Personal Data Protection Act, 2023:** Requires data fiduciaries to collect “verifiable parental consent” for processing personal data of children under 18.
- **The National Commission of Protection of Child Rights (NCPCR):** It has established an online complaint management system.

Global steps to protect children online

Country	Policy/Regulation	Details
United States	Children’s Online Privacy Protection Act (COPPA) (1998) & Children’s Internet Protection Act (CIPA) (2000)	<ul style="list-style-type: none"> • COPPA mandates parental consent for collecting personal data from children under 13. • CIPA restricts inappropriate content in schools and libraries
European Union	General Data Protection Regulation (GDPR)	Parental consent is required for the processing of personal data for children under the age of 16, though the member states can lower that limit to 13.
UK	Online Safety Act (2023)	Sets tougher standards for social media platforms such as Facebook, YouTube and TikTok – including on appropriate age restrictions.

Way ahead

- **Safety-by-Design**
 - **Privacy by Default:** Tech companies must provide default privacy settings for minors, especially regarding data collection. For example, **the UK’s Age Appropriate Design Code.**
 - **AI Detection of Harmful Content:** Use AI tools to identify and remove harmful interactions or inappropriate content in children’s feeds.
- **Regulations:**
 - **Accountability for Tech Companies:** Instead of banning, tech companies can be held accountable for creating safer, child-friendly spaces.
 - > Social media **platforms like Meta set age limits (13+) to ensure children’s safety online.**
 - **Investing in a Children’s Internet:** Governments could create a “Children’s Internet” – a safe, educational space free from mainstream social media risks.
- **Improving Digital Skills and Education:** Educate children and parents about responsible online behavior, digital literacy, and **self-regulation.**
 - For E.g., **Kerala’s Digital De-Addiction (D-DAD)** centres offer free counseling for kids struggling with digital addiction.
- **Parental Involvement and Control:**
 - **Create Accounts Together:** Set up social media accounts with your child to ensure proper privacy settings, strong passwords, and content limitations.
 - **Establish Screen Time Limits:** Implement tools to manage screen time, promoting healthier digital habits.
 - **Enable Activity Reports:** Regularly review detailed reports on your child’s social media activity to identify any concerns early.
 - > **Protect Personal Information:** Teach your child to keep personal details (address, phone number) private to avoid online dangers.
 - > **Report and Block Unwanted Interactions:** Teach your child how to report or block harmful accounts to protect against cyberbullying and harassment.

Related News: Brain Rot

The term “brain rot” has been named the **Oxford Word of the Year 2024**.

About Brain Rot

- It is the **result of overstimulation of human brain**.
- It refers to a **decline in mental health and cognitive abilities** due to excessive consumption of **low-quality online content**, particularly on social media.
- It has been **associated with issues like decreased attention span, reduced critical thinking**, mental health issues etc.

6.3. MANUAL SCAVENGING

Why in the News?

A Bench of Supreme Court sought an action taken report on each of its directions issued on **Dr Balram Singh V. Union of India & Ors (2023) case**

Directions issued in Dr Balram Singh V. Union of India & Ors (2023) case

- Apex court had **issued directions to the Union and States** to take measures to eradicate manual scavenging and hazardous cleaning in the country.
- The **Union, State and Union Territories** are directed to ensure that **full rehabilitation (including employment to the next of kin, education to the wards, and skill training)** measures are taken in respect of sewage workers, and those who die.
- **Enhances the compensation** payable for **sewer deaths to ₹30 lakh from the earlier ₹10 lakh**.
 - In the case of **sewer victims suffering disabilities**, enhances compensation to **₹ 20 lakhs from earlier ₹ 10 lakhs**.
- **Conduct a comprehensive national survey within one year to identify manual scavengers** across states and union territories.
- NCSK, NCSC, NCST and the Union government are required to **coordinate and prepare training and education modules**, for information and use by district and state level agencies, under the **2013 Act**.

About Manual Scavenging

- **As per Prohibition of Employment as Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013**, Manual scavenging refers to the practice of manually cleaning, carrying, or handling human excreta from insanitary latrines, open drains, or pits.
- **Manual Scavenging** being officially banned since **1993** under the Employment of Manual Scavengers and its Prohibition Act (1993).
- **As on 31.07.2024**, out of 766 districts in the country, **732 districts have reported themselves as manual scavenging-free**.

Government Steps to end manual scavenging

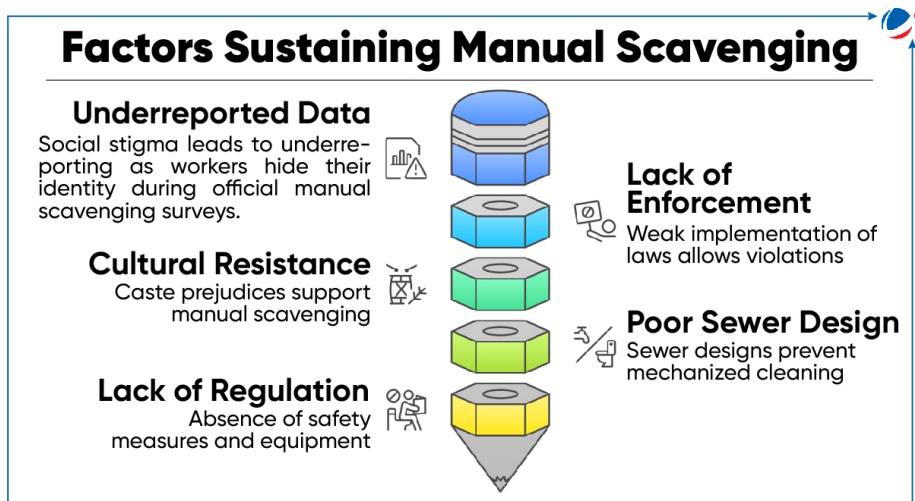
- **Legislative Measures**
 - **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**: Provide for the prohibition of employment as manual scavengers, rehabilitation of manual scavengers and their families.
 - > Every offence under act is a cognizable and non-bailable offence.
 - **Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993**: Act prescribes punishment to individual who employs manual scavengers as well as to those who construct dry toilets or latrines.
 - **Others**: The protection of Civil Rights Act, 1955; The SC/ST (Prevention of Atrocities) Act, 1989; etc.
- **Schemes**
 - **National Action for Mechanised Sanitation Ecosystem(NAMASTE scheme) 2023**: A Central Sector Scheme, implemented by National Safai Karamchari Financial Development Corporation under Social Justice Ministry.
 - > To ensure safety, dignity and rehabilitation of hazardous sanitation workers.

- **Swachh Bharat Mission (Urban 2.0):** Funds amounting to Rs 371 Cr have been approved for release to States to be provided to smaller towns to acquire the machines and improve their state of mechanization.
- **Dedicated institution**
 - **National Commission for Safai Karamcharis (NCSK):** Initially created as a statutory body in 1994 for three year, became a **non-statutory body** under Social Justice Ministry after its Act lapsed.
 - **National Safai Karamchari Financial Development Corporation(1997):** operates as a non-profit company under Social Justice Ministry to uplift Safai Karamcharis through various loan and non-loan based schemes.

Way Forward

- **As per National Human Rights Commission Suggestions**

- The distinction between **sanitation workers and manual scavengers** in the 2013 Act is necessary.
- **Empanelment of de-sledging market** and regulating its operations.
- Providing of **safety gear** and conducting of **awareness workshops**.
- **Give financial assistance** to those coming up with technological innovations for hazardous waste cleaning.
- **Technological intervention:** Modern sanitation technologies such as automated sewer cleaning machines and robots can significantly reduce the dependence on human labour for cleaning sewers and septic tanks.
 - **Example like Kerala's Bandicoot**, which a robotic scavenger.
- **Upgrading sanitation infrastructure:** Investments in improved sanitation infrastructure, including sewage and sewage treatment systems.
- **Survey and Identification of Manual Scavengers:** Periodic surveys to identify manual scavengers across India to ensure they receive benefits under rehabilitation schemes. **Last survey was conducted in 2018.**



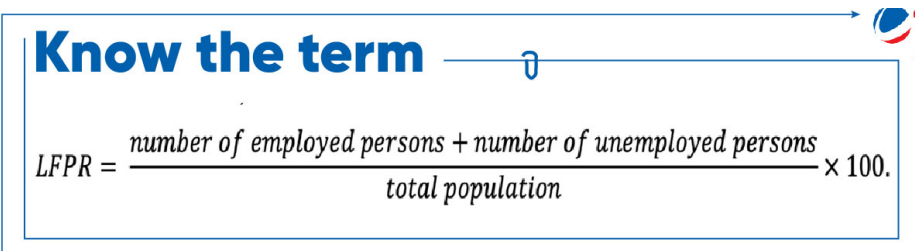
6.4. FEMALE LABOR FORCE PARTICIPATION IN INDIA

Why in the news?

The Economic Advisory Council to the Prime Minister (EAC-PM) has released a working paper highlighting a **dramatic increase** in female Labor Force Participation Rate (LFPR).

Key Findings

- **Rural Female LFPR:** It increased sharply from 24.6% in 2017-18 to 47.6% in 2023-24, (**~69% growth**)
- **Urban Female LFPR:** It rose modestly from 20.4% to 25.4% (**~25% growth**)
- **Regional Variation:** States like Bihar, Punjab, and Haryana have lower female LFPR.
 - In contrast, States like Rajasthan and Jharkhand displayed significant growth.



Factors Influencing female LFPR

The working paper has highlighted 3 key factors

- **Age:** Female LFPR follows a **bell-shaped curve**, rising between ages 20-30, peaking during 30-40 years, and declining sharply thereafter.

- In contrast, male LFPR remains **high (~100%) from ages 30-50**, gradually declining afterward.
- **Marriage:** Marriage significantly reduces female LFPR, especially in urban areas, where the decline is more pronounced than in rural areas.
 - This is mainly due to **household responsibilities**, which are more prevalent in urban settings.
- **Parenthood:** The presence of children under 14 significantly reduces female LFPR, especially among women aged 20-35, and is more pronounced in **urban areas**.
 - This suggests that **childcare responsibilities** play a major role in women's decision to join the workforce.

Reasons for low participation of women in workforce

- **Safety Concerns:** For E.g., the number of workplace sexual harassment cases reported by the National Crime Record Bureau increased from 402 in 2018 to 422 in 2022.
- **The Double Burden:** The **Economic Survey 2024** shows women's unpaid care work **contributes 3.1% to GDP**, while men's contributions are only 0.4%.
- **Education:** Recent Periodic Labor Force Survey (PLFS) data shows that 37.94% of women stay out of the workforce to continue their education.
- **Digital Divide:** For E.g., the **National Family Health Survey-5** (2019-2021) found that **only 33%** of women in India have used the internet.
- **Social Protection:** For E.g., **eShram database** (March 2022) shows that women make up 52.7% of the 287 million registered unorganized workers, surpassing men in this sector.
- **Increased Household Income:** As household income increases, women drop out of the labor force as domestic non-market work is perceived to have a higher status than market work (International Labor Organisation).

Steps taken by the government to enhance LFPR

Area	Scheme	Details
Survival and Education of Females	<ul style="list-style-type: none"> ● Beti Bachao Beti Padhao Scheme ● National Education Policy (NEP), 2020 	<ul style="list-style-type: none"> ● Aims to improve female child survival, safety, and education, addressing the declining sex ratio and raising awareness. ● Prioritizes gender equity in education, with focus on equitable access to quality education, especially for disadvantaged groups.
Safe and Convenient Accommodation	Working Women Hostel	Provides safe accommodation with daycare facilities in urban, semi-urban, and rural areas for working women.
Supporting Women Affected by Violence	One Stop Centre (OSC) and Women Helpline	OSCs are intended to support women affected by violence , in private and public spaces, within the family, community and at the workplace.
Codification of Labor Laws	Labor Codes (Wages, Industrial Relations, Social Security, Occupational Safety, Health and Working Conditions)	Simplifies and rationalizes 29 labor laws to harmonize the needs of job seekers, workers, and employers. Aims to promote employment and ensure easier compliance .
Equal Opportunity and Work Environment	<ul style="list-style-type: none"> ● Protective Provisions for Women Workers ● The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 	<ul style="list-style-type: none"> ● Includes paid maternity leave (26 weeks), crèche facilities in larger establishments, and provisions for night shifts with safety measures. ● It protects women from sexual harassment in the workplace.
Economic Empowerment	<ul style="list-style-type: none"> ● Mahila Shakti Kendra (MSK) ● NAMO Drone Didi 	<ul style="list-style-type: none"> ● To empower rural women through community participation. ● Provide drones to 15,000 women Self Help Groups, which could be rented for agricultural purposes.

Way ahead

- **Social Norms and Education:** Encouraging families to invest in **girls' education**, especially in STEM and vocational training, helps women thrive in the workforce.
 - **For E.g., Girls Who Code (International NGO)** teaches computer science to close the gender gap in tech.
- **Safety and Infrastructure:** Safe streets, reliable transport, and childcare support working mothers.
 - In Burkina Faso, **mobile creches** allow mothers to work while their children play safely.
- **Bridging the Digital Divide:** Digital literacy and internet access help rural women access job opportunities.
 - **For E.g., Google's Internet Saathi** trains women in rural India to teach others about the internet.
- **Addressing the Wage Gap:** Equal pay and flexible work policies can support working women.
- **Formalizing the Informal Sector:** Integrating women in the informal sector into the formal economy improves working conditions.

6.5. NEWS IN SHORTS

6.5.1. SOUTH KOREA BECOMES 'SUPER-AGED' SOCIETY

Recently, South Korean Ministry of the Interior and Safety has formally declared that South Korea has **become a "super-aged" society** as the share of its **population aged 65 or over surpassed 20%**.

- This makes South Korea only the **second country in Asia, after Japan**, to become a 'Super-Aged' Society.
- **According to the UN**, a country is defined as **"aging"** when the share of **people aged 65+** is above **7%**, **"aged"** when it is **14% or more**, and **"super-aged"** when it exceeds **20%**.

Status of Ageing

World

- Global population aged 60+ was **1 billion in 2020**, projected to reach **2.1 billion by 2050**.
- Population aging, initially seen in **high-income countries like Japan**, is accelerating in **low- and middle-income countries**, where two-thirds of the elderly will live by **2050**.

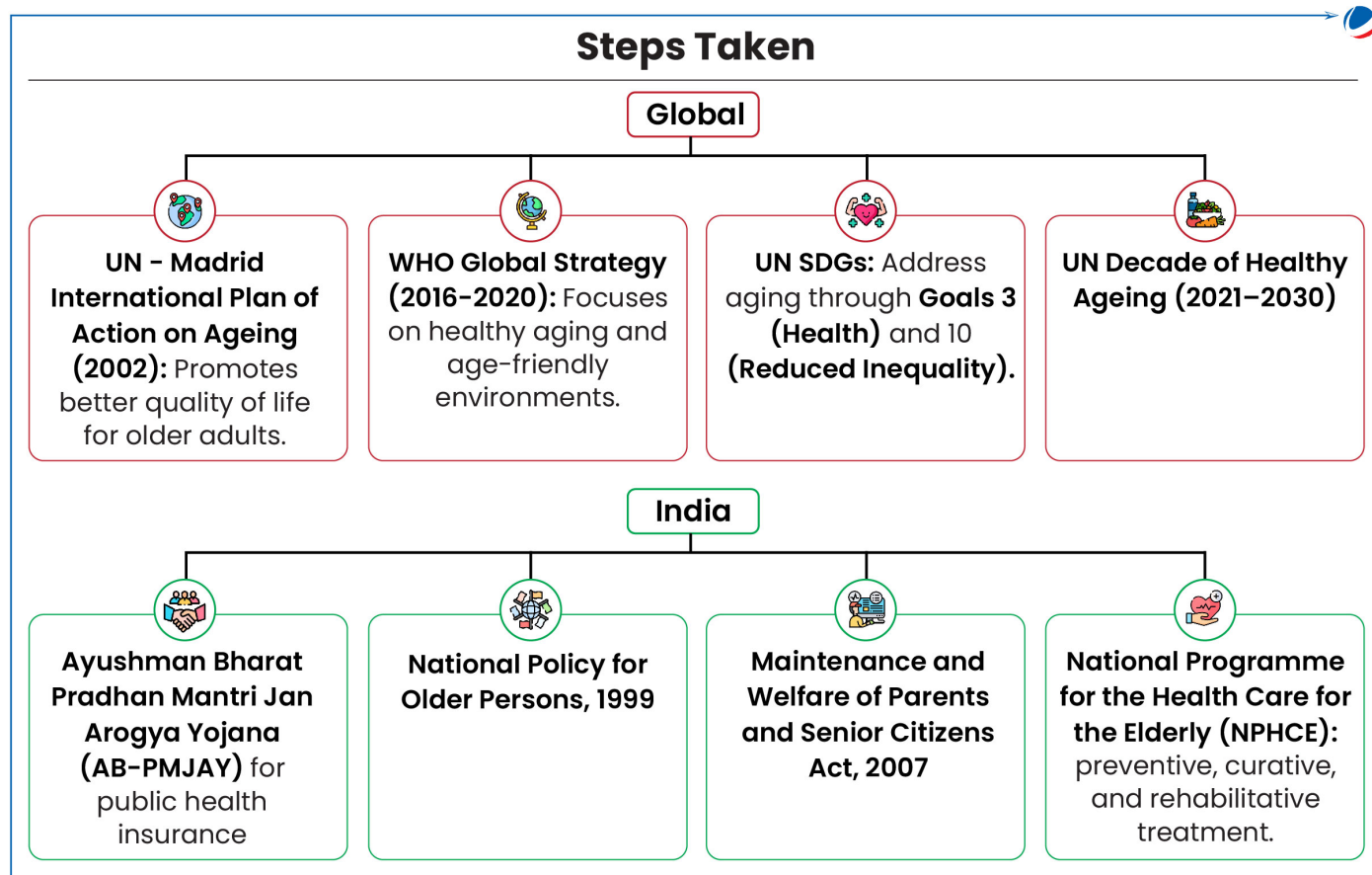
India

- India's elderly population will **exceed 20% of the total by 2050. (UNFPA 2023)**

Challenges with ageing society

- **Economic:** Shrinking workforce, rising healthcare costs, increased expenditure on social security systems, etc.
- **Social:** Families face increased caregiving responsibilities, need to bridge generational gaps and maintain social cohesion, etc.
- **Infrastructure:** Urban spaces need to be made more age-friendly, accommodation of reduced mobility by transportation system, etc.

Steps Taken



Scan the QR code to know more about **ageing society in India**

Weekly Focus #84 - Towards Empowered Ageing in India



6.5.2. JJM AND WOMEN EMPOWERMENT

Recently Prime Minister highlighted role of Jal Jeevan Mission (JJM) in empowering women in rural areas.

- Earlier a report by SBI also highlighted that **9 crore women no longer fetch water from outside** owing to 'JJM: Har Ghar Jal' initiative.

Significance of JJM for Women Empowerment

- **Skill Development:** Water availability at doorstep allows women to focus on **skill development** and **self-reliance**.
 - Also, time saved leads to a **7.4 percentage point increase** in women's participation in **agriculture** and **businesses**.
- **Leadership:** JJM mandates 50% of village water and sanitation committees members be women, prioritizing their needs in **water planning**, and enhancing **leadership roles**.
- **Employment Opportunities:** JJM is expected to generate 59.9 lakh direct employment boosting economic opportunities for women.

About JJM: Har Ghar Jal

- **Nodal Ministry:** Ministry of Jal Shakti
- **Type:** Centrally Sponsored Schemes
- **Objective:** Ensure every rural household has access to **safe and reliable tap water by 2024**.

- **Goal:** To develop ‘**WASH enlightened villages**’ wherein the local communities are equipped to provide long-term assured water supply and sanitation services to all.
- **Focus on children:** Piped water supply in schools, 93 focusing 93 centres and ashramshalas
- **Key Components:** Ensuring **Water Quality, Bottom-Up Planning, Source Sustainability, Greywater Management, and Skill Development & Employment.**
- **Key achievement:** Rural coverage for tap water connection is raised to 79.31% from just 17% (3.23 crore households) in 2019.

6.5.3. GLOBAL ONE-STOP CENTRES (OSC)

Government has approved 9 global OSCs for Indian women in distress by Ministry of External Affairs.

About Global OSCs

- **Aim:** To **provide comprehensive assistance to women in vulnerable situations**, addressing their immediate needs and offering critical support.
- They include **7 OSCs with provision of shelter homes** in Bahrain, Kuwait, Oman, Qatar, UAE, Saudi Arabia (Jeddah & Riyadh) and **2 OSCs without shelter homes** in Toronto and Singapore.
- **Indian Community Welfare Fund (ICWF)** will play a vital role in extending welfare measures to distressed Indian nationals, particularly women.
 - ICWF, set up in **2009**, stands extended to **all Indian Missions and Posts abroad.**

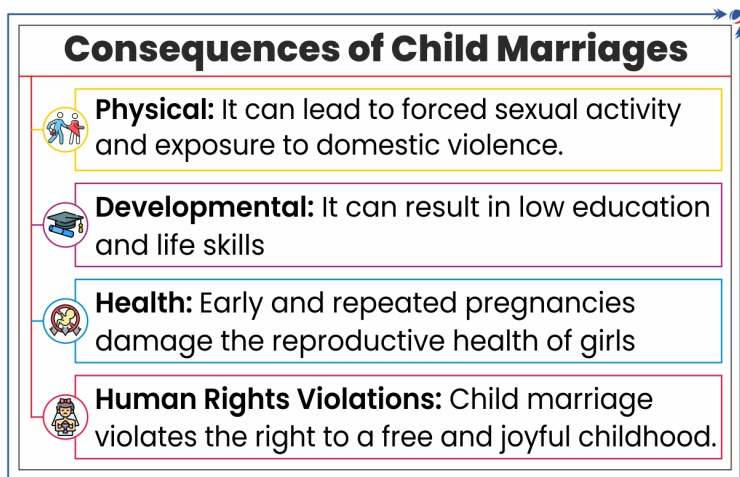
6.5.4. BAL VIVAH MukT BHARAT CAMPAIGN LAUNCHED

Union Minister for Women and Child Development launched ‘Bal Vivah MukT Bharat’ (Child Marriage Free Bharat) campaign.

- The campaign calls on **all citizens to actively oppose child marriage** and is a collaborative effort between the Ministry of Women and Child Development and various other Ministries.

About the Campaign

- **Focus Areas:** In **seven States with high burden** of child marriages and in nearly **300 high-burden districts.**
- **Collaborative approach:** Call on every State and Union Territory to devise an **action plan aimed at reducing the child marriage rates below 5% by 2029.**
- **Child Marriage Free Bharat Portal:** An innovative online platform that enables citizens to report child marriage incidents, file complaints, and access information about **Child Marriage Prohibition Officers (CMPOs) nationwide.**



Status of Child Marriage in India

- **Reduction in Child Marriage:** As per NFHS-5, Child marriage has decreased from 47.4% in 2005–06 to approximately 23.3% during 2019-21.
- **Variation by household wealth:** According to NFHS-5, 40% of females in the lowest quintile married before the age of 18, compared to only 8% in the highest quintile.
- **States with high prevalence:** West Bengal, Bihar, Tripura, Jharkhand, Assam, Andhra Pradesh, Rajasthan and Telangana.

Steps taken by government

- **Prohibition of Child Marriage Act, 2006 (PCMA):** Prohibits child marriages where females are under 18 and males are under 21.

- **United Nations Convention on the Rights of the Child:** India is a signatory which mandates the protection of children from harmful practices, including child marriage.
- **National Commission for Protection of Child Rights (NCPCR):** Runs awareness programs to fight child marriage.
- **Sustainable Development Goals (SDGs):** India has committed to achieve SDG 5, which aims to eliminate all harmful practices, such as child, early, and forced marriage, by 2030.
- **Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW):** India has ratified the CEDAW.

To know more about child marriages in India, refer to Article 6.2. Child Marriage in India in October 2024 Monthly Current Affairs Magazine.

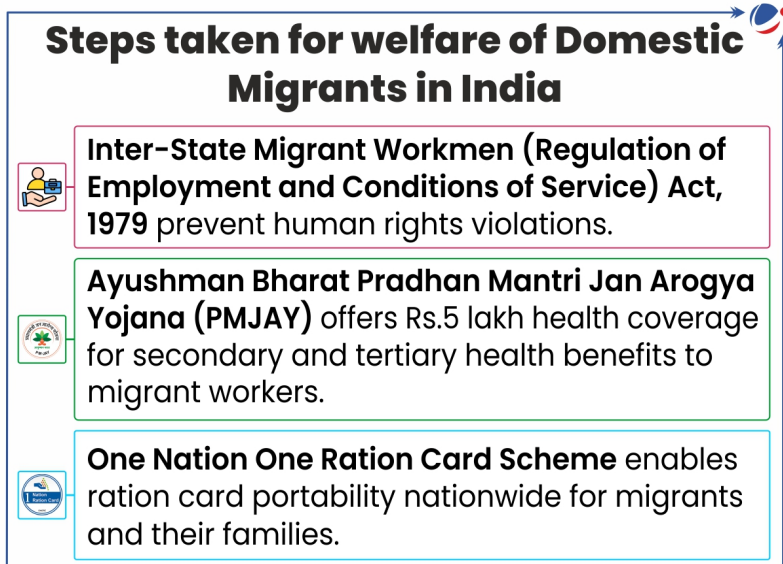
6.5.5. DOMESTIC MIGRATION REPORT BY EAC-PM

Report on domestic migration released by Economic Advisory Council to the Prime Minister (EAC-PM)

- Report titled '**400 Million Dreams**' highlights the **changing patterns of migration** in India since **2011 Census**.
- **Internal/Domestic migration** refers to movement of people within a country from one region to another.
 - **Push factors:** Lack of job opportunities, natural disaster, lack of quality education and healthcare facilities, etc.
 - **Pull factors:** Economic opportunities, higher standard of living, peace and stability, etc.

Key findings of report

- **Reduction in Domestic Migrant Numbers:** By about **12% from 45.57 crore to 40.20 crore in 2023** with migration rate dropping from **~38%** to an estimated **~29% in 2023**.
- **Migration Dynamics:**
 - **Short-distance migration is predominant**, with distance negatively affecting labour mobility.
 - Migration originates **primarily from areas around major urban centers like Delhi, Mumbai, Chennai, Bangalore, and Kolkata**
- **Major Migration Routes:** UP-Delhi, Gujarat-Maharashtra, Telangana-AP, Bihar-Delhi (state level).
- **Increase in Migrant Share:** West Bengal, Rajasthan, and Karnataka have seen an increase in percentage of arriving migrants.
- **Decrease in Migrant Share:** Maharashtra and Andhra Pradesh experienced reduction in their share of total migrants.



Reasons for decline in migrant numbers

- **Improved infrastructure** (roads, education, healthcare, public transport), social security nets etc. at place of origin.
- **Localized economic growth** creating jobs closer to rural areas.

6.5.6. 'RIGHT TO DISCONNECT' IN INDIA

Recently, various sections in India have raised voices on the **need to bring a law on 'Right to Disconnect'** in the backdrop of **death of a young female employee due to work stress**.

- **'Right to Disconnect'** means that **employees are not obliged to reply to calls** made by employers after work hours and such an employee shall not be subject to any disciplinary action by employers.

Need for 'Right to Disconnect' in India

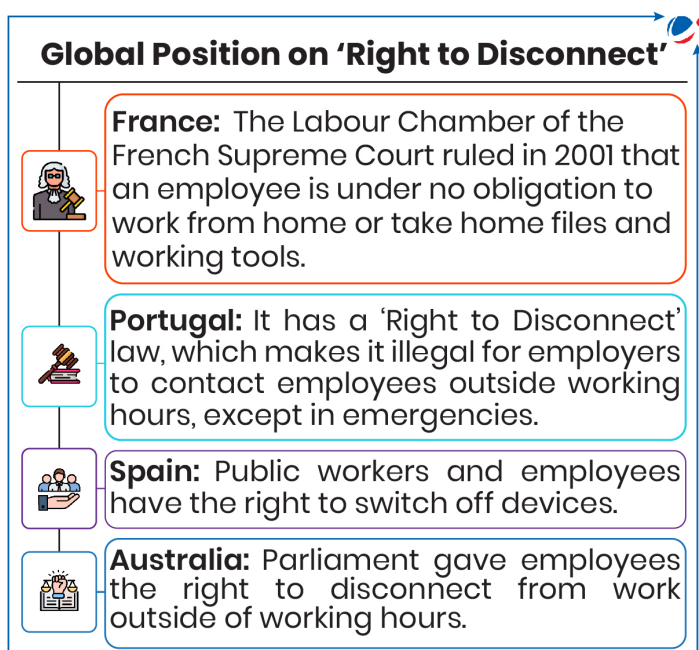
- **Psycho-Social: Weakens social bonds and leads to isolation** and may even elevate risk of mental health issues, cardiovascular diseases, etc.

- **Impact on women:** A recent report reveals that **Indian women in professional jobs**, such as auditing, IT, and media, **work more than 55 hours a week**.
- **Others:** Loss of productivity; insomnia, disrupted sleep cycles, etc., due to prolonged screen time, among others.

Status of 'Right to Disconnect' in India

Currently, India **lacks specific laws** recognizing right to disconnect from work.

- **Constitutional Provisions: Article 38** (directs state to promote welfare of people) and **Article 39(e)** (directs state to secure strength and health of its workers).
- **Judicial pronouncements: Vishakha v State of Rajasthan, 1997** (on safe working environment for women), **Ravindra Kumar Dhariwal and Ors v. UoI, 2021** (accommodate persons with disabilities).
- **Recent Initiative:** In 2018, a **Private Member's Bill** was introduced in Lok Sabha, which aimed to delineate the right to disconnect from work after working hours.



6.5.7. GLOBAL REPORT ON TRAFFICKING IN PERSONS 2024

Global Report on Trafficking in Persons 2024 has been released by the **United Nations Office on Drugs and Crime (UNODC)**.

Key Findings

- In 2022, the number of known victims worldwide rose to 25% above 2019's pre-pandemic levels
- Women and girls account for the majority of victims (61 % in 2022).

About UNODC (1997)

- It is a **UN agency** that leads global efforts **against illicit drugs, organized crime, and terrorism**.
- **HQ:** Vienna (Austria).

6.5.8. NO DETENTION POLICY

Ministry of Education scraps 'no detention' policy for Classes 5 and 8 for the schools under the Centre.

- The new policy allows schools to fail students who do not pass their year-end exams under the new **Right of Children to Free and Compulsory Education (RTE) (Amendment) Rules, 2024**.
 - The no-detention policy was **part of the Right to Education (RTE) Act, 2009** aiming to reduce dropout rates.
- **16 states and 2 Union Territories**, including Delhi, have already adopted this policy, as education is a **State subject**.

Key points regarding the new policy

- Although the no-detention **policy was abolished from the RTE Act in 2019**, the implementation was delayed waiting for the National Curriculum Framework, released in 2023.
 - If a student fails to meet promotion criteria, they will receive **additional instruction and a chance for re-examination within two months** from result declaration.
 - **No child can be expelled from school** until they complete elementary education.

Arguments for Detention

- **Decline in learning outcomes:** as >65 lakh students failed in classes 10 and 12 (2023)
- **Lack of incentives:** automatic promotion takes away motivation from students to work hard and **reduces accountability of teachers**.

Arguments for no Detention

- **Stigmatization and higher dropout rates:** due to **fear of failure and being forced to repeat** classes
- **Child centric learning: promoting** an educational system valuing **holistic development** of a child rather than just academic performance.

About RTE Act, 2009

- Every child **between the ages of 6 to 14 years** has the right to free and compulsory education as per **86th Constitution Amendment Act via Article 21A**.
- The government schools shall provide **free education to all the children and the schools will be managed by School Management Committees (SMC)**.

6.5.9. WFP GLOBAL OUTLOOK FOR 2025

World Food Programme (WFP) released 'Global Outlook for 2025' Report.

- It provides updates on **global food security** & highlights solutions WFP can offer to respond to crises, and tackle root causes of hunger.

Key Highlights

- **Global Hunger Crisis:** An estimated **343 million people** across **74 countries** are **acutely food insecure**, with **1.9 million people on the brink of hunger**.
- **Key Factors: Armed violence** is a key driver in 14 out of 16 hunger hotspots like Sudan, Gaza, etc. Other factors includes **food inflation, extreme weather events** etc.
 - **65 % of acutely food-insecure people live in fragile/conflict-affected situations.**
- **Funding Requirement: WFP requires US\$16.9 billion** to provide critical assistance to 123 million of most vulnerable people facing food insecurity worldwide.
- **India Specific:**
 - **India is home to a quarter of all undernourished people worldwide.**
 - Around **21.25 %** of population **lives on less than US\$1.90 a day.**
 - **38% of children** aged 6-59 months grappling with **chronic malnutrition.**

WFP's Approach to Combating Hunger

- **Investing in local nutritious food solutions, fortification & social protection systems**, to reduce needs in long term.
- **Empowering vulnerable communities** to withstand shocks through improved livelihoods, climate protection etc.
- **Other:** Increasing **institutional capacity at local level, address gender inequalities affecting food insecurities** etc.



About World Food Programme



- About:** The WFP is the largest humanitarian agency saving lives in emergencies & using assistance to help communities become self-sufficient and resilient to shocks.
- Genesis:** Established in 1961 by United Nations General Assembly (UNGA) & Food and Agriculture Organization (FAO).
- Reach:** Presence over 120 countries.
- Funding:** Voluntary donations from governments, corporates and private donors.
- Recognition:** WFP is awarded Nobel Peace Prize in 2020.

6.5.10. ANNA CHAKRA TOOL



The Union Minister of **Consumer Affairs, Food and Public Distribution** launched the 'Anna Chakra' PDS Supply Chain optimization tool and **SCAN Portal** to modernize the PDS system.

About Anna Chakra

- It is a Public Distribution System (PDS) **Supply Chain optimization tool** that leverages **advanced algorithms** to **identify optimal routes** and ensure **seamless movement of food grains**.
- It is an initiative of the **Department of Food Public Distribution** developed in **collaboration** with the **World Food Programme (WFP)** and **IIT-Delhi**.
- It is **Integrated** with the **PM Gati Shakti platform** and **FOIS (Freight Operations Information System)** portal of the Railways through the **Unified Logistics Interface Platform (ULIP)**.

About SCAN (Subsidy Claim Application for NFSA) portal

- Aims to provide a **single window submission of subsidy claims** by **states, claim scrutiny and approval** by Department of Food and Public Distribution facilitating **expeditious settlement** process through end-to-end workflow automation.

 <p>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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Start



English Medium	Hindi Medium
21 January, 1 PM	30 January, 1 PM
(Offline/Online)	


CSAT

CRASH COURSE PRELIMS 2025

(Approach is to revise and strengthen fundamental concepts, enhance problem-solving abilities, hone analytical skills, foster critical thinking, and improve comprehension skills for Prelims 2025.)

PROGRAM OUTCOMES

 <p>Efficient Time Management and Exam-taking Strategies</p>	 <p>Problem-Solving Techniques Including Tips and Tricks</p>	 <p>Proficiency in Interpreting and Analyzing Data Presented in Various Formats</p>	 <p>Firm command on Mathematical Concepts and Development of Quantitative aptitude</p>
 <p>Reading Comprehension and Language Proficiency</p>	 <p>Logical and Analytical Thinking Skills</p>	 <p>Reinforced Learning Through Regular Practice and Tutorials</p>	 <p>Development of Confidence to Tackle the Exam</p>



7. SCIENCE AND TECHNOLOGY

7.1. CE20 CRYOGENIC ENGINE

Why in the News?

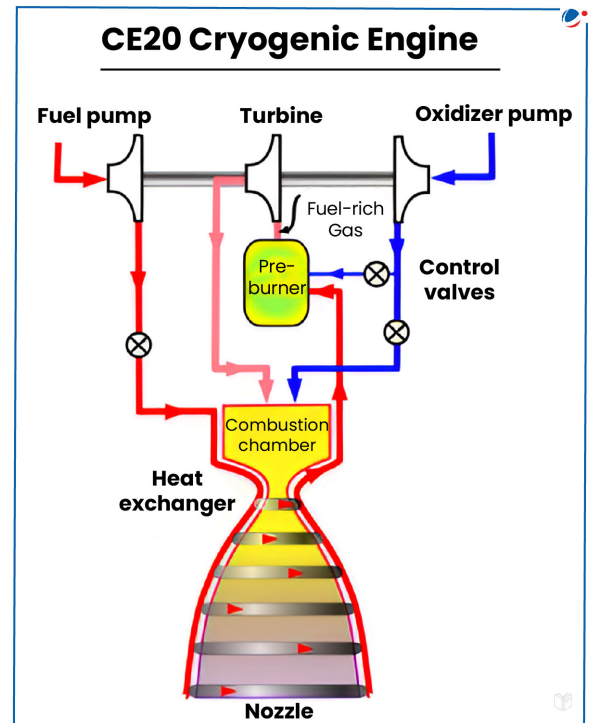
The Indian Space Research Organisation's CE20 cryogenic engine passed a critical sea-level test, a breakthrough in its propulsion technology.

More about the news

- The sea-level test implemented a '**Nozzle Protection System**' to manage issues like flow separation within the nozzle, which can cause vibrations, thermal problems, and potential damage.
- ISRO has been working on the engine in view of its **Gaganyaan mission, India's first manned spaceflight**.
- **Test Location: ISRO Propulsion Complex in Mahendragiri, Tamil Nadu.**
 - The sea-level test introduced an **innovative 'Nozzle Protection System'** to address technical challenges in engine restart capability.
- Earlier, HAL had also established the Integrated Cryogenic Engine Manufacturing Facility in Bengaluru, 2023.

How does a cryogenic engine work?

- **The working principle:** The thrust is produced by an **internal combustion/pressure difference**.
 - This follows **Newton's Third law of motion**- "Every action has an equal and an opposite reaction".
- **Uses:** Cryogenic engines are used in space launch vehicles, in the last stage (or upper stage) of a rocket.
 - A Cryogenic engine uses both cryogenic fuel and oxidizer, liquefied at a very low temperature.
- **Fuel:** The fuel and oxidizer used in a cryogenic engine are liquefied gases, stored at extremely low temperatures.
 - Generally **liquid hydrogen liquefied at -253° Celsius** is used as fuel and liquid **oxygen liquefied at -183° Celsius** is used as oxidizer.



Note: Semi-cryogenic engine uses refined kerosene instead of liquid hydrogen which offers advantages of lighter weight and storage at normal temperature.

Advantages of cryogenic engine

- **Efficiency and Thrust:** Compared to solid and earth-storable liquid propellant rocket stages, cryogenic propulsion offers **superior thrust**, with LOX+LH2 producing maximum energy and lightweight water vapor, resulting in higher performance.
- **Fuel Efficiency:** Cryogenic engines use less fuel. ISRO's PSLV Vikas engine burns 3.4 kg/sec, while cryogenic engines need only 2 kg/sec for the same thrust. Their specific impulse reaches 450 seconds versus 260 seconds for solid propellants.
- **Eco-Friendly Technology:** Hydrogen-oxygen combustion emits only steam, making cryogenic propulsion a clean, carbon-free solution.
- **Heavy Payloads & Space Missions:** High efficiency makes cryogenic fuel ideal for heavy payloads and long missions like Gaganyaan and Chandrayaan.

Some of the challenges in Cryogenic engine technology

- **Complex technology:** A very complex system compared to solid or liquid propellant stages due to its use of propellants at extremely low temperatures and the associated thermal and structural problems.
- **High thermal gradient and thermal stresses:** Problems such as cracks forming on the divergent outer shell, sudden stoppage of rotation, blockages in the channels, distortions in nozzles etc.
- **High Operational Pressures:** The high operational pressures of thrust chamber coolant circuits and thrust related stresses typically require high strength super alloys for load reaction, ultimately a major engine weight driver.
- **Maintaining low temperature:** The most significant thrust chamber challenge is balancing system performance with the thermal capability of coolant liners at deep throttle; low coolant flow operation.
- **High cost of development:** Cryogenic Upper Stage (CUS) project in 1994 had budget of Rs 300 crore.

About CE20

- **Developed by:** The Liquid Propulsion Systems Centre (LPSC), Valiamala, Kerala.
- **Output:** It has been upgraded to produce a thrust level of 20 tonnes. Apart from that, it is capable of producing an **enhanced thrust of 22 tonnes** for the C32 stage in the future.
 - **C32** is new and heavier cryogenic upper stage called C32, a variant of the C20 engine that will replace lesser capacity C25 stage.
- **Successful Mission:** It has demonstrated its capability by successfully operating in six successive LVM3 missions, including the **Chandrayaan-2, Chandrayaan-3, and two commercial OneWeb missions**.
 - **LVM3 (Geosynchronous Satellite Launch Vehicle Mk III)** is three-staged vehicle, capable of lifting 4000kg payload.

Cryogenic Engine comparison with other engines

Characteristics	Cryogenic Engine	Jet Engine	Solid Propellant Engine	Liquid Propellant Engine
Air Intake	No air intake is required.	Air intake is required.	Air intake is required as oxidizer.	Air intake is required as oxidizer.
Fuels	Generally super cooled Hydrogen and Oxygen.	(Jet A-1, kerosene), Kerosene-gasoline mixture, Aviation gasoline (avgas), Bio-kerosene.	Fuels for composite propellants are generally metallic powders, with aluminum being the most common.	Hydrazine, mono-methyl hydrazine (MMH), unsymmetrical dimethyl hydrazine (UDMH) etc.
Fuel temperature	The temperature of fuel must be Very low.	Fuel storage does not require low temperature.	Fuel storage does not require low temperature.	Fuel storage does not require low temperature.
Efficient working	It runs efficiently when low temperature fuel transforms and mixes correctly and ignites.	It runs efficiently at supersonic speed that forcefully compresses air before combustion.	It runs efficiently when fuel is provided with sufficient oxidizer.	It runs efficiently when fuel is provided with sufficient oxidizer.
Purpose	Third stage/ last stage of rocket.	Used in the Airplanes etc.	Used as boosters in initial liftoff.	Act as main stage of rocket after booster separation.

Conclusion

The CE20 Cryogenic engine marks a significant milestone in ISRO’s progress with cryogenic technology. Advancing further, ISRO could explore start fuel ampules like Tri-ethyl-aluminum and Tri-ethyl-boron to enhance ignition reliability and efficiency.

7.2. QUANTUM CHIP

Why in the News?

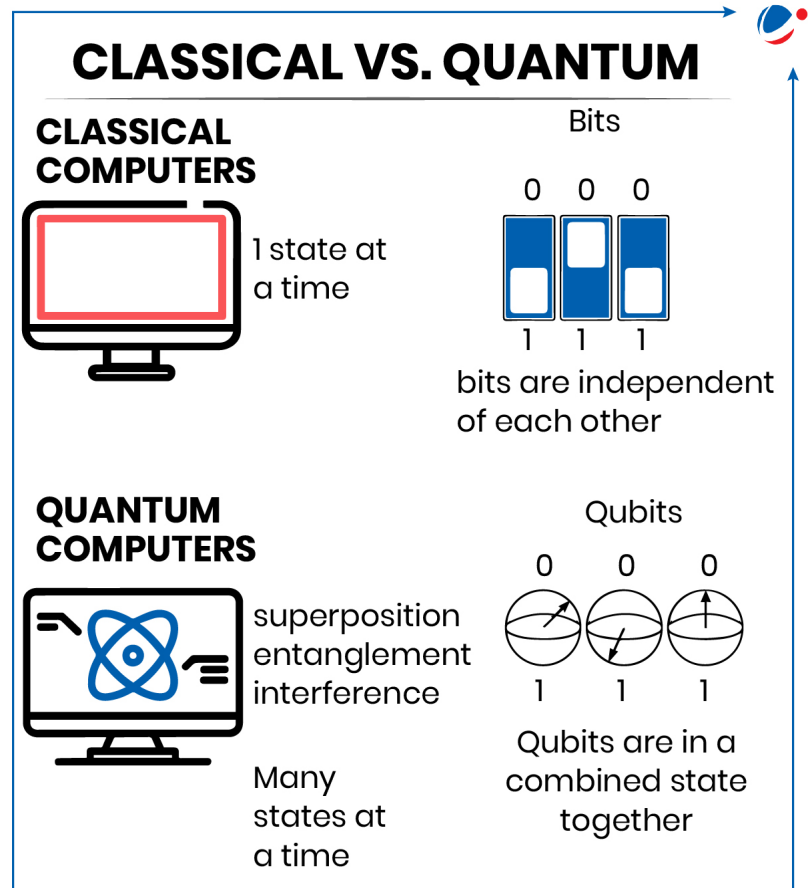
Google unveiled **Willow**, its latest quantum chip, marking a milestone in the development of quantum computing.

More on News

- Willow has **state-of-the-art performance on the random circuit sampling (RCS) benchmark**, enabling two major achievements.
 - First, Willow can **reduce errors exponentially** as systems scale up using more qubits.
 - Second, Willow **performed a standard benchmark computation in under five minutes** that would take one of today's fastest supercomputers 10 septillion (that is, 10^{25}) years.
- Willow has also shown **improved coherence time** (expresses the length of time a qubit can maintain its quantum state).

About Quantum Chips

- While regular chips use 'bits' (0 or 1) to process information, quantum chips use 'qubits'.
 - A classical bit can only exist in either a 0 position or a 1 position. **Qubits, however, can also occupy superposition, which represents 0, 1, and all the positions in-between taken at once**, for a total of **three separate positions**.
 - While qubits can encode three separate positions, **they are still used to convey information through a binary system**.
 - Also, **two quantum bits can be correlated with each other** so that the state of one quantum bit is dependent on the state of another quantum bit (**Entanglement**).
- Like a classical computer, a quantum computer is also a **host of physical operations called quantum gates** that change the states of qubits to perform calculations.
 - In a classical computer the information flowing in and out of bits is controlled and manipulated by **physical operations called gate operations**. For example, an **'AND' gate accepts two inputs**, each either 0 or 1, and outputs 1 if both inputs are 1 and 0 for any other combination of inputs.



Quantum computing's impact on emerging technologies

- Domain of quantum AI:** It involves developing AI algorithms and architectures with quantum computing advantages.
 - One of the major aspects of developing an AI model is to train it on large amounts of data. In that case, quantum computers can be very helpful because it helps you to **compute the data faster**.
 - Quantum computers will be able to collect training data for AI models that are currently **inaccessible to classical computers**.
- Impact on encryption:** A fully functional quantum computer could also have code-breaking capabilities that would render all forms of online encryption unreliable even in any system with RSA encryption.
 - RSA (Rivest, Shamir, Adleman algorithm)** is a public-key encryption algorithm with many real-world applications such as digital certificates, digital signatures, email encryption, and more.

- In 1994, American mathematician **Peter Shor** showed that a quantum computer scaled up to a certain capability can break the discrete logarithm problem.
- **Effect on crypto currency:** Capable of breaking algorithm and encryption hence threaten the underlying cryptography of Bitcoin and other crypto currency.

Challenges

- **Fragile Quantum States:** Qubits are extremely sensitive and collapse easily with slight disturbances, limiting how long they can store information and how scalable quantum computers can be.
- **Noise Problem in Qubits:** Qubits are highly prone to interference and can lose information easily. Even with millions of qubits, many would be redundant, making the system inefficient.
- **Temperature Control:** Qubits must be cooled to near absolute zero to prevent disturbances that can cause calculation errors.
- **High Cost:** Quantum systems need many expensive coaxial cables and complex CMOS control systems, making it difficult to scale for business needs.
- **Chip Supply Chain Issues:** Disruptions like pandemics, trade wars, and natural disasters have impacted chip production.

Conclusion

Advancing quantum computing requires **focused research on using semiconducting materials** like silicon, gallium, or germanium for more efficient qubits. **Global collaboration through initiatives** like the Quad Critical and Emerging Technology Working Group, the Quad Investors Network (QUIN), Quantum Center of Excellence in Quantum Information Sciences etc. and increased investment are crucial due to high costs. **Clear policies and regulations** must guide the technology's use and growth. Lastly, developing talent across quantum theory, physics, and computer science is essential for progress.

Scan the QR code to know more about **Quantum Technology**

Weekly Focus #69 - Quantum Technology in India: Exploring the possibilities ahead



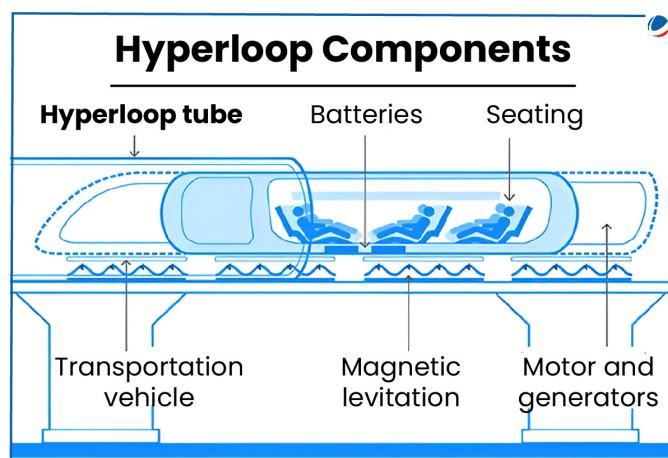
7.3. HYPERLOOP

Why in the News?

Avishkar Hyperloop team of IIT Madras in collaboration with TuTr (an startup) has recently completed a 410-meter Hyperloop test track, the first such experiment in Hyperloop technology in India.

What is Hyperloop Technology?

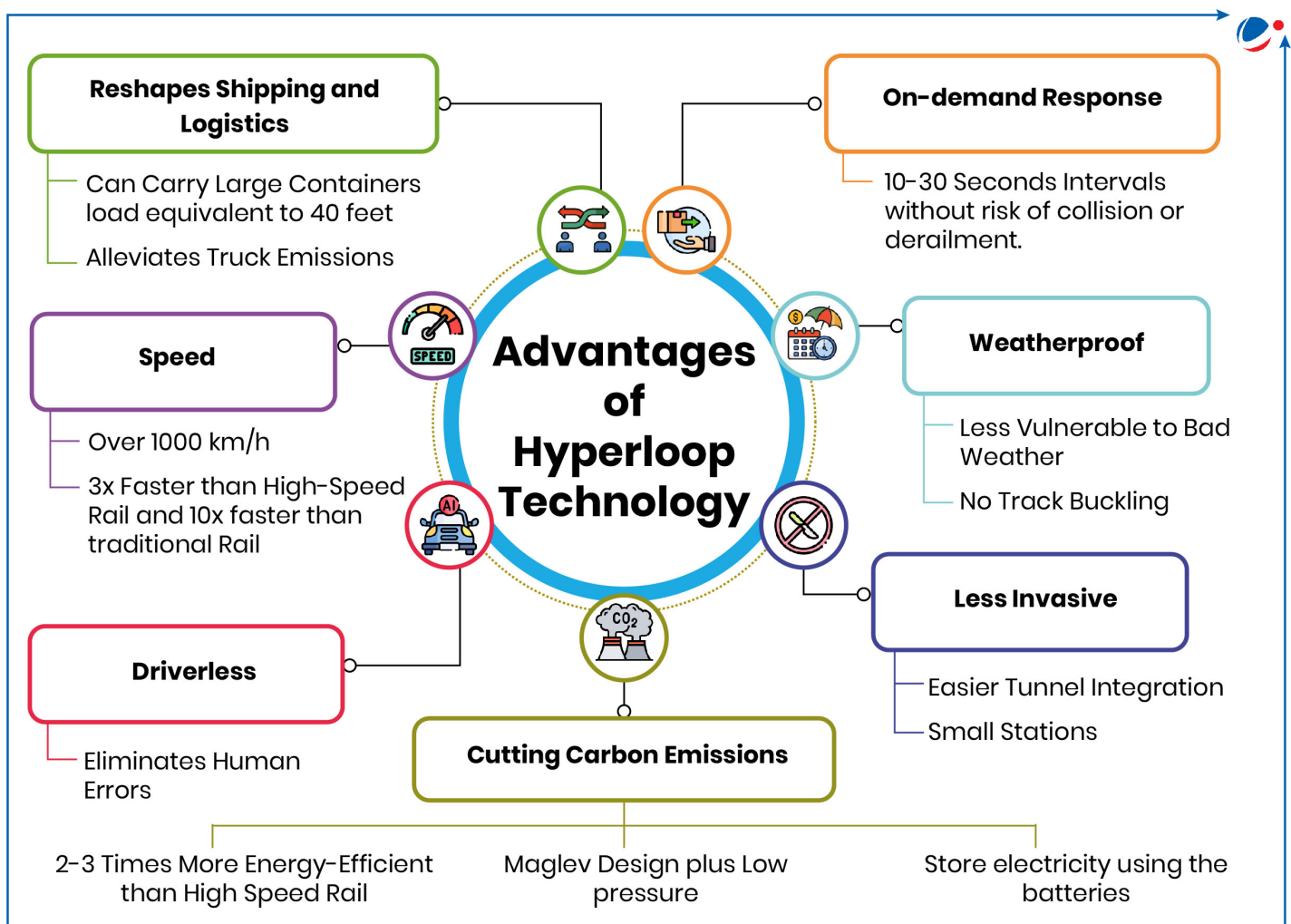
- **Concept:** In 2013, the CEO of SpaceX, Elon Musk, proposed a concept of **ultra-high-speed rail (UHSR)** called hyperloop and open-sourced it.
- **Hyperloop:** It is a **high-speed transportation system** in which pods, essentially pressurized vehicles travel at extraordinary speeds through low-pressure tubes.
 - The technology significantly builds on a **much older idea variously known as “gravity vacuum tube,” “gravity vacuum transit,” or “high-speed tube transportation,”** which dates originally back to 1865.
- **Functioning:**
 - Hyperloop is essentially a **magnetic levitation (maglev) train system** that uses one set of magnets to **repel** cars so that they hover above a track and another set of magnets to **propel** them forward over the track.



- The track in hyperloop technology is a **low-pressure tube** with built-in vacuums that remove nearly all air from the steel tube.
- This concept enables the theoretical speed of 1,200 km/h.
- **Accessibility:** The technology has an ambitious goal to result in a **time-space shrinkage**, which will increase the accessibility of cities through very low travel times over long distances.

Components of Hyperloop

- **Tube:** Two steel tubes are welded together to allow the capsules travel in both directions. The expected air pressure inside the tube will be maintained around 100Pa.
- **Capsule:** The capsule has the capacity of carrying passengers. Magnetic linear accelerators are used to accelerate the capsules.
- **Compressor:** It is at front side of the capsule and allows the capsule to traverse through low pressure tube without choking the air flow that travels between tube walls and capsule.
- **Suspension:** For the purpose reliability and safety, the air bearing suspensions are used.
- **Propulsion:** To accelerate and decelerate the capsule linear induction motor is used over permanent magnet motor, as it lowers the material cost, reduces the weight of the capsule.



Some of the issues with Hyperloop technology

- **Costs:** A report into the commercial feasibility of hyperloop by NASA shared a **cost of \$25 – \$27 million per mile for just the technology**, excluding land acquisition.
- **Hyperloop Safety:** safety concerns such as fire, communication system challenges in capsule etc.

- While the low-pressure environment prevents fire from breaking out in the tubes, a **fire inside a pod is a real threat**.
- **Evacuating a hyperloop is difficult** as the tubes are designed to have a limited number of exits.
- **Vacuum Maintenance Challenges:** Maintaining an air vacuum in a tube for **hundreds of kilometers** is quite difficult and it takes a lot of energy to depressurize the tube.
- **Huge acceleration impact:** Any accelerations greater than **about 2 m/s²** in the lateral or vertical directions poses a difficulty for humans resulting in nausea and vomiting.
 - Current hyperloop acceleration specifications are seven times greater than the maximum accelerations allowed for Japan's Shinkansen bullet train system.
- **Need of straight line layout:** It requires building stable and well-constructed elevated and/or tunnel-like structures over **very long distances to maintain high speed and avoid any mishap**.

Other Emerging modern transit systems

- **Autonomous helicopters:**
 - **Developed:** Airbus successfully completed a test flight of its **Vahana electric vertical take-off and landing (eVTOL)**.
 - **Aim:** To create a fleet of eVTOL aircraft and position those on rooftops in major cities, enabling commuters to get **around densely populated areas** where road traffic is deadlocked.
- **Smart roads**
 - A **Portuguese scheme**, co-funded by the European Union, is set to create around 1,000 kilometers of smart roads in the country.
 - This initiative will see **a series of cutting-edge transportation technologies** installed on the route, facilitating wireless communication between road-based infrastructure nodes and smart cars.
 - **Sweden** recently completing a pilot project that saw two kilometers of road transformed into an electrified track that recharges modes of transport, such as electric cars and trucks while they drive.
- **India's Bullet Train Project:**
 - Mumbai-Ahmedabad High Speed Rail (MAHSR) is **India's first High Speed Train Project**.
 - India is leveraging Japanese Shinkansen technology for its first bullet train project between **Mumbai and Ahmedabad**.
 - The **National High-Speed Rail Corporation Limited (NHSRCL)**, a visionary entity was established under the aegis of the Companies Act, 2013 to execute India's first Bullet Train project.

Way Forward

- **Substantial financial backing from private companies and governments:** Financial backing is necessary for the research and development to find solutions such as depressurizing tubes efficiently.
 - The Hyperloop Technology **market size was valued at USD 2.05 billion** in 2023 and is projected to reach **USD 24.85 billion, with a CAGR of 36.6% by 2031**.
- **Continued Research and Development:** Particularly in areas like **Linear Induction Motors (LIM)** for efficient propulsion.
- **Infrastructure:** Not only pod infrastructure but need for **Hyperloop stations and infrastructure**, which will require a number of projects, and should be added to the network of roads, railroad systems, and aviation.
- **Need for regulations for standards and safety:** India can frame policy on the line of European countries which came together and agreed to create **a joint technical committee (JTC) called JTC 20 regarding Hyperloop in 2020**.

7.4. 10 YEARS OF MINISTRY OF AYUSH

Why in the News?

The Ministry of Ayush recently marked its **10th anniversary**.

More on the News

- Founded in 2014, the Ministry of Ayush aims to revive ancient medical knowledge while supporting the UN's **Sustainable Development Goals** and **Universal Health Coverage**.

- The Ministry evolved from the **Department of Indian System of Medicine & Homoeopathy**, which was created in 1995 and renamed the **Department of Ayush in 2003**.
- “AYUSH” is an acronym for the traditional medical systems practiced in India: **Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy**.

Key Achievements of Ministry of Ayush in last decade

- **Expanding Ayush Infrastructure:** India has over 755,780 registered Ayush practitioners, supported by 886 undergraduate and 251 postgraduate colleges.
 - Additionally, **three advanced National Ayush Institutes** have been established to enhance education and healthcare in the Ayush sector.
- **Research and Innovation:** The Ayush Research Portal hosts over 43,000 studies.
 - Key developments like **AYUSH-64** and **Kabasur Kudineer** were introduced for COVID-19 management.
- **Economic Impact:** The Ayush market has grown from USD 2.85 billion in 2014 to USD 43.4 billion in 2023, with exports increasing from USD 1.09 billion to USD 2.16 billion.
- **Technology Integration:** Digital platforms like **Ayush Grid, e-Sanjeevani**, and Ayush Telemedicine have improved healthcare access, especially in remote areas.
- **International Day of Yoga (IDY):** Achieved global recognition, with 24.53 crore participants in 2024.
- **National Ayush Mission (NAM):** launched the Centrally Sponsored Scheme in 2014.

About National AYUSH Mission (NAM)

- It was launched to promote and develop traditional medical systems: **Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa-Rigpa, and Homeopathy**.
- **Objective:**
 - Increasing accessibility to Ayush services
 - Promoting the cultivation of medicinal plants used in these systems
 - Strengthening educational institutions for Ayush
 - Creating awareness about the benefits of Ayush practices
- **Tenure:** Till 2026.

Steps taken by India to promote Traditional Medicines

- **International Cooperation:** 24 MoUs with countries and 48 institute-level MoUs and the **Ayush Visa** and **Heal in India** portal for medical tourism.
- **Quality Assurance and Certifications:** introduced the **Ayush Mark** and Ayush **Premium Mark** certification programs for Ayush products.
 - Provided **WHO Good Manufacturing Practices-Certified Manufacturing Units for Certificate of Pharmaceutical Products (COPP)** certifications to 31 Ayurvedic drug manufacturers to facilitate international trade.
- **WHO Collaboration:** India signed an agreement with WHO to establish the **WHO Global Centre for Traditional Medicine (GCTM)** in Jamnagar, Gujarat, with a US\$ 85 million commitment.
- **Capacity Building:** The **Champion Sector Services Scheme (CSSS)** was launched to develop **skilled human resources** in the AYUSH sector and promote medical value travel services.
- **Education Reforms:** Under the NCISM Act, 2020, the government established the National Commission for Indian System of Medicine (NCISM) and National Commission for Homeopathy (NCH) to improve **education** and **practice standards**.
- **AYURGYAN Scheme:** To enhance and develop capacity in the Ayush healthcare sector.
- **Policy Support:** MoUs with various government departments to support infrastructure development, research, and the promotion of AYUSH practices.
 - **For ex-** establishment of the **Strategic Policy and Facilitation Bureau (SPFB)** to facilitate investment in the AYUSH sector.

Challenges in mainstreaming AYUSH



Lack of standardisation: AYUSH systems often lack standardized protocols for diagnosis, treatment, and drug formulations.



Lack of Trials: Many AYUSH treatments lack robust scientific evidence and clinical trials to validate their efficacy.



Lack of synergy with Allopathy: Allopathy treats symptoms based on a biomedical model, while AYUSH, like Ayurveda, takes a holistic approach.



Regional Variations: AYUSH systems are deeply rooted in cultural practices, which vary across regions.



Lack of Awareness and misconceptions about AYUSH system.

Way ahead

- **Quality Control and Standardization:**
 - Invest in **advanced labs** and testing protocols.
 - Develop systems for reporting **adverse events** with Ayush medicines.
 - Conduct regular **post-marketing surveillance** for safety and efficacy.
 - Align Ayush quality standards **with global benchmarks** like WHO.
- **Research and Evidence-Based Practice**
 - Increase funding for **clinical research** on Ayush therapies, focusing on chronic diseases and prevention.
 - Use local health data for **large-scale epidemiological studies**, with improved infrastructure and training.
- **Bridging the Integration Gap**
 - Develop **referral pathways** and collaboration protocols between Ayush and allopathic systems.
 - Integrate Ayush practitioners into **primary healthcare teams** and community health campaigns.
- **Addressing Delays:** By creating **action plans for Ayush Health and Wellness Centres (AHWCs)**, providing training, financial incentives, and streamlining processes with technology.
- **Consumer Confidence and Advocacy**
 - Promote **responsible advertising** and **educate patients** on the safe use of Ayush medicines.
 - Encourage **private insurance companies** to cover Ayush treatments like **Panchkarma** where applicable.

To know more about National Ayush Mission, refer to Article 6.4. National Ayush Mission in February 2024 Monthly Current Affairs Magazine.

7.5. RARE DISEASES

Why in the News?

India's Central Drugs Standard Control Organisation (CDSCO) approves **first anti-complement therapy for rare diseases**

More on the news

- Earlier, Delhi High Court had issued several directives to the Union Government aimed at **improving the funding and treatment infrastructure for rare diseases** in India.

- Also, in **Master Arnesh Shaw v. Union of India & Anr. Case**, the Delhi High Court underscored that patients, particularly children, suffering from rare diseases should not be denied treatment solely due to the prohibitive cost of drugs or therapies.
- The Court further affirmed that **the Right to Health, as an integral component of the Right to Life under Article 21**, must be upheld universally, including for those with rare diseases.

Do you know ?

➤ Rare diseases also come under the category of '**orphan diseases**'. Drugs to treat such diseases are called "**orphan drugs**" as the number of persons suffering from individual rare diseases is small and do not constitute a significant market for drug manufacturers.

What are Rare Diseases?

- **World Health Organization (WHO)** defines rare disease as often debilitating lifelong disease or disorder with a **prevalence of 1 or less, per 1000 population**. For E.g. Fanconi Anemia, Osteopetrosis etc.
 - However, different countries have their own definitions to suit their specific requirements and in context of their own population, health care system and resources.
- Currently, **63 Rare Diseases are listed under National Policy for Rare Disease 2021 (NPRD, 2021)**, classified under 3 groups (see infographic).
 - The disease list in these groups is **updated periodically** based on scientific advances and recommendations of **Central Technical Committee for Rare Diseases**.

Classification of Rare Diseases in India (as per NPRD 2021)		
Group 1: Amenable to one-time curative treatment	Group 2 Long-term treatment needed with relatively lower costs and documented benefits	Group 3 Definitive treatment is available but challenges in optimal patient selection for benefit, very high cost and lifelong therapy
E.g., Disorders amenable to organ transplantation like Urea cycle disorders, Fabry disease etc.	E.g., Disorders managed with special dietary formulae like Phenylketonuria, Homocystinuria etc.	E.g., Gaucher Disease, Pompe Disease etc.

Initiatives to tackle rare diseases

- **Global**
 - **WHO's Fair Pricing Forum:** It foster dialogue between regulators, insurers, pharmaceutical companies and patient groups to ensure sustainable access to medicines, including **orphan drug**.
 - **Rare Diseases International (RDI):** Global alliance of people living with a rare disease of all nationalities across all rare diseases.
- **India**
 - **National Policy for Rare Diseases, 2021:** Aims to lower incidence and prevalence of rare diseases based on an integrated and comprehensive preventive strategy.
 - > **Financial support of up to Rs. 50 lakhs per patient** is provided for treatment at notified **Centres of Excellence (CoEs) for Rare Diseases**.
 - > **National Consortium for Research and Development on Therapeutics for Rare Diseases (NCRDTRD)** for streamlining the research activities for rare diseases
 - **Rashtriya Arogya Nidhi:** Provides financial assistance for poor patients suffering from rare disease.
 - **Exemption from Department of Expenditure on Goods & Services Tax (GST) and Basic Customs Duty** on drugs imported for Rare Diseases for individual use and through CoE.
 - **Drugs Controller General of India (DCGI) circular:** Under Rule 101 of the New Drugs and Clinical Trials Rules, 2019, CDSCO has waived off local clinical trials for new drugs for rare diseases that have already been approved in countries like the United States, United Kingdom, Japan, etc.

Issues in managing Rare Diseases in India

- **High prevalence rate:** India accounts for **one-third of global rare disease cases**, with over 450 identified diseases.
- **Limited clinical trials:** With over 8000 global clinical trials for rare diseases underway, hardly 80 (<0.1%) of them have a site in India.
- **Lack of definition:** India currently lacks sufficient epidemiological data for a **standard definition**.
- **Low budgetary support:** The 2023-24 Budget allocation for rare diseases stands at ₹93 crore, still low despite gradual increases.
- **Underutilization of funds by Centre of Excellences:** Over ₹47 crore of the ₹71 crore allocated for financial assistance to 11 CoEs remains unused.

Other Challenges associated with Rare Disease			
Delayed diagnosis/ Misdiagnosis	Limited treatment options	Limited R&D	Impact on patients
<ul style="list-style-type: none"> • Inadequate screening/diagnostic facilities • Diverse Symptoms • Low awareness among primary care physicians 	95% rare diseases have no approved treatment	<ul style="list-style-type: none"> • Inadequate clinical experience due to Small patient pool 	<ul style="list-style-type: none"> • Financial Strain (High Cost of Orphan drugs) • Psychosocial Effects like stress, anxiety, and social isolation etc.

Way forward

- **Implement Key directives of the recent Delhi High Court judgement:**
 - **Establish National Fund for Rare Diseases (NFRD)** with ₹974 crore allocation for FY 2024-25 and FY 2025-26.
 - > Allocated funds must **not lapse** or be **refunded due to non-utilization**.
 - > NFRD shall be administered by **National rare disease cell** consisting of one or more nodal officers in Ministry of Health and Family Welfare (MoH&FW).
 - **National Rare Diseases Committee (NRDC)**, established in 2023, will continue its work for an additional five years, chaired by the Director General of the ICMR.
 - **Develop and operationalize centralized National Rare Disease Information Portal** (within 3 month) for patients, doctors, and the general public with facilities such as patient registry, available treatments etc.
 - Instruct Drugs Controller General of India (**DCGI**) and Central Drugs Standard Control Organization (CDSCO) to **monitor local and global clinical trials** to ensure more patients can be enrolled.
 - Create **dedicated Fast Track approval process** for rare disease drugs and therapy.
 - **Pharmaceutical companies** importing rare disease therapies to submit detailed plan to MoH&FW and NRDC within 90 days for establishing local manufacturing/distribution facilities in India.
 - **Enable Corporate Social Responsibility (CSR) contribution** by companies, including Public Sector Undertakings by adding Donations for rare diseases in Schedule VII of the Companies Ac.
 - **Flexibility in upper limit of ₹50 lakhs under NPRD, 2021** for the treatment of rare diseases in Group 3 category, as per the recommendation of NRDC.
- **Other steps that can be taken**
 - **Strengthen epidemiological and prevalence data research** to 107ocusing107io definition of Rare Disease.
 - **National Registry** to address this data gap, a hospital-based National Registry to collect epidemiological data on rare diseases across India has been initiated.
 - **Expand CoEs**, especially in underserved region would improve accessibility to timely diagnosis and treatment.
 - **Incentivize domestic drug manufacturing** under the **Production-Linked Incentive Scheme**.

7.6. NEWS IN SHORTS

7.6.1. ISRO LAUNCHES PROBA-3 SATELLITES

ISRO launched PSLV-C59 rocket with European Space Agency's Proba-3 satellites

About PSLV-C59

- PSLV-C59 vehicle carried Proba-3 spacecraft into a highly elliptical orbit as a dedicated **commercial mission of NewSpace India Limited (NSIL)**.

- It was launched from **Satish Dhawan Space Centre (SDSC-SHAR)**, Sriharikota
- It is ESA's first launch from India since Proba-1 mission in 2001.
- **Polar Satellite Launch Vehicle (PSLV)** is the third generation launch vehicle.
 - It is a four-stage vehicle, with multiple satellite launch capability and multiple orbit capability.

Proba-3 Mission

- An **In-Orbit Demonstration (IOD)** mission.
- **Aim:** Observe the Sun's corona through an innovative satellite formation flight.
- World's **first precision formation-flying mission.**
 - In it, two satellites will fly together, maintaining a fixed configuration.
 - > Focus of formation flying is to maintain a **targeted orbit configuration.**
 - Consists of Coronagraph Spacecraft (CSC) and Occulter Spacecraft (OSC)

Benefits of Commercial Space Launches for India

- **Increasing share in global Space economy:** Currently, India constitutes 2-3% of the total.
- **Revenue Generation:** India generated over \$279 million in revenue from the launch of foreign satellites. (as of 2022)
- **Soft Power:** Commercial satellite launches are considered a form of soft power.
 - It can be leveraged in the geo-political sphere by fostering strong diplomatic ties.
- **Other:** May facilitate Technology transfer etc.



About NewSpace India Limited (NSIL)

- Department of Space set it up in 2019 to handle ISRO's commercial activities.
- Primary responsibility is to help Indian industries to take up high-technology space-related activities.
- Also enables ISRO to focus on future space activities.

7.6.2. AXIOM MISSION 4 (AX-4)

Indian astronauts who have been selected for the upcoming **Axiom-4 mission** to the International Space Station (ISS) have completed the initial phase of training.

Axiom Mission 4 (Ax-4)

- Ax-4 is the **fourth private astronaut mission** to the **International Space Station.**
 - It will launch to the orbiting laboratory **on a Dragon spacecraft** aboard a **SpaceX Falcon 9 rocket.**
- **Axiom Mission** is jointly coordinated by the **NASA** and a **private US company Axiom Space.**
 - Ax-1 **was the first all-private mission**, launched in 2022.

7.6.3. DARK COMET

NASA researchers have discovered more **dark Comets**, Oumuamua-like (a messenger from afar arriving first) objects.

Dark Comets

- These celestial objects look like asteroids but act like comets and have **less surface area** for material to form **tails.**
- They **deviate from expected orbit.** That deviation **couldn't be explained** by the **Yarkovsky effect.**
 - It is a phenomenon which **changes the path of celestial objects** due to **asymmetric radiation of heat energy.**
- They **spin quite rapidly and disperse escaping** gas and dust in all directions, making them less visible.
- Dark comets follow **elongated, elliptical paths** that bring them close to the Sun before sweeping back out to the farthest reaches of the Solar System.

7.6.4. FSSAI ISSUES ADVISORY FOR E-COMMERCE FOOD BUSINESS OPERATORS (FBOS)

The Food Safety and Standards Authority of India (FSSAI) advisory aims to ensure the safety, quality, and authenticity of food products being sold online.

Key Points of the Advisory

- **Regulatory Compliance:** E-commerce platforms must ensure food products sold comply with **Food Safety and Standards (Labelling and Display) Regulations 2020**.
 - Online claims must align with those on **physical labels to avoid misleading consumers**.
- **Food Safety and Hygiene:** Platforms must train **last-mile delivery personnel** to ensure that delivery staff are well-trained in food safety and hygiene practices.
- **Shelf-Life Requirements:** Food products delivered must have a minimum of **30% shelf life remaining**, or **at least 45 days** before expiry at the time of delivery.
- **Seller Accountability:** Platforms must prominently **display the FSSAI licence and registration** numbers of sellers and Hygiene ratings of the food business operators.

About FSSAI

Established: Under the **Food Safety and Standards Act, 2006**.

Ministry: Ministry of Health and Family Welfare

Role: Laying down **science-based standards** for articles of food and regulating their manufacture, store, distribution, and sale.

Organizational Structure: It consists of a Chair person appointed by the Centre along with twenty-two members out of which one-third shall be women.

7.6.5. HIGH RISK FOOD

FSSAI has classified packaged drinking water as ‘High Risk Food Category’.

About High Risk Food

- High risk foods are ready to eat foods that support **multiplication of pathogenic bacteria that could be harmful**.
- These include **dairy products**; meat products including poultry; fish and fish products, etc.
- Food products that come under High Risk category are **subjected to mandatory risk-based inspections**.
- All Central Licensed Manufacturer/Processors under High Risk Food Categories shall get its business **audited by FSSAI focusing on food safety auditing agency every year**.

7.6.6. NOTIFIABLE DISEASE

Ministry of health and family welfare (MoHFW) has designated snakebite cases and deaths as a ‘notifiable disease’.

- Earlier, Ministry launched the **National Action Plan for Prevention and Control of Snakebite Envenoming (NAPSE)** to halve **snakebite-related deaths and disabilities by 2030**.

What are notifiable diseases?

- It is **any disease** that is required by law to be reported to government authorities.
 - Responsibility of notifying any disease and the implementation lies with the **state government**.
 - The collation of information **allows the authorities to monitor the disease**, and provides early warning of possible outbreaks.
- **Other notified diseases:** AIDS, hepatitis, dengue, etc.

WHO’s International Health Regulations, require disease reporting to the WHO in order to help with its global surveillance and advisory role.

7.6.7. WORLD MALARIA REPORT 2024

World Malaria Report 2024 was released by **WHO**.

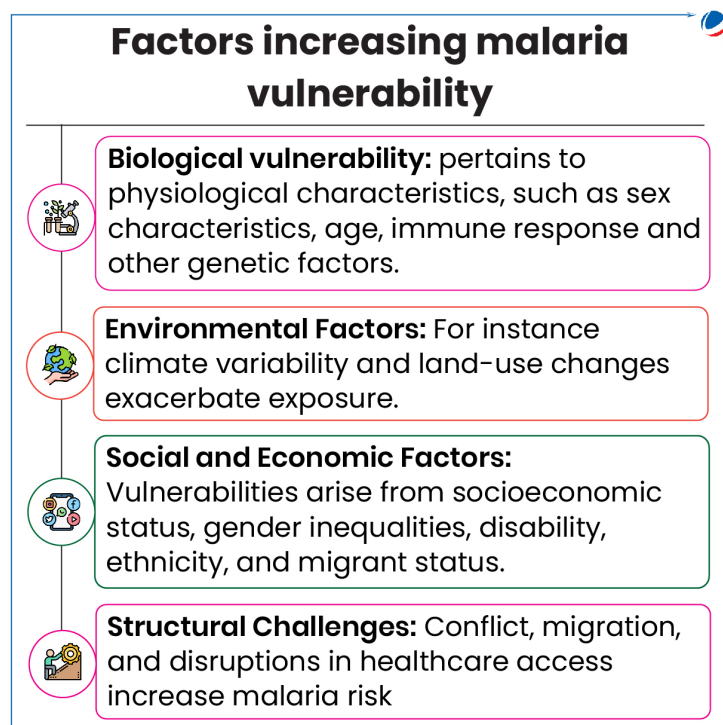
Key Findings of the report

- Globally, Malaria cases rose to **263 million** in 2023, with an incidence of **60.4 per 1000 population at risk**, up from **58.6 in 2022**.

- The **WHO African Region** accounted for **94% of global cases**.
- **Findings related to India:**
 - **Decline in Malaria Cases:** Reduced by **69%**, from **6.4 million in 2017 to 2 million in 2023**.
 - **Decline in Malaria deaths:** declined by **68%**, from **11,100 in 2017 to 3,500 in 2023**.
 - In 2024, **India officially exited the High Burden to High Impact (HBHI) group**.

About Malaria

- It is a **life-threatening disease** caused by **Plasmodium parasites** (a genus of parasitic protozoans), transmitted to humans through the bites of infected **female Anopheles mosquitoes**.
 - 2 of the 5 parasite species (Plasmodium falciparum and Plasmodium vivax) pose the greatest threat of malaria.
- **Geographical prevalence:** Mostly found in **tropical countries**.
- **Symptoms:** Fever, chills and headache, fatigue etc.
- **Five Plasmodium species cause malaria in humans:** P. falciparum, P. vivax, P. malariae, P. ovale, P. knowlesi.
 - **P. falciparum and P. Vivax** pose the greatest threat.
- **Malaria Vaccines:** **RTS, S/AS01 vaccine** (WHO approved first vaccine in 2021), **R21/Matrix-M** (WHO approved second vaccine in 2023).



Initiatives

- **World Health Organization (WHO) Global technical strategy for malaria 2016–2030**, updated in 2021, provides a technical framework for all malaria-endemic countries.
- **National Strategic Plan: Malaria Elimination 2023-27**
- **GM Mosquitoes:** They are **mass-produced in a laboratory** for **effective mosquito control** and carry **two types of genes**:
 - **Self-limiting gene** (prevents female mosquito offspring from surviving)
 - **Fluorescent marker gene** (glows under a special red light, enabling their identification).

7.6.8. NANOPLASTICS AS AGENTS OF ANTIBIOTIC RESISTANCE

According to a study, nanoplastics derived from single-use plastic bottles (SUPBs) contribute to the spread of antibiotic resistance (AR).

Key findings of Study

- Nanoplastics and microorganisms **coexist in diverse environments, including the human gut**.
- Polyethylene Terephthalate Bottle-derived Nanoplastics (PBNPs) can facilitate the **cross-species gene transfer** from E. coli to **Lactobacillus acidophilus**, a significant beneficial bacteria found in human gut microbiota, through a **process called horizontal gene transfer (HGT)**.
 - HGT is the **movement of genetic information or material between organisms** (except for those from parent to offspring).
- **Two mechanisms** through which PBNPs facilitate AR gene transfer include:
 - **Direct transformation pathway**, in which PBNPs act as physical carriers, transporting AR plasmids across bacterial membranes.
 - **Outer Membrane Vesicle (OMV) – Induced Transfer Pathway**, in which PBNPs induce oxidative stress and damage to bacterial surfaces, **increasing OMV secretion** facilitating gene transfer.

About Nanoplastics

- Nanoplastics are solid particles of **synthetic or heavily modified natural polymers** with sizes between 1 nm (nanometer) and 1000 nm.
- **Sources:** Primary sources like cosmetics, paints, drugs, electronics, and secondary sources from breakdown and fragmentation of microplastics.
- **Impact:** More easily penetrate cells and tissues in living organisms, and have been found in human blood, liver and lung cells, and in reproductive tissues.

7.6.9. EXTRACHROMOSOMAL DNA (ecDNA)

Studies reveal how **ecDNA drives cancer progression and drug resistance**.

About Extrachromosomal DNA (ecDNA)

- **ecDNA are small circular DNA fragments that float freely in the nucleus**, separate from chromosomes.
- **Genesis:** Formed **due to DNA damage (e.g., chromothripsis) or errors during DNA replication**.
- **Role of ecDNA in Cancer:**
 - **Found in up to 90% of certain tumour types**, including brain tumours, liposarcomas, and breast cancers.
 - ecDNA often contains multiple **oncogenes, promoting tumour growth and drug resistance**.
 - > **Oncogenes** are mutated genes capable of causing cancer that are required to activate tumour growth.

7.6.10. MARBURG VIRUS DISEASE

A recent outbreak of Marburg Virus Disease (MVD) in Rwanda has killed at least 15 people, and infected at least 66.

About MVD or Marburg Haemorrhagic Fever

- **Causative agents:** **Marburg virus (MARV)** and **Ravn virus (RAVV)** of the species ***Orthomarburgvirus marburgense***.
- **Human MVD infection** results from **prolonged exposure to mines or caves inhabited by Rousettus fruit bat colonies**, most notably Egyptian fruit bat (***Rousettus aegyptiacus***).
- **Transmission:** Human-to-human transmission via direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people.
- **Symptoms:** Begins abruptly, with high fever, severe headache, severe malaise, muscle aches and pains, etc.

7.6.11. DIAMOND BATTERY

Scientists from **University of Bristol and UKAEA** have created world's **first carbon-14 diamond battery**, a sustainable power source that can last thousands of years.

About Diamond Battery

- It uses a **man-made diamond** that, when placed in a radioactive field, is able to generate a small electrical current.
 - The diamond incorporates **carbon-14 (half-life of 5,700 years)**, an isotope used in radiocarbon dating.
- Like a solar panel, battery converts energy, but instead of light, it uses fast-moving **electrons** from **radioactive decay**.
- **Encased in diamond**, it safely **absorbs short-range radiation**, and generates low levels of electricity without leakage.

Potential Applications

- Can power devices like pacemakers, **hearing aids**, and **ocular devices**.
- Ideal for **space missions** because of long-lasting power for satellites.
- Can help manage **nuclear waste** by extracting carbon-14, reducing radioactivity and storage costs.

7.6.12. MILKWEED FIBER

Ministry of Textiles encouraging research & development into new natural fibers, including milkweed fiber.

About Milkweed fiber

- It is a unique **natural fiber** extracted from the seed pods of **milkweed plants** (*Asclepias syriaca* L).

- The plant is **native to North America**. In India, it is found as a wild plant in **Rajasthan, Karnataka & Tamil Nadu**.
- **Properties:** It contains **oily material & lignin, a woody plant substance**, which makes them too brittle for spinning.
 - Its **amphiphilic material** that can exhibit both **hydrophilic** (water absorbing) & **hydrophobic** (water-repelling/resisting) properties.
- **Applications:** Used as an absorbent material, water-safety equipment (life jackets & belts) etc.



7.6.13. BIO-BITUMEN


Union Transport Minister inaugurated India's first National Highway made with Bio-Bitumen in Nagpur-Mansar Bypass on National Highway 44.

- Bitumen is a **black substance** derived from **distillation of crude oil**, known for **adhesive properties**.
 - It is mainly used in **road paving** and **waterproofing applications**.

About Bio-Bitumen

- It is a petroleum-free alternative to bitumen manufactured from **organic elements**. E.g. Bio-char, Stubble, lignin, bio-oil, etc.
- It can be used as an addition to bitumen or to reduce the quantity of bitumen in **binder mixture**.
- **Benefits:** Reduced imports, address issue of stubble burning, boosting Bio-economy etc.
- **Other sustainable methods for road construction** -Copper Slag, Geotextiles, Cold asphalt mix etc.

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8. CULTURE

8.1. COMMUNIST PARTY OF INDIA

Why in the News?

2025 marks the Communist Party of India's (CPI) its 100th foundation day.

About Communist Party of India

• Background

- **Formation of CPI outside India (1920):** A group of seven people including leaders like **M.N. Roy, Mohd. Ali, Mohd. Shafiq, etc.** met in **Tashkent** (capital of the then Turkistan Republic of the Soviet Union), to form the **Communist Party of India**.
- **Reason behind the formation:** Disappointment and disenchantment caused by the **sudden withdrawal of the non-cooperation movement** and inspiration from **the October revolution of 1917** that had established the first workers' state in the world.
- **Formation of CPI inside India:** A resolution announcing the formation of CPI was adopted during '**Kanpur Communist Conference**' in December **1925** bringing together various **communist groups** active across British India.
 - **First President:** Malayapuram Singaravelu Chettiar
 - > In May **1923**, the **1st May Day celebration in India** was organized under his leadership.
 - **First general secretaries:** S.V.Ghate and J P Bagerhatta
 - **Founding members of the party:** Satyabhakta, M.N.Roy, E.T.Roy, Abani Mukherjee, Mohammad Ali, Hasrat Mohani etc.
- **Prominent Leaders:** M.N. Roy, Evelyn Trent-Roy (wife of M.N.Roy), Abani Mukherjee, Rosa Fitingov, Mohmmad Ali, Mohmmad Shafiq, A. K. Gopalan, S.A. Dange, E.M.S. Namboodiripad, P.C. Joshi, Ajay Ghosh and P. Sundarraya etc.
- **Ideology:** They followed **Marxist and Leninist ideas**.
 - Marxism-Leninism is a **political ideology and a system of government based on the ideas of Karl Marx and Vladimir Lenin**.
 - It combines **Marxist socialism with Leninist vanguardism**, emphasizing the role of a communist party in leading a revolution to **establish a socialist state and eventually a communist society**.
- **Publications supported by CPI:** Ganavani (Bengali weekly), Mehnatkash (Urdu weekly from Lahore) and Kranti (Marathi weekly from Bombay).
- **Major goals of CPI:** Nationalization of banks, workers and peasants' rights, land reforms, abolition of zamindari, formation of socialist state etc.
- **Key events in the history of CPI:**
 - **Ban:** British government declared **CPI illegal in July 1934** and the ban was **lifted in 1942**.
 - **Split:** In 1964 following the **ideological rift between Soviet Union and China**, CPI split into the CPI (pro-Soviet faction) and CPI (Marxist) (pro-China faction).

Do you know ?







From 1920 to 1929, there were three famous trials: the **Peshawar Conspiracy Case** (1922-27), the **Kanpur Bolshevik Case** (1924), and the **Meerut Conspiracy Case** (1929- 1933) against several communist leaders. **These were British attempts to suppress the communist movement in India;** however, the trials became so famous that they **generated solidarity for the communists both in India and abroad**.

Role of CPI in Indian Freedom Struggle

- **Mobilization of masses:** With the CPI led organizations like **All India Trade Union Congress (AITUC)** in 1920, **All India Kisan Sabha (AIKS)** and **All India Student's Federation** in 1936 and **Mahila sanghmas**, CPI mobilized masses **from every section of the society** into the Indian Freedom struggle.
 - Indian National Movements like non-cooperation, civil disobedience saw huge **participation from women, peasants, workers and middle class**.
- **Social reforms:** CPI was actively engaged in social reforms by advocating rights for Dalit equality, unity of Hindu and Muslims and formation of united nation against colonial repression.
 - **Kerala:** CPI leaders like **AK Gopalan and P Krishna Pillai** led the satyagraha in **Guruvayur for entry of Untouchables inside the temple**.

- **Maharashtra:** Under the leadership of **R.B. More**, communists were the organizers of **Ambedkar led Chavdar Lake Satyagraha at Mahad in March 1927.**
- **Demand for Full Independence:** It was the CPI who first sent the **manifesto in the shape of an open letter with the demand for full independence** to the **Ahmedabad session in 1921** and subsequently to the **Gaya session in 1922** of Indian National Congress (INC).
 - Such resolution was later passed in **INC session of Lahore in 1929.**
- **Ideological Influence:** Through organizations like the **All India Students Federation and the All India Progressive Writers Association**, communists propagated the idea of overthrowing the British rule through the **revolutionary activities.**
 - The British **were gravely concerned** about the growth and influence of the communists and targeted and arrested communist leaders in **Meerut Conspiracy case 1929.**
- **Support to struggles:** CPI and its leaders supported several major peasant and worker struggles in India. (see infographic)
- **Role of CPI in Constitution making**
 - **Idea of constitution:** It was **M.N. Roy** who formally proposed the idea of constitution in **1934**, similarly CPI also put forth the idea of a **constituent assembly.**
 - **Ideals of Constitution:** CPI significantly influenced the **ideals of secularism, justice, equality, universal suffrage, minority rights, land reforms** etc. which are incorporated in the Constitution.

Major revolts supported by CPI

Revolt	Details
 Telangana People's Revolt (1946-1951)	Armed struggle in the Telangana region launched by the Communist Party and the Kisan Sabha for abolishing landlordism.
 Tebhaga Struggle (1946-1949)	Communist Party led All India Kisan Sabha (AIKS) spearheaded the movement in West Bengal demanding a threefold division of produce (tebhaga)- <ul style="list-style-type: none"> ➤ 2/3rd to tenant farmers (bargadars) ➤ 1/3rd to the sublandlords (jotedars)
 Punnappra-Vayalar Struggle (1946)	Led by the Communist Party, coir workers, farm workers, and other sections of the working class in Allapuzha (now Kerala) against the dewan running the state in brutal and autocratic manner and refusing to merge with India
 Tripura Tribals Struggle (1948-1950)	Tripura Upjati Ganamukti Parishad , in association with AIKS , led a massive movement of tribal peasants in the name of Gana Shiksha Andolan and against land alienation , the "titun" system and other demands.
 Revolt of the Warlis, Maharashtra (1945-47)	Initiated and organized by Communist Party led by the communist woman leader Godavari Parulaker in Thane district of Maharashtra, against the inhuman exploitation of Warli Adivasis by landlords.
 Other revolts with influence of CPI	Surma Valley Struggle (1936-1948), RIN Mutiny (1946)

8.2. NEWS IN SHORTS

8.2.1. GEOGRAPHICAL INDICATION (GI) TAG

Gharchola, a traditional wedding sari from Gujarat, has received the GI tag.

- Historically crafted in auspicious colors like **red, maroon, green, and yellow**, it is traditionally worn during **Hindu and Jain weddings**.

About GI Tag

- GI is a sign used on products that have a **specific geographical origin** and possess qualities or a reputation that are due to that origin.
- In India, it is given under the **Geographical Indications (GI) of Goods Act, 1999**.
 - The registration of a geographical indication is **valid for a period of 10 years, which can be renewed**.
- Benefits:** It confers **legal protection** to Geographical Indications in India preventing 115ocusing115ion use by others in turn boosting exports.

8.2.2. 1924 BELGAUM CONGRESS SESSION

Centenary of 1924 Belgaum Congress Session is being celebrated in **Belagavi (earlier Belgaum)**, Karnataka on December 26-27.

About 1924 Belgaum Congress session

- It was **39th Session of the Indian National Congress** and was the **only session presided over by Mahatma Gandhi**.
- Significance**
 - Discussed his **dream of 'Swaraj' and 'Sarvodaya'**.
 - Revamped 115ocusing115ional structure and functioning of congress** with 90% fee cut, focusing on social change, etc.
 - Held **separate conferences against untouchability**.
 - Strong resolutions were passed to stress upon **Hindu-Muslim unity, paid social service, and making khadi spinning mandatory**.

8.2.3. INDIRA GANDHI PRIZE

Former Chile President, Michelle Bachelet is to be conferred the **Indira Gandhi Prize for Peace, Disarmament and Development, 2024**.

- She would be awarded for her work to improve gender equality, human rights and democracy.

About Indira Gandhi Prize

- Awarded **annually** to a **person or organization** in recognition of creative efforts towards **promoting international peace and disarmament**, etc.
- It consists of an **award of Rs.10 million** and a **trophy with a citation**.
- Scrutiny of proposals and final selection is made by a **jury of 5 to 9 eminent persons**, named by the Chairperson of the Indira Gandhi Memorial Trust.

8.2.4. SAHITYA AKADEMI

Naga writer Easterine Kire's "Spirit Nights" wins Sahitya Akademi Award 2024.

About Sahitya Akademi

- **Genesis:** Formally inaugurated in **1954** and Registered under the **Societies Registration Act, 1860**.
- **Ministry:** An autonomous body under **Ministry of Culture**.
- **Role:** Undertakes **literary activities in 24 languages** (22 scheduled languages and **English** and **Rajasthani**).
 - Honoured as '**India's National academy of letters**'.
- **Its major awards:** Sahitya Akademi Award, **Bhasha Samman**



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9. ETHICS

9.1. INDIC IDEA OF GOOD GOVERNANCE

Introduction

Recent emphasis on the idea of **P2G2 or Pro-People Good Governance** in India and the creation of a new Department of **Government Efficiency** in USA indicates the growing realization towards better and people-oriented governance. In this light, it is essential to revisit the India's age old traditions that had the idea of **Rajadharma** imbibed in them dealing with justice, fairness, and welfare of the people.

About Good Governance

- Governance was defined as the manner in which **power is exercised** in the **management of a country's economic and social resources for development**.
 - It provides a **comprehensive framework** that ensures that the **voices of the most vulnerable** are heard and that decisions are made to **address both current and future needs**.
- According to the **United Nations**, good governance has eight major characteristics, viz, participatory, **consensus-oriented, accountable, transparent, responsive, effective, equitable, and inclusive**, all while adhering to the **rule of law**.
- **Challenges to Good Governance:** Corruption, lack of accountability, judicial delays, poor law implementation, inadequate public service delivery etc.

Know the term

➤ **Dharma** is law in its widest sense—**spiritual, moral, ethical and temporal**. Every individual, whether the ruler or the ruled, is governed by his or her own dharma."

-- **Kautilya (The Arthashastra)**

Indic Idea of Good Governance

- **Brihadaranya Upanishad:** It stresses on the duty of the king to protect **Dharma**, the public good, so that all citizens get equal opportunity and that the weak are not exploited.
- **Mundaka Upanishad:** It includes the phrase "**Satyamev Jayate**" that translates to **Truth alone triumphs**, a basic part of good governance.
- **Epic Ramayana:** It talks about **Ram-Rajya or ideal governance** and offers essential insights into the crucial art of leadership. According to **Ram Rajya**, a leader is expected to look after everyone who need help and support instead of accumulating wealth for himself.
 - The **Ayodhya Kanda** of **Ramayana** is a treatise on the issues related to good governance. In Ram Rajya, there was no starvation, soreness or discrimination among the people
- **Bhagwat Gita:** Talks about the concept of **Adhishthan**, which is an important element at the foundation of everything, including governance.
 - Adhishthan, or the seat of action, relates to good governance by **ensuring decisions are made with responsibility and stability**, fostering a transparent, accountable, and effective administrative system.
- **Atharvaveda:** Atharvaveda contains a hymn known as the **Bhumi Suktam**, dedicated to the Earth. This hymn venerates the Earth as the universal mother who nourishes all creatures, and it emphasizes the need to live in harmony with nature.
- **Thirukural:** It deals with the **orderly development** of the society, including regulation to ensure reasonableness of prospecting and exploitation of resources and protection of the environment.

Do you know ?

➤ Chhatrapati Shivaji Maharaj adopted the approach of **Upphogshoonya Swami** towards kingship that deals with the complete ownership of subjects without any personal aggrandisement.

- **Kautilya's Arthashastra:** It deals with **Yogakshema**, or the welfare of the citizens, and **Raj Dharma** describing king as the servants of the citizens who looks after the sick, children, old, etc.
- **Antyodaya:** It is based on the ideas of **Mahatma Gandhi** that implies welfare of all through the **weakest** of the society to achieve **Sarvodaya** or 'development of all'.

Relevance of the Indic Ideas of Good Governance

- **Adapting to Globalisation:** Globalisation has limited the authority of government with the rise of various transnational organizations and supranational organizations. Hence, reviving the Indic ideas of good governance **may fill up the vacuum** in the areas of public order and welfare.
 - Philosophies like **Vasudhaiva Kutumbakam** (the world is one family) promotes global unity and inclusivity.
- **Sustainable living:** Indic principles as mentioned in Atharvaveda underline the importance of sustainable development practices, as seen in **India's commitment to SDGs and Lifestyle for Environment (LiFE)**.
- **Preserving Democracy:** By ensuring cooperation between the government and civil society/citizens.
 - **Karmayogi project** for building capacities of government is governed by the same impulse.
- **Welfare for All:** Concept of Antodaya aligns with the **modern concept of inclusive development**.
 - It is seen in programs like MGNREGA, Public Distribution System (PDS), and Ayushman Bharat aimed at uplifting marginalized communities.
- **Improving Diplomatic Relations:** Ideas of **Kautilya**, 118 focusing on **pragmatism** assess the strategic opportunities, threats and risks while dealing with foreign countries.
- **Conflict Resolution:** The Nyaya system of jurisprudence, which focuses on justice, fairness, and mediation, offers an alternative to adversarial legal systems.
 - Modern governance could adopt elements of this approach to resolve conflicts more amicably, reducing the burden on judicial systems.

Conclusion

Basic features of the **modern day concept of good governance** resonates well with the thought process and the administrative structure postulated by the ancient scriptures. The primary objective of the authority in both the cases essentially is the **happiness of the people**. Therefore, there is a strong need to dive into the seas and oceans of Ancient Scriptures and gain pearls of wisdom necessary to build **SMART (simple, moral, accountable, responsive and transparent)** administration.

Check your Ethical aptitude

You have recently taken charge as the District Magistrate of a remote district X. On interacting with the public and the officials there, you find out that the district has a very poor governance track record with corruption among officials, poor service delivery, and complacent attitude among officials. On further inquiry you find that both the officials and the citizens are quite traditional in their beliefs and do not connect with modern governance ideas. Therefore, you feel the urgent need to revamp the administrative strategy by linking it with Indic ideas of Good Governance so that it not only resonates with the beliefs of the people but also the officials ensure their implementation with full spirit.

On the basis of the above case study, answer the following questions.

1. What are the key foundational notions of Indic Idea of Good Governance?
2. Citing few examples, suggest how Indic ideas help in the dealing with the problems being faced by governance of district X?

9.2. ASPECTS OF PEACE

Introduction

Recently, World Leaders at 10th Global Forum of **UN Alliance for Civilizations** adopted the **Cascais Declaration**, pledging to **promote peace** amid today's turbulent times. The declaration highlighted the importance of intergenerational dialogue for achieving **peace, sustainable development, and human rights**. Prior to this, the **UNESCO HK Association's 2012 Peace Project** introduced the **Aspects of Peace**—defining **peace as harmony within individuals and across all aspects of life**.

Five Aspects of Peace

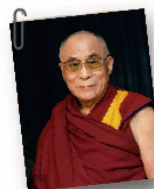
Aspect	Concept	Challenges
Individual/ Inner Peace	<ul style="list-style-type: none"> It enables individuals to handle life's challenges, reduce stress, and contribute positively to society. 	<ul style="list-style-type: none"> Mental Health Issues (anxiety, depression) due to work life imbalance, economic instability etc. Consumerism and Materialism.
Social Peace	<ul style="list-style-type: none"> Focuses on creating peaceful & harmonious relationships within communities, through collaboration, conflict resolution, equality, & justice. 	<ul style="list-style-type: none"> Discrimination & Exclusion causes resentment and violence. Misinformation, hate speech and prejudices based on gender, race etc.
Ecological Peace	<ul style="list-style-type: none"> Emphasizes importance of sustainable development and a balanced relationship with environment. 	<ul style="list-style-type: none"> Climate change, extreme weather etc. contribute to resource conflicts and displacements. Insufficient cooperation on environmental issues.
Cultural Peace	<ul style="list-style-type: none"> Encourages understanding, respect, and appreciation for cultural diversity & cultural exchanges. 	<ul style="list-style-type: none"> Ethnocentrism (Viewing one's own culture as superior), Cultural Intolerance, hate speech etc.
Political Peace	<ul style="list-style-type: none"> Fosters just, non-violent relationships within groups, organizations, and communities across government, business, and society. 	<ul style="list-style-type: none"> Global: Territorial disputes, and rivalries, Weak International Governance, Proliferation of nuclear weapons etc. National: Lack of rule of law, nepotism, corruption.

Some Philosophical Aspects of Peace

- Gandhian Conception of Peace:** Gandhi's core idea of peace was rooted in **Ahimsa (nonviolence)** and **Satya (truth)**. He also emphasized **self-purification, simplicity, and compassion** as prerequisites for societal peace.
- Utilitarian Concept of Peace:** A peaceful society is one that enhances collective well-being, and peace is achieved when actions **maximize overall happiness** and **minimize suffering**.
- Kantian Notion of Peace:** Peace is not a passive state but an **active moral obligation of individuals and nations**. Immanuel Kant believed in perpetual peace **through rationality, universal morality**, and international cooperation.

“Peace can only last where human rights are respected, where the people are fed, and where individuals and nations are free. True peace with oneself and with the world around us can only be achieved through the development of mental peace

- Dalai Lama



Key Stakeholders in Promoting Peace

Global/Political Peace	
Governments	<ul style="list-style-type: none"> Government set policies, enacts laws, and enforce regulations that can promote peace, human rights, and justice within their countries and globally.
International Organizations	<ul style="list-style-type: none"> They mediate conflicts, promote diplomacy, and coordinate efforts for global peace and sustainable development.
Civil Society Organizations	<ul style="list-style-type: none"> They are instrumental in advocating for peace, human rights, and social change at the local, national, and global levels.
Social and Cultural Peace	
Community Leaders	<ul style="list-style-type: none"> Local leaders play a critical role in promoting peace by resolving conflicts, advocating for justice, and fostering social cohesion in their communities.
Religious & spiritual leaders	<ul style="list-style-type: none"> They have significant influence in promoting peace by advocating for love, compassion, forgiveness, and religious tolerance across cultural and religious divides.

Mainstream media & social media	<ul style="list-style-type: none"> It plays a vital role in ensuring peace by promoting truthful information and countering misinformation and hate speech etc.
Individual/Inner Peace	
Individuals	<ul style="list-style-type: none"> Each person contributes to peace by practicing tolerance, understanding, and empathy in their daily life, creating peaceful environments within their families and communities
Families	<ul style="list-style-type: none"> Families are the first unit of society where peacebuilding begins. They instill values of non-violence, respect, and conflict resolution in their children.
Educational Institutions	<ul style="list-style-type: none"> Teachers and curricula shape future generations by teaching peaceful values, critical thinking, social justice, environmental sustainability and conflict resolution

Initiatives Undertaken to Restore and Promote Peace

- **Global Peace:** Various global institutions like World Bank, UN, etc. fostering the dialogue and cooperation, multipolarity to ensure global stability and peace.
- **Political Peace:** Global institutions like **International Court of Justice (ICJ)** and several peace negotiations and treaties ensure peaceful dispute settlement.
- **Ecological Peace:** Initiatives like **Paris Agreement** address environmental degradation to **prevent resource-based conflicts**. Programs like **WWF's Earth Hour** raise awareness about **ecological sustainability**.
- **Inner Peace:** Global events such as **International Yoga Day** and **World Meditation Day** foster mental well-being.
- **Cultural Peace:** **UNESCO's World Culture Forums** promote understanding between diverse cultural groups.
 - UNESCO's **cultural heritage Programme** works to preserve cultural landmarks prevent destruction during conflicts, symbolizing unity and peace.

Conclusion

Peace is a holistic concept. It is not just the absence of conflict, but the **active presence of harmony, justice, equality, and understanding** both within individuals and between nations. **Building peace from the inside out encourages sustainable solutions to global problems**, such as human rights, environmental protection, and economic equity.

Case Study

Rivania, a fictional country in a geopolitically sensitive region, faces a long-standing territorial dispute with its neighbor, Cardovia, over a resource-rich border. The conflict has caused repeated clashes, displacement, and regional instability. Multilateral institutions like the Global Peace Council have failed to mediate effectively due to political biases and weak enforcement, deepening mistrust. Socially, the dispute fuels nationalism and discrimination against ethnic minorities in Rivania, eroding social cohesion. Individually, border residents face fear, trauma, and conscription, tearing families apart. Peace activists remain disillusioned as global institutions struggle to address the conflict, exacerbating its impact on society and individuals.

Based on the above case study, answer the following questions:

- Identify the various stakeholders and ethical issues involved in the case.
- Discuss how different aspects of peace are connected to each other?
- As a leader in Rivania, how can you demonstrate ethical leadership by navigating the conflict with Cardovia?

9.3. CONCEPT OF LIBERTY

Introduction

Recently, in Arvind Kejriwal vs CBI case, Supreme Court said that Arvind Kejriwal's continued incarceration would infringe upon the right to personal liberty under Article 21. With this and similar other decisions, Supreme Court has upheld the principle of bail as rule and jail as exception, while underlining the sacrosanct nature of the individual's right to personal liberty guaranteed under Article 21 of the Constitution.

Concept of Liberty

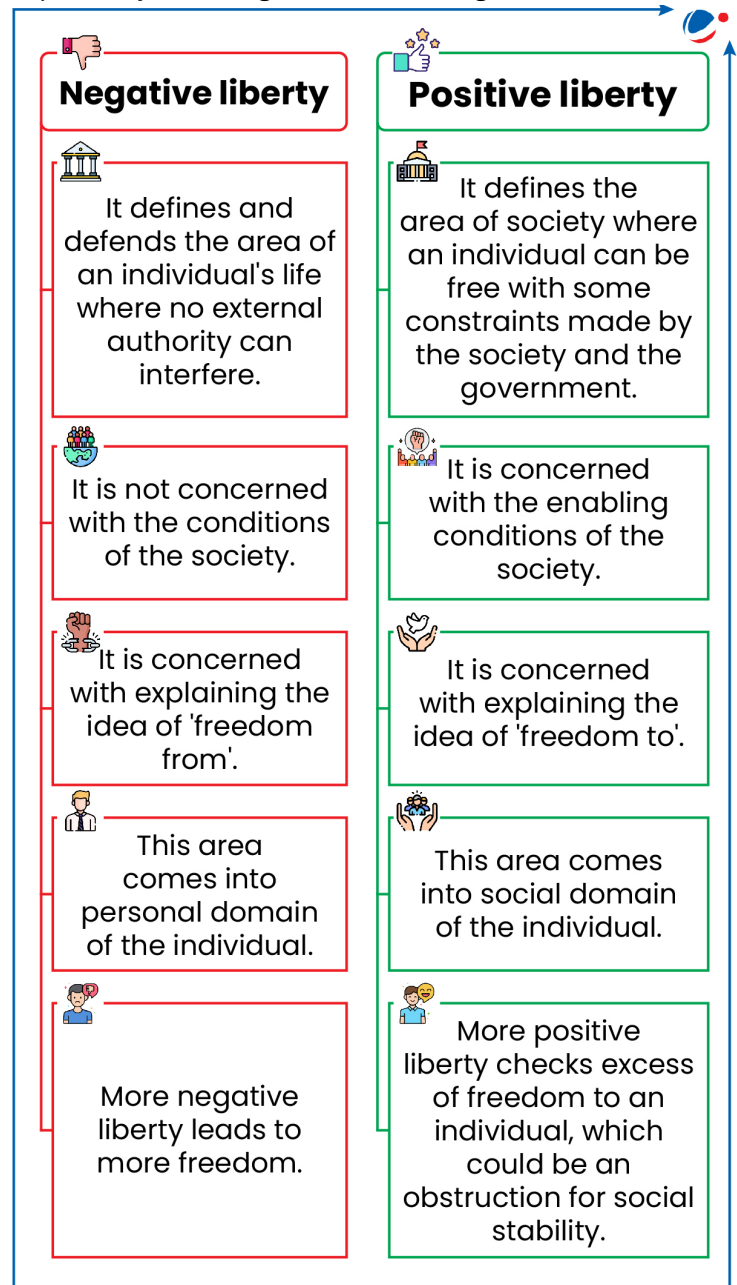
- Liberty refers to the state or condition in which an individual has the **freedom to act according to their will, without undue restraint or coercion** from external forces.

- There are **two aspects** to the concept of Liberty (see infographic).
- **Constraints on Liberty:** Restrictions on liberty may be imposed by force or government through laws and can also result from social inequality and economic inequality.
 - **Need for Constraints:** Differences exist between people regarding their ideas and opinions, and there are conflicting ambitions and competition to control scarce resources.

> Therefore, every society **needs some restraints** to ensure that differences may be discussed and debated without one group coercively imposing its views on the other. However, such restraints must be **reasonable and justified**.

Ethical Frameworks surrounding Liberty

- **John Stuart Mill's harm principle:** Mill urged for **minimal state intervention in the exercise of liberties**, arguing that "the only power that can be rightfully exercised over any member of a civilised community, against his will, is to prevent harm to others". This is called the 'harm principle'.
 - **Constraints:** Mill believed that that the state or society do not have any justification in restricting self-regarding actions (actions having consequences only for individual actors and nobody else).
 - > However, the **state or society can control other-regarding actions** (actions having consequences for others).
 - > For instance, in **Navtej Singh Johar vs. Union of India case**, the Supreme Court buttressed its conclusion that the state cannot criminalise homosexuality (self-regarding action) by recalling Mill's theory.
- **Liberty and Rights:** Liberty is integrally linked to the rights as the due enforcement of the rights ensures the availability of legitimate freedom to the subjects of the state.
 - **Principle-based Framework:** Rights framework emphasizes on liberty based on moral principles and human rights, which sometimes are in conflict with one another.
 - > According to it, **civil liberty depends upon positive laws** such as legal rights.
- **Isaiah Berlin's Ethical Pluralism:** It is a political and philosophical theory that there are multiple objective values and principles that are part of humanity's essence.
 - Berlin's value pluralism emphasizes on both **positive liberty and negative liberty** as fundamental human value.



Constitutional Framework surrounding Liberty

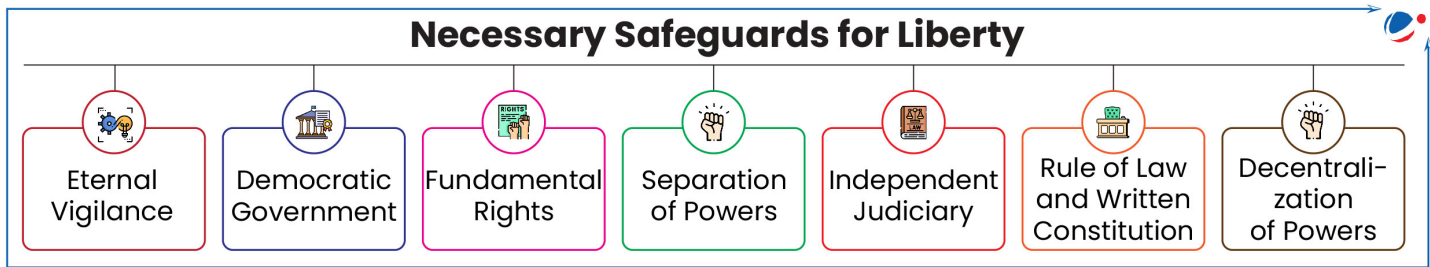
- **Article 21:** It guarantees that no person shall be deprived of his **life or personal liberty** except according to **procedure established by law**. It provides one of the most robust legal safeguards for personal liberty.
- **Article 19:** It grants **freedom of speech and expression** without fear of state repression.
 - Mill emphasized that a **society that completely suppresses all ideas** that are **not acceptable today**, runs the danger of losing the benefits of what might turn out to be very valuable knowledge.

- However, Mill also recognized **the limits of free speech**, particularly in cases where **speech could incite violence or harm others** such as hate campaigns and hate speeches.
 - > To address such issues, the Constitution imposes **reasonable restrictions** such as preventing speech that incites violence, promotes enmity, or threatens public order.
- **Other Fundamental Rights:** Fundamental rights such as Right to Equality (Article 14), Equality of Opportunities (Article 16), Freedom of Conscience (Article 25) etc. also constitute important framework for Liberty.

Key Stakeholders		
Stakeholders	Roles/Interests	Ethical Considerations
Individual	<ul style="list-style-type: none"> ● Primary beneficiary of liberty. ● Right to pursue personal freedom and dignified life. ● Respecting social norms and moral values. 	<ul style="list-style-type: none"> ● Not infringing on other individual's liberty. ● Ensuring actions do not violate public good. ● Exercising freedom with social responsibility.
Society	<ul style="list-style-type: none"> ● Preserving order and harmony. ● Safeguarding their collective interests like social customs and norms. 	<ul style="list-style-type: none"> ● Establish reasonable limits on individual liberty and justified collective interest. ● Protecting individual liberty.
Government	<ul style="list-style-type: none"> ● Upholding law and order. ● Safeguarding individual liberty and maintain social order. ● Maintaining national security. 	<ul style="list-style-type: none"> ● Protecting individual liberty, ensuring justice and fairness. ● Keep checks and balances on arbitrary exercise of power.
Judiciary	<ul style="list-style-type: none"> ● Ensuring rule of law. ● Promoting ideals of liberty and justice. ● Preserve social interests and ensure public good. 	<ul style="list-style-type: none"> ● Upholding impartiality and fairness thus ensuring individual rights. ● Ensuring accountability of Government.
Civil Society	<ul style="list-style-type: none"> ● Protecting and promoting liberties. ● Ensuring social justice and raise awareness. 	<ul style="list-style-type: none"> ● Work transparently and advocate for freedoms without any ulterior motive. ● Avoiding conflict of interest in prioritizing public good.

Ethical Issues associated with Liberty

- **Liberty vs Security:** Striking the right **balance between protecting individual liberty and ensuring national security** is an ethical challenge.
 - Laws like the Unlawful Activities (Prevention) Act (UAPA) and the National Security Act (NSA) have been criticized for their misuse in curtailing individual liberties but are deemed necessary for national security.
 - Recently, Supreme Court emphasized that **depriving a person of their liberty, even for a single day, is a day too many.**
- **Freedom of Speech vs Hate Speech:** Rise of social media has led to an increase in hate speech and misinformation but what exactly constitute hate speech is undefined in law.
 - Thus, it is dependent upon the **interpretation of implementing authorities** resulting in curtailment of freedom of speech in some cases while non-punishment to actual hate speeches in some other cases.
- **Cultural traditions vs women's rights:** Women and Transgender often **face restrictions, social stigma, and non-realization of their fundamental rights** due to patriarchal structure of society.
 - Ethical challenge is navigating between respecting cultural traditions and advancing women's rights and freedom.
- **Right to Privacy vs Surveillance:** Supreme Court has declared the **Right to Privacy as a fundamental right** but there are concerns on how data of citizens is **collected, stored and used** by government entities and private sector.
 - Ethical dilemma for government is to ensure public safety and deliver good governance without violating individual's privacy.
- **Economic Inequality vs Liberty:** Liberty is often linked to economic freedom as it also means **opportunity to explore one's full potential** in an enabling society.
 - However, economic inequality hinders that opportunity by limited access to quality education, healthcare, basic infrastructure services like water, sanitation, and electricity etc.



Conclusion

The concept of liberty is multidimensional, encompassing both personal autonomy and the ethical responsibility to prevent harm to others. Supreme Court has consistently reinforced the idea that personal liberty is paramount. Philosophically, John Stuart Mill's harm principle offers a critical framework for understanding when and why liberty may be legitimately restricted. Together, these perspectives remind us that liberty, while fundamental, must be balanced with justice and fairness in any democratic society.

Check your Ethical Aptitude

As a district magistrate, you are approached by the police requesting approval to detain a prominent political activist under preventive detention laws. The activist has been organizing large protests against certain government policies, which the police argue could lead to unrest and disruption of public order. However, the activist has not been involved in any violence, and the protests have been largely peaceful so far.

At the same time, the activist's legal team submits a petition emphasizing their right to freedom of speech and expression under Article 19 and personal liberty under Article 21 of the Constitution. They argue that any preventive detention would be an unjust violation of these constitutional rights and that the protests are a legitimate expression of public dissent in a democracy.

On the basis of the case study answer the following questions:

- What ethical principles will guide your decision-making process in this situation?
- Reflect on John Stuart Mill's harm principle. Would the preventive detention of the activist be justified under this principle? Why or why not?

Scan the QR code to know more about **Liberty**

Weekly Focus #97 - Constitutional Ethos IV: Liberty and Freedom



9.4. PERSONALITY IN FOCUS: SHRI TULSI GOWDA (1944-2024)

Introduction

Recently, Shri Tulsi Gowda, an Indian environmentalist, breathed her last. She was known as the "**Encyclopedia of the Forest**" and the "**tree goddess**" because of her knowledge of the forest. Her legacy would continue to act as a guiding light for environmental conservation inspiring generations to protect our planet.

Brief about the life of Shri Tulsi Gowda

- **Birth:** Born in **1944**, into a modest **Halakki tribal** family in **Karnataka**.
 - In the traditions of **Halakki Vokkaliga** tribe, matriarchy is connected deeply to nature.
- **Early Life and Education:** She did not receive a formal education and lost her father at the age of 2.
- **Accolades:** Honoured with **Padma Shri**, country's 4th highest civilian award, in 2021 by the Government of India.
 - Also received **Indira Priyadarshini Vriksha Mitra Award**.



Key contributions of Shri Tulsi Gowda

- **Respecting Traditional Knowledge:** Her approach to tree planting was deeply rooted in ecological principles, emphasizing the importance of selecting native species that were well-suited to local conditions.
 - She was also an expert in **seed collection** and **germination techniques**.
- **Dedicated afforestation Efforts:** Her environmental contributions are **marked by her extraordinary achievement of planting over 30,000 trees throughout her life**.
- **Reversing Environmental Destruction:** Her deep commitment towards preserving and protecting forests can help reverse the **anthropogenic harm**.
 - Her efforts revitalized barren landscapes and restored ecological balance in Karnataka.
- **Fostering Environmental Justice:** Her inclination to **educate local communities** about the importance of conserving the forest and its resources would ensure **welfare of all**.
- **Promoting Ecofeminism:** Her legacy highlights the **contribution of women** to environmental conservation not only as **agents of change** but also for their **economic empowerment**.
- **Collective Responsibility:** By involving the community in her efforts to protect environment, she created a collective sense of responsibility **empowering individuals** to take action.

Conclusion

The legacy of Shri Tulsi Gowda is that of **inspiration** and **empowerment**. She has showcased how community-led initiatives can lead to **significant ecological change**. She has also exhibited the importance of **developing a culture of care and connectedness** towards the environment.

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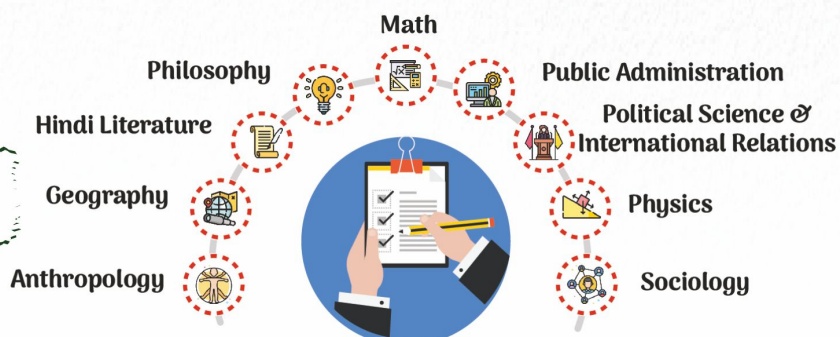
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10. SCHEMES IN NEWS

10.1. SAMARTH (SCHEME FOR CAPACITY BUILDING IN TEXTILES SECTOR)

Why in the News?

Recently, Government had extended Samarth scheme till March 2026, with a budget of Rs. 495 Crore to train **3 lakh persons in textile-related skills**.

Objectives	Salient features
<ul style="list-style-type: none"> • To deliver industry-aligned NSQF-compliant training across textile sectors (except spinning and weaving) to enhance employment opportunities. • To promote skilling and upskilling/ reskilling in the traditional sectors of handlooms, handicrafts, sericulture and jute. • To enable provision of sustainable livelihood either by wage or self-employment to all sections of the society across the country 	<ul style="list-style-type: none"> • Ministry: Ministry of Textiles • Launch year: 2017 • Valid Till: March 2026. • Implementing Agencies <ul style="list-style-type: none"> ○ Textile Industry. ○ Institutions/Organization of the Ministry of Textiles/State Governments having training infrastructure and placement tie-ups with textile industry. ○ Reputed training institutions/ NGOs/ Societies/ Trusts/ Organizations/ Companies /Start Ups / Entrepreneurs active in textile sector having placement tie-ups with textile industry • Implementation Framework: Overall framework for implementation including costing for the capacity building programmes will be in alignment with the broad policy framework for skill development viz. Common Norms, National Skills Qualifications Framework (NSQF) etc. adopted by Ministry of Skill Development & Entrepreneurship (MSDE). <ul style="list-style-type: none"> ○ The scheme would include Entry level courses and Training of Trainers programme. • Branding of the Training Centre: Implementing agencies must follow government-mandated branding guidelines to promote the scheme and training centres through standardized marketing approaches. • Selection of the Trainees: Preference will be given to the marginalized social groups like women, SC/ST, differently abled persons, minorities, persons from the BPL category and Aspirational Districts notified by the NITI Aayog. • Current Status: Scheme has trained 3.27 lakh candidates, of which 2.6 lakh (79.5%) have been employed. <ul style="list-style-type: none"> ○ There is a strong emphasis on women's employment, and 2.89 lakh (88.3%) women have been trained so far. • Funding: The scheme assistance will be only towards the cost heads covered under the Common Norms of the MSDE and agreed to by the Ministry under this scheme. • Management Information System (MIS): An integrated web-based MIS platform will monitor scheme implementation and facilitate stakeholder registration, including Implementing Agencies. • Aadhaar Based Biometric Attendance: Mandatory Aadhaar Enabled Biometric Attendance System integrated with centralized MIS, which will ensure real time attendance of the trainers and the trainees. <ul style="list-style-type: none"> ○ Minimum 80% attendance required for assessment. • Soft Skills: In addition to the targeted domain specific hard skills, the programme shall also aim at imparting soft skills (life management skills) to the trainees. • Assessment and Certification: Third Party Assessment and Certification will be mandatory for all the eligible trainees.

- **Grievance Redressal:** Any grievance can be submitted through three modes – **Call Centre, Mobile App or Scheme website.**
 - If the grievance is not redressed within 15 days, it will be escalated by **MIS to the Director, handling Samarth, in the Ministry,** for redressal within next **21 days**, who will be designated as **Grievance Redressal Officer (GRO).**
- **Employment linkage:** Mandated in the courses under organized textile sector with mandatory placement 70% in entry level & 90% for Upskilling programmes.



Monthly Current Affairs

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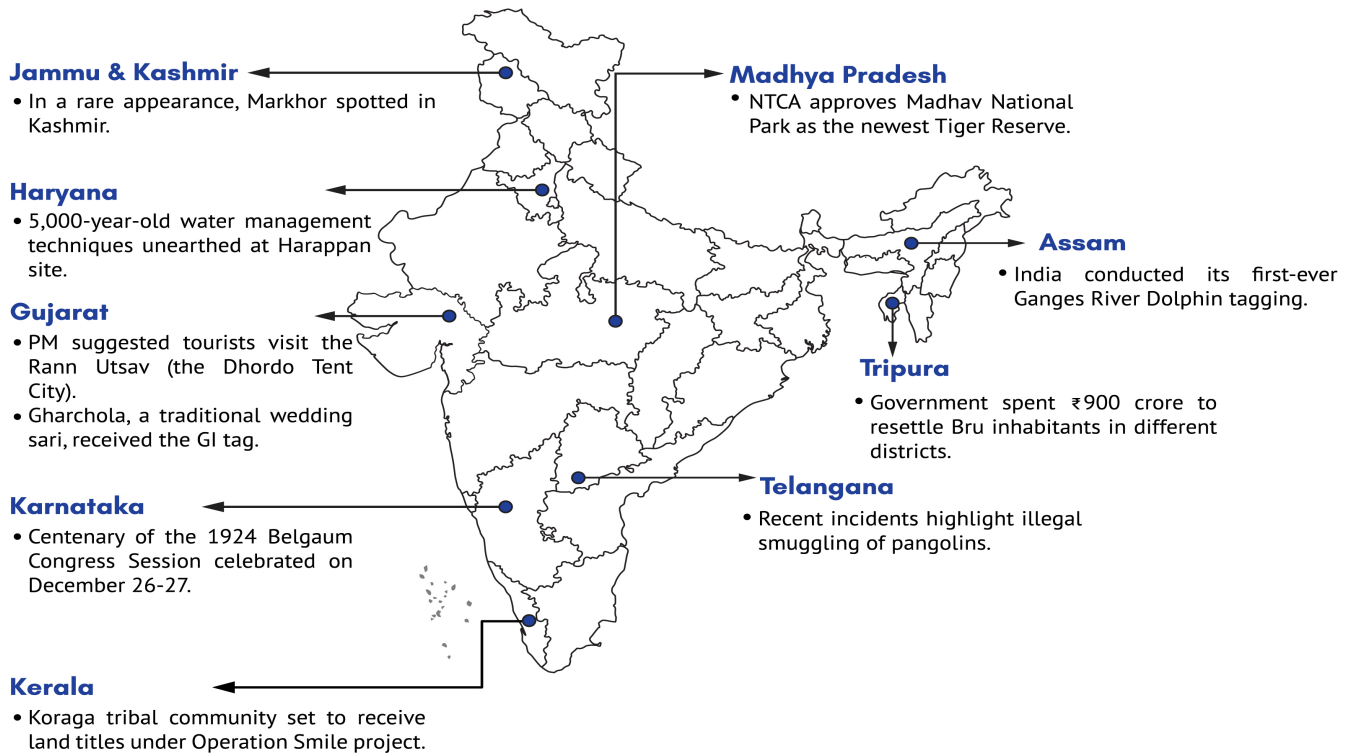
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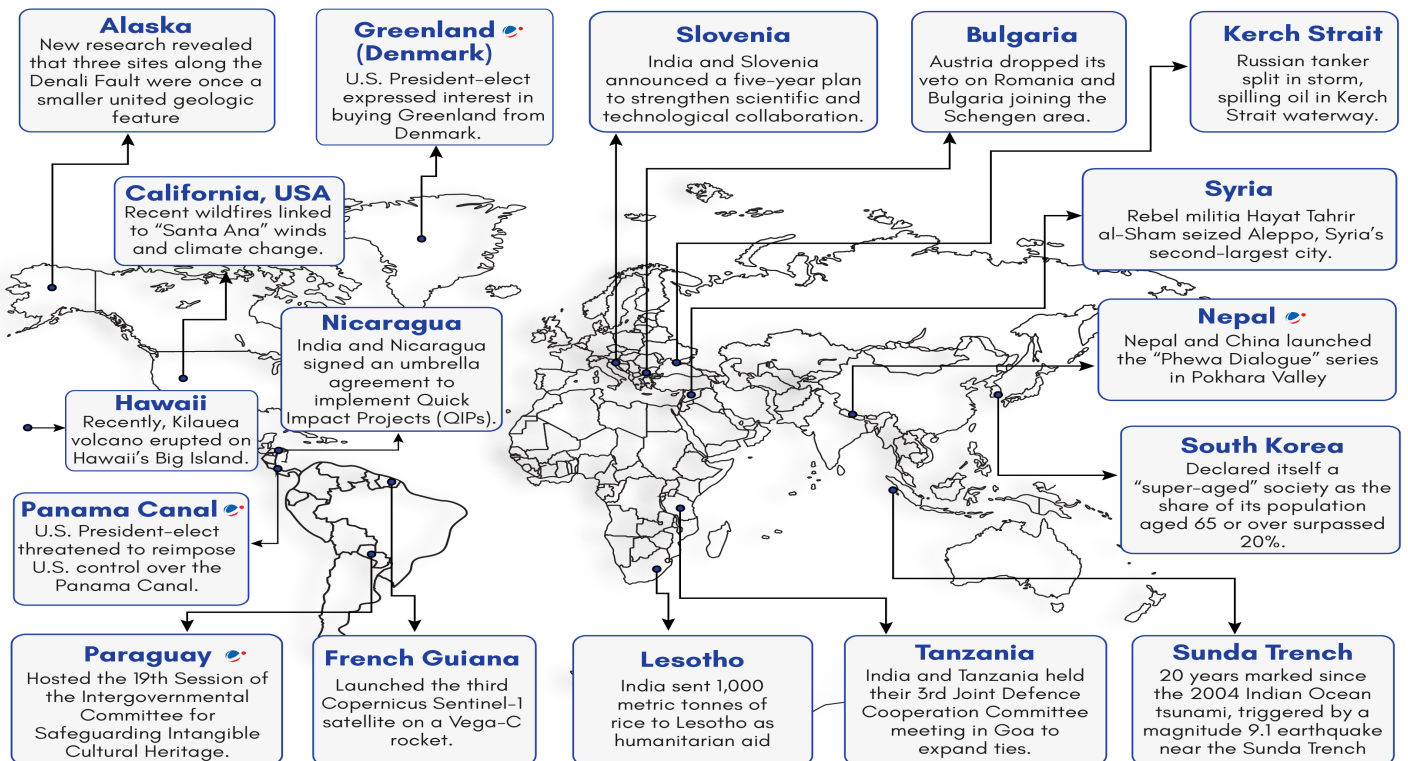
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11. PLACES IN NEWS

India

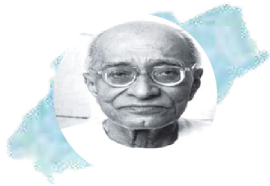


World



12. PERSONALITIES IN NEWS

Personality	About	Ethical Values exhibited by the Personality
 <p>Guru Tegh Bahadur (1621-1675)</p>	<p>Recently, the 'Martyrdom Day' of Guru Tegh Bahadur ji was observed on November 24.</p> <p>About Guru Tegh Bahadur ji</p> <ul style="list-style-type: none"> • He was born in Amritsar (Punjab). • He was the 9th Sikh Guru and was a great warrior, spiritual personality and lover of the motherland. <p>Key Contributions</p> <ul style="list-style-type: none"> • He propagated the message of universal brotherhood and religious freedom. • He fought against superstitions, caste-based discrimination, and untouchability. <ul style="list-style-type: none"> ▸ His teachings inspire to build a strong and vibrant India which is firm on the pillars of equality, justice, fraternity and liberty • He founded the town of Chak Nanki in Punjab, later enlarged into the city of Shri Anandpur Sahib. • He was crowned with the rare honour of 'Hind Di Chadar'. 	<p>Commitment and Universal Brotherhood</p> <ul style="list-style-type: none"> • He committed himself to save a community from the oppressive ruler. • His hymns were based on the idea of brotherhood i.e. to consider fraternity as binding force between different members of a society.
 <p>Jyotirao Phule (1827-1890)</p>	<p>28th November marks the death anniversary of Jyotirao Phule.</p> <p>About Jyotirao Phule</p> <ul style="list-style-type: none"> • Birth: Satara (Maharashtra) • He, along with Savitribai Phule, worked as a social reformer, fighting against social evils like untouchability and promoting women's education <p>Major contributions</p> <ul style="list-style-type: none"> • With help of his wife, he started the first school for girls in 1848 in Pune at Tatyasaheb Bhide's residence. • He founded Satyashodhak Samaj(1873) to propagate caste equality. <p>Written various books like Gulamgiri(slavery); Sarvajaneek Satyadharma, etc.</p>	<p>Rationalism and social justice</p> <ul style="list-style-type: none"> • Phule through his writing reinterpreted the Indian past and provided scientific understanding of Indian history particularly the origin of its caste based social order. • He pioneered women education in India and started several schools for girls and for children from depressed classes.



C. Rajagopalachari
(1878-1972)

C. Rajagopalachari remembered on his birth anniversary.

About C. Rajagopalachari

- **Chakravarti Rajagopalachari**, popularly referred to as **Rajaji** was born on 10th december in **Thorapalli, Tamil Nadu**.
- He was a **patriot, social reformer**, renowned **lawyer & abled administrator** etc.

Key Contribution

- **Independence Movement:** Participated in agitations against **Rowlett Act, Non-Cooperation movement, Vaikom Satyagraha**, & Civil Disobedience Movement.
- **Constitution Making:** Rajaji as a **member of Constituent Assembly** from Madras contributed to constitution making.
- **Later Contribution:** Served as the **last Governor-General of India till 1950**, formed **Swatantra Party** etc.

Patriotism and Integrity

- Actively participated in India's freedom movements, showcasing unwavering dedication for the nation.
- Upheld high moral standards in constitutional and administrative roles.



Subramania Bharati
(1882-1921)

Mahakavi Subramania Bharti remembered on his **143rd birth** anniversary.

About Subramania Bharti:

- A great Tamil poet and freedom fighter, regarded as the father of the modern Tamil literary style.
- He was Involved in a faction of the Indian National Congress (INC) party that favoured armed resistance against the British raj.
- He began his career as a journalist in "Swadesamitran"(1882)

Key contributions

- He championed the empowerment of youth and women and had immense faith in science and innovation.
- **Notable works:** Kannan pattu, Panchali sapatnam, Kuyil pattu etc.

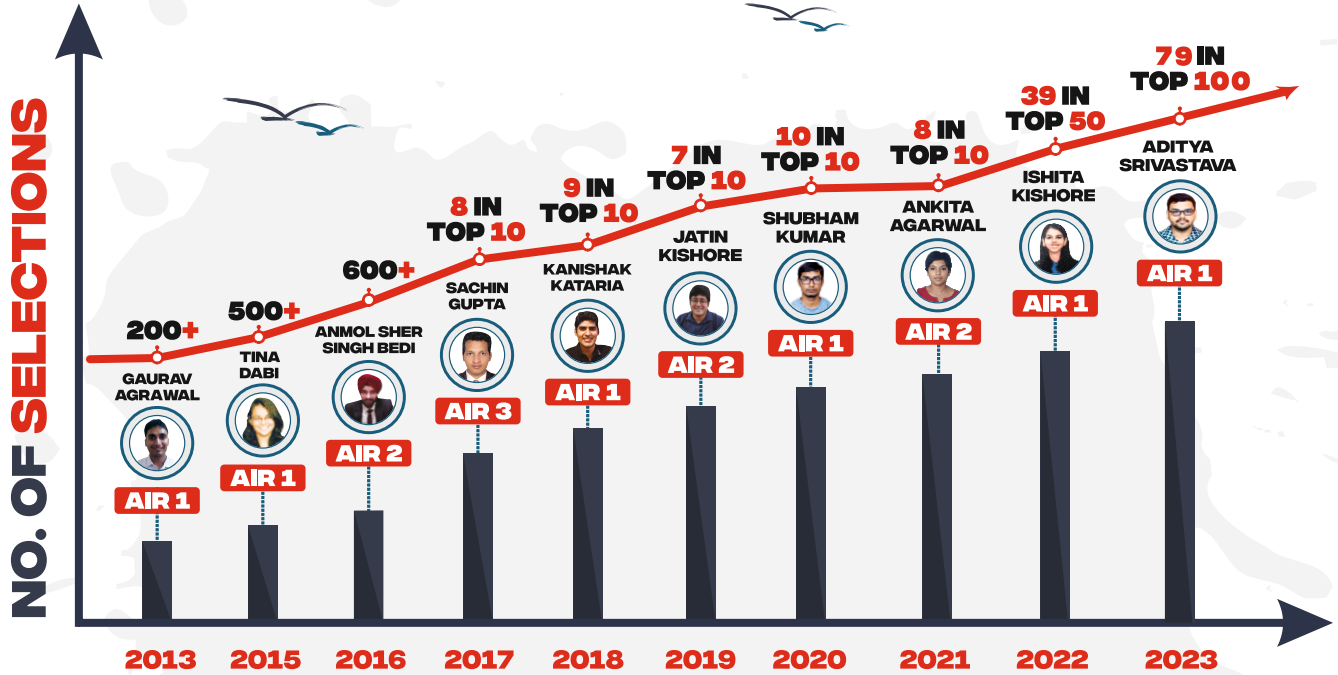
Genius and Egalitarian

- He was a literary genius and wrote about every complex social, political, or philosophical issue that existed then.
- His writings reveal a visionary poet deeply preoccupied with the realisation of a just and joyful human society. He rejected British colonialism as an affront to human dignity; but he was equally critical of the oppressive conventions of his own society.

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AHMEDABAD: 4 JAN

BENGALURU: 18 FEB

BHOPAL: 5 DEC

HYDERABAD: 22 JAN

JAIPUR: 20 JAN

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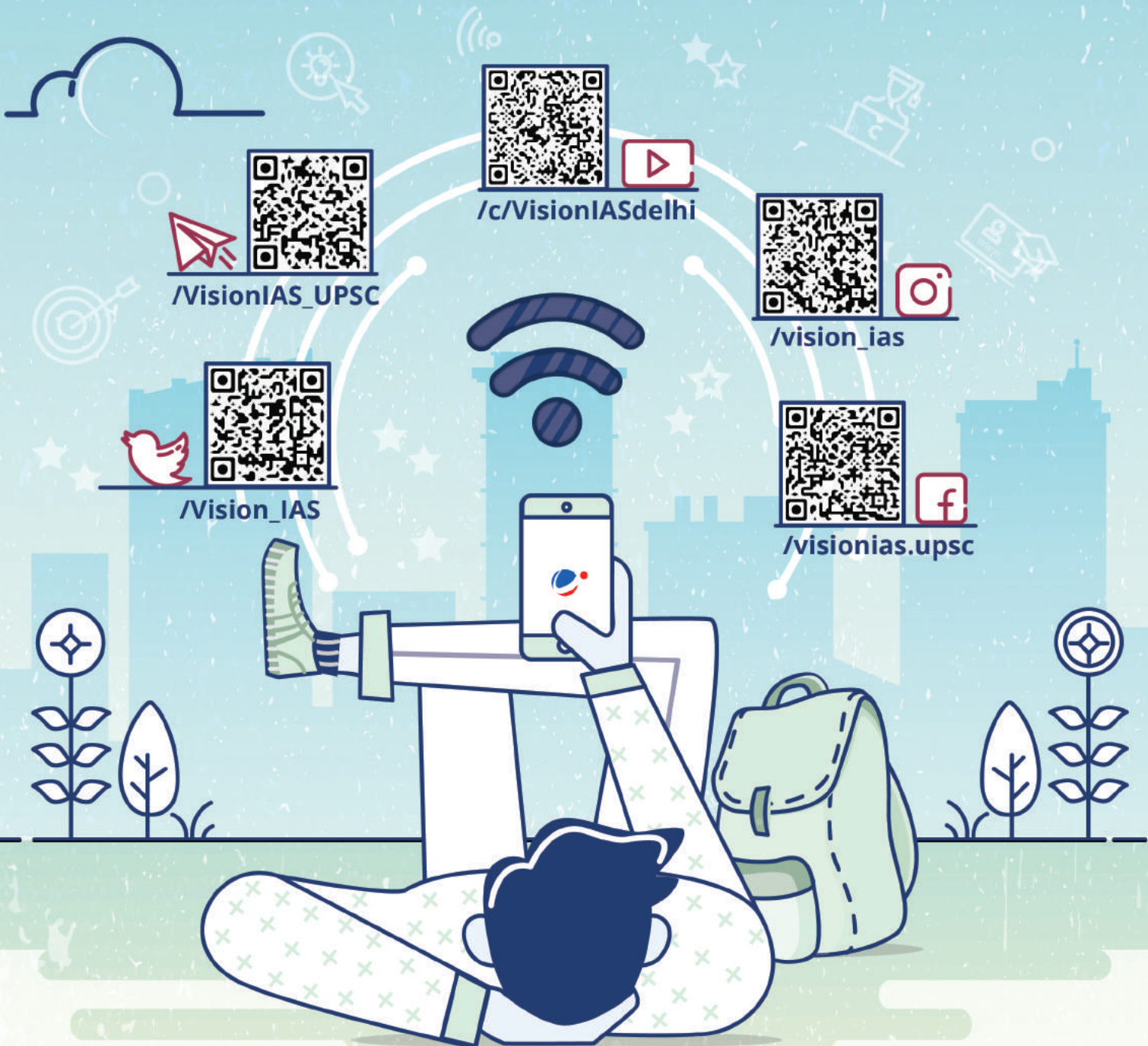
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