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September 2025

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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.

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3

1. POLITY AND GOVERNANCE

1.1. CRIMINALISATION OF POLITICS

Why in the News?

A report by Association for Democratic Reforms (ADR) has found that about **47% of Ministers in India,** including in the Union Cabinet and State Cabinets, **have declared criminal cases against themselves**, out of which 27% are of a serious nature.

Causes of Criminalisation of politics

Criminalisation of politics refers to the **entry and participation of persons with criminal backgrounds in the political and electoral process.** The causes include:

- **Politico-Criminal Nexus:** Criminals enter politics to gain immunity and legitimacy, while politicians and parties use them for their muscle and financial power, creating a vicious cycle of mutual benefit.
  - **Vohra Committee Report (1993)** highlighted the nexus of politicians, criminals and bureaucrats in the Indian administrative and political setup.
- **"Winnable" Candidates:** ADR data 2024, indicates that the success rate for candidates with criminal charges was 15.3%, while candidates without any criminal cases had a much lower success rate of just 4.4%.
- **High cost of elections**: To fund election campaigns, candidates and parties often rely on "black money" and funds from the mafia.
- **Slow Justice system:** Poor conviction rate for MPs and MLAs, coupled with trial delays, does not deter political parties from giving tickets to candidates with a criminal background.
  - 55% rise in MPs with criminal records since 2009 (ADR Report 2024)
- **Identity Politics:** Elections often prioritize caste/religion over criminal records.

Impact of criminalisation of politics

Loss of Credibility
Erodes public faith in democracy

Law-Breakers as Law-Makers
Criminals in power manipulate laws for self-interest.

Unfair Electoral Process
Criminal candidates distorts the electoral competition, limiting the choice available to voters

Institutionalised Corruption
Encourages systemic and institutionalised corruption.

Constitutional and legal provisions to reduce Criminalisation of politics

- **Representation of People Act, 1951**
  - **Disqualification under Section 8:** Individuals convicted of heinous crimes or sentenced to two years or more face disqualification.
  - **Section 11:** Gives the EC the power to remove or reduce the period of disqualification. This power was utilized in September 2019 to reduce the disqualification period of Prem Singh Tamang.
- **Recent Initiatives**
  - **130th Constitutional Amendment Bill:** Seeks to amend Articles 75 and 164. It proposes that a Minister arrested and detained for 30 consecutive days for an alleged offense punishable with imprisonment of at least five years, shall be removed from office.

Read our previous coverage on 130th Amendment Bill

Judicial pronouncements related to Criminalisation of politics

- **Union of India v Association for Democratic Reforms (2002):** Directed the ECI to secure affidavits from candidates detailing all past or pending criminal charges, convictions, and the quantum of punishment awarded.

- **Lily Thomas v Union of India (2013): Immediate disqualification** for sitting legislators convicted and sentenced to two or more years of imprisonment.

- **Public Interest Foundation v. Union of India (2019):** Political parties publish the criminal record of their candidates on their websites, social media and local newspapers.

Way Forward

- **Enhanced Penalties for False Affidavits:** The punishment for filing false affidavits (recommended by **244th Law Commission Report, 2014**) should be enhanced to a minimum of two years imprisonment, and this offense should also be made a ground for disqualification.
- **Dedicated Election Benches:** High Courts should set up dedicated election benches to hear petitions through day-to-day trials, ensuring timely convictions before disqualification of candidates.
- **Review of Section 11 of RPA, 1951:** Convictions for serious crimes should be kept out of the Election Commission's power to reduce the period of disqualification.
- **Financial and Transparency Reforms:** Political parties should be brought under the RTI Act, 2005.

1.2. JUDICIAL PENDENCY

Why in the News?

Case backlog in Supreme Court hits all-time high of 88,417.

More in the News

District Courts have nearly **4.6 crore pending cases** and High Courts have nearly **63 lakh case pendency** (National Judicial Data Grid).

Reasons for pendency of cases

- **Inadequate Judge/population ratio:** India has just 21 judges per million people against the recommended Judge to Population ratio of fifty Judges per million (120th Law Commission).
- **Ineffectiveness of Alternate Dispute Resolution (ADR):** ADR mechanisms have not been deployed effectively enough to meet the rising demands for justice.
  - **Gram Nyayalayas (village courts),** which were proposed to handle small claims in rural areas and reduce the main judiciary's workload, have not been effectively established in most states.
- **Systemic and Procedural Inefficiencies:** Judicial delays in India stem from multiple appeals, frequent adjournments, frivolous litigation, vague laws, weak compliance and poor case management.
  - There is often no systematic grouping of similar cases or categorisation based on urgency, leading to inefficiencies.
- **Deficiencies in Judicial Infrastructure and technology:** India's judiciary faces challenges like shortage of support staff, lack of basic amenities in lower courts limited technological equipment and poor digital adoption.
- **Financial Constraints:** India spends only 0.1% of GDP on judiciary compared to 2% on defence.
- **Government as Litigator:** Government agencies are responsible for around 50% of litigation.

Impact of Judicial pendency

- **Violation of Fundamental Rights**: The Supreme Court in Hussainara Khatoon Vs. State of Bihar (1979) held that the right to speedy trial is part of **Article 21 (Right to Life and Liberty)**.

- **Social Implications**
  - **Weakening Rule of Law**: Delay in criminal trials emboldens offenders and reduces deterrence.
  - **Disproportionate impact on the poor**: Undertrial prisoners (about **76% of prisoners** in India) remain incarcerated without conviction.
- **Economic Implications**
  - **Increased litigation cost**: Parties spend heavily on repeated hearings, adjournments, and lawyer fees.
  - **Stalled projects**: Land acquisition and environmental clearance cases block infrastructure development.
- **Erosion of trust**: Citizens lose confidence in the judiciary and sometimes resort to extra-legal methods for dispute resolution **(Black coat syndrome).**
  - The delay in delivering justice has become so systemic that it can be perceived as a **"new defense"**, where prolonging a case becomes a strategic advantage for one party.

Schemes/Initiatives by Government to reduce case pendency

- **National Mission for Justice Delivery and Legal Reforms (NMJDLR- 2011)**: Reduction of arrears & delays, infrastructure, procedural reforms.
- **Centrally Sponsored Scheme (CSS) for Development of Infrastructure for Judiciary:** Court halls, residential units for judges, lawyer halls, toilets, digital facilities in courts.
- **e-Courts Mission Mode Project (Phase I, II, III)**: Computerisation of courts, e-filing, videoconferencing, virtual courts, Virtual Justice Clock, JustIS App for judges.
- **Commercial Courts (under Commercial Courts Act, 2015)**: Faster disposal of commercial disputes, lowering pecuniary jurisdiction, electronic case management.
- **Fast Track Courts (FTCs)**: Disposal of long pending and heinous criminal cases. E.g. NIA courts, POCSO courts etc.
- **Alternate Dispute Resolution (ADR) Mechanisms**: Settling disputes outside regular courts, reducing burden through Lok Adalats, Mediation, Arbitration etc.

Way Forward

- **Establishment of a Central Authority:** The establishment of the **National Judicial Infrastructure Authority (NJIA)**, as proposed by former CJI Justice N.V. Ramanna in 2021, is needed to plan, create, manage, and maintain functional infrastructure for Indian Courts.
  - The potential of AI in case management should be explored.
- **Appoint Ad-hoc Judges:** Articles 128 and 224A of the Constitution should be invoked to appoint experienced retired judges as ad-hoc judges in the Supreme Court and High Courts.
- **Setting Targets and Timelines:** High Courts and subordinate courts should set annual targets for disposing of old cases and conduct bi-monthly or quarterly performance reviews to ensure accountability.
- **Controlling Adjournments:** The practice of granting adjournments on flimsy or technical grounds, which wastes significant judicial time, should be strictly regulated.
- **Reforming Litigation Practices:** Reduce government litigation, draft **clear laws**, ensure **timely compliance**, and deter **frivolous cases**.
- **Prioritizing ADR Mechanisms:** Expand ADR and promote local resolution to reduce unnecessary litigation.
  - The Legal Services Authorities should **undertake pre-litigation mediation** on a large scale to regulate the number of new cases being filed.

1.3. NATIONAL MEDICAL COMMISSION (NMC)

Why in the News?

The National Medical Commission (NMC) recently **completed five years**.

About the National Medical Commission

- **Establishment: A statutory body** constituted under the **National Medical Commission Act, 2019**; came into force on **25 Sept 2020**.
  - Replaced the **Medical Council of India (MCI),** and the Board of Governors was dissolved.

- The Commission consists of the following persons to be **appointed by the Central Government**, namely
  - a chairperson
  - ten ex officio Members
  - twenty-two part-time Members
- **Four Autonomous boards under NMC:**
  - Under- Graduate Medical Education Board
  - Post- Graduate Medical Education Board
  - Medical Assessment & Rating Board
  - Ethics and Medical Registration Board.

Issues With NMC

- **Governance Gap: Weak accountability due to** a **body dominated by doctors**; it lacks public health experts, social scientists, or citizen voices.
  - NMC also allows appeals only from registered medical practitioners, systematically rejecting patients' complaints despite no legal bar.
- **Fee Regulation:** Controls fees for **only 50% of private seats**; others remain prone to exorbitant charges, excluding poor students.
- **Ethics Oversight:** Misconduct cases handled **without judicial expertise or timelines**, raising concerns of impartiality.
- **National Medical Register (NMR):** The process for updating and verifying the credentials of practicing doctors in the NMR has been very slow, leading to concerns about unqualified individuals practicing medicines.

Functions of NMC

Policy & Standards
Lay down policies to maintain high standards in medical education and regulate institutions, research, and professionals.

Healthcare Planning
Maps healthcare needs and resources effectively.

Coordination
Ensures smooth functioning of boards and councils.

Oversight
Monitors compliance and handles appeals efficiently.

Ethics
Enforces professional conduct standards strictly.

Fee Regulation
Controls fees for 50% seats in private/ deemed colleges.

Licensing
Grants limited licences to Community Health Providers.

Conclusion

While the NMC marks a step towards **modernizing medical governance** in India, addressing **concerns of accessibility, ethical oversight, and inclusivity** remains vital to build a transparent, accountable, and globally competitive healthcare system**.**

1.4. NEWS IN SHORTS

1.4.1. INDIAN AND FRENCH POLITICAL SYSTEMS

Recently, the French Parliament voted to remove the government along with the Prime Minister, creating political instability in the country.

Comparison between the Indian and the French Political Systems

- **Similarities**: **Republican** form of government with elected heads of state, **bicameral legislatures**, based on the principles of **democracy**, emphasizing **liberty, equality, and fraternity.**
- **Differences**: (Refer Table)

Aspect	India	France
Constitutional model	**Parliamentary republic;** single executive led by PM; President largely ceremonial.	**Semi-presidential** with dual executive (i.e. President + Prime Minister)

Procedures to elect the President	**Indirect election** by an electoral college using **single transferable vote** and **secret ballot.**	**Direct election** by universal adult suffrage.
Choosing / Removing Prime Minister (PM)	The **PM is elected by Lok Sabha** and must retain the **confidence of Lok Sabha.**	The **PM is appointed by the President**, but must keep **Assembly confidence**.
Federal design	**Quasi-federal;** Blends federal and unitary features.	**Unitary;** Centralized authority with local governments as central agents.
Approach to Secularism	**Positive approach:** State maintains **neutrality but can intervene** to reform (**e.g.**, abolishing untouchability).	French **laïcité** enforces **strict separation** of religion and state (**e.g.**, bans on conspicuous symbols).

1.4.2. VISAKHAPATNAM DECLARATION

The Declaration adopted at the 28th National Conference on e-Governance, called for a whole-of-government approach to strengthen civil services with digital competencies, and agile & data-driven frameworks.

Key Proposals of the Vishakapatnam Declaration

- **National Vision:** Inclusive, citizen-centric, and transparent governance.
- **Technology-Driven Governance:** Adoption of **AI, ML, Blockchain, GIS, IoT, and Data Analytics** to deliver multilingual, real-time, and sector-specific citizen services, emphasizing the need for ethical and transparent adoption.
  - **E.g**. Digital India BHASHINI, Digi Yatra, NADRES V2, etc.
- **Replication of Successful Models:** Focus on nationwide scaling of models like **SAMPADA 2.0 (**MP**), eKhata (**Bengaluru**), Rohini Gram Panchayat (**Maharashtra**), Drone Analytics Monitoring System (DAMS)** by NHAI**,** etc.
- **Grassroots and Inclusive Development**:
  - **Geographical Outreach:** To regions with connectivity challenges, like **North-East and Ladakh**, under the NeSDA framework.
  - Nationwide expansion of successful **Panchayat digital models, launching digital literacy programs** targeting women, youth, etc.
- **Cybersecurity and Resilience:** Focus on **Zero-Trust architecture, post-quantum security and AI-enabled monitoring** in priority sectors like **transport, defence** and **citizen services platforms.**
- **Agriculture and Sustainability**: **National Agri Stack** for better access to credit, advisories, and markets.
- **Other**: **Collaboration** between government, industry, for scalable digital solutions; **Regional Hub Development (E.g. Visakhapatnam** as IT and innovation hub).

> **Related News**
>
> **World's first AI minister appointed in Albania**
>
> Diella, an AI-generated bot will manage and award all public tenders for government projects, aiming to enhance transparency and minimize corruption.

1.4.3. IMMIGRATION AND FOREIGNERS (EXEMPTION) ORDER, 2025

Union Ministry of Home Affairs notified the **Immigration and Foreigners (Exemption) Order, 2025,** under the **Immigration and Foreigners Act, 2025**.

Key Highlights of the Order

- **Exemption of Passport/Visa for:**
  - Indian armed forces on duty
  - Indian, Nepali, and Bhutanese citizens at specified borders;
  - Tibetans with valid registration and special permits;
  - Specific religious minorities (**Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians**) from Afghanistan, Bangladesh, Pakistan who entered by December 31, 2024 (even with invalid documents), and
  - Registered Sri Lankan Tamil nationals who took shelter by January 9, 2015.
- **Visa exemption also applied to:**
  - Foreigners holding diplomatic/official passports (where waived by agreement)
  - Those eligible for visa-on-arrival
  - Certain foreign military personnel visiting on naval warship

2. INTERNATIONAL RELATIONS

2.1. SHANGHAI COOPERATION ORGANISATION (SCO)

Why in the News?

The 25th **Shanghai Cooperation Organisation (SCO)** Summit 2025, held in Tianjin, China.

More on the News

- The Summit concluded with the adoption of the **Tianjin Declaration**.
- SCO Chairmanship for 2025–2026 Passed to the **Kyrgyz Republic.**
- SCO Members also adopted the **SCO Development Strategy** until 2035.
- Merger of dialogue partners and observers has been done into a new category i.e. **SCO partner countries**.
- **Laos** has been admitted as a partner country; SCO now has **27 countries (10 members + 17 partners)**.
- SCO was granted **Observer status with the Commonwealth of Independent States (CIS)**.

Prime Minister of India emphasized that the SCO rests on three essential pillars — **security** (Security of the Region), **connectivity** (Revolutionizing SCO as a 'connectivity' hub), and **opportunity** (Nourishing Mutual Opportunities).

Do you know ?
- CIS was **established in 1991** to ensure continued cooperation in trade and military policy between the States which **formed part of the erstwhile USSR (except Baltic States).**
- Russian Federation, Ukraine, Moldova, Georgia, Armenia, Azerbaijan, Belarus, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan and Tajikistan are the members of CIS.

Key Outcomes of the SCO Summit

- **Security & Counter-Terrorism**
  - Condemnation of the **terrorist attack in Pahalgam, Jammu & Kashmir**.
    - Inclusion of Pahalgam is **strategic victory** in the context of China's historical tendency to leverage its influence in international fora to shield Pakistan from criticism.
  - Emphasis on adopting the **Comprehensive Convention on International Terrorism (CCIT)** proposed by India.
    - CCIT is a proposed UN treaty initiated by India in 1996 that aims to provide a universal legal framework to criminalize and suppress all forms of terrorism.
  - Agreement on establishing an **SCO Anti-Drug Centre** and a **Universal Center for Countering Security Threats**.
- **Global Governance & Trade**
  - Endorsement of **Global Governance Initiative (GGI)** proposed by China.
    - Initiative advocates true multilateralism, based on sovereign equality, respect for international law and broad-based consultation moving beyond an era **dominated by Western powers.**
  - Steps toward establishing an **SCO Export Credit and Investment Mechanism** and **SCO Development Bank**.
    - SCO Development Bank aims to **fund infrastructure and development projects** across the bloc; it also aims to **offer Eurasia a non-dollar, low-conditionality alternative** to Western finance e.g. World Bank.
- **Technological Cooperation**
  - Permission for SCO members to use **China's BeiDou navigation system (BDS).**
    - BDS is a global satellite navigation system, providing **Positioning, Navigation, and Timing (PNT) services** to users worldwide. It is an alternative to the US GPS.
- **Other Key Outcomes:**
  - Recognized **India's global vision** of "**One Earth, One Family, One Future,**" reaffirming the country's leadership in promoting **inclusive** and **sustainable development**.
  - India proposed a **Civilisation Dialogue Forum** to enhance **cultural diplomacy**, people to people exchange and **soft power.**

Read our previous coverage on SCO

Conclusion

By advancing cooperation in security, technology, etc., the summit laid the groundwork for a more dynamic and effective SCO. It reflects members' shared commitment to uphold collective interests and adapt the organisation to emerging global and regional challenges.

2.2. INDIA-CHINA RELATIONS

Why in the News?

Indian Prime Minister and Chinese President met on the side-lines of the **SCO Summit 2025** in Tianjin, China.

More on the News

- It was his first visit to China since 2018.
- Also, recently, the **24th round of the Special Representatives' (SRs) Dialogue** between the two countries was held.
  - It was co-chaired by the Chinese Foreign Minister along with **India's National Security Advisor.**
- PM visit and SRs Dialogue show **renewed engagement between India and China**.

Challenges in India-China Relations

- **Unsettled Borders:** Along the 3,488-kilometer **Line of Actual Control (LAC)**, the lack of mutual agreement between the two countries has led to multiple clashes.
  - The recent clashes include the **Doklam standoff in 2017** and the **Galwan Valley clash in 2020**.
- **Trade imbalance:** India's trade deficit with China rose to **USD 99 billion (2024-25)** against USD **85** billion (**2023-24**).
  - In August 2025, China overtook the US to become India's largest trading partner.
- **China-led Trilateral Nexus:** Recently, China launched two trilateral initiatives in India's immediate neighbourhood—one with Bangladesh and Pakistan, and another with Pakistan and Afghanistan.
  - **China-Pakistan Economic Corridor (CPEC)** passes through Pakistan-occupied Kashmir (PoK), violating India's sovereignty.
- **China's Assertiveness:** Particularly in South Asia, through strategies like String of Pearls, presence in the Maldives, Sri Lanka, etc., create insecurities in Indo-Pacific.
  - India, meanwhile, is strengthening ties with like-minded nations through platforms like the **Quad (India, US, Japan, Australia)**, seen as a counter to China's assertiveness.
- **Waterpower:** E.g., Construction of **Dam over Brahmaputra River (Yarlung Zangbo),** China can use water as a **geo-strategic weapon** against India.

Renewed Engagement between India and China through 24th round of SRs Dialogue:

- **Consensus on Border Management:**
  - Seek a **fair, reasonable and mutually acceptable framework** for settlement in line with the **2005 Agreement on Political Parameters and Guiding Principles**.
  - Setting up an **Expert Group and working group,** under the Working Mechanism for Consultation and Coordination.
  - Use existing **diplomatic and military-level mechanisms** to manage tensions and initiate discussions on de-escalation.
- **Strengthening Economic and Trade Ties:** Both countries underlined the need to proceed from a political and strategic direction to expand bilateral trade and investment ties and reduce the trade deficit.

- o Trade through **Lipulekh Pass (Uttarakhand), Shipki La Pass (Himachal Pradesh) and Nathu La Pass (Sikkim)** will be reopened.
- **Dialogue mechanisms**: Both sides pledged to restart suspended bilateral dialogues, including the **High-level Mechanism on People-to-People Exchanges** in 2026.
  - o Both countries **reaffirmed** that they are **development partners** and **not rivals**.
- **75 years of ties**: India and China will hold commemorative events throughout 2025 to mark 75 years since the establishment of diplomatic relations with renewed calls to revive **Dragon-Elephant ties**.
  - o **Pursuit of Strategic Autonomy:** Both countries will ensure that their relation shall not be **seen** through a **third country's lens**.
- **Other:** Agreement on resuming direct flights, India's **Kailash Mansarovar Yatra** will be expanded in scale from 2026, both sides agreed to share hydrological data during emergencies etc.

Significance for India from Renewed Engagement

- **Trade:** E.g. China is a major source of **Active Pharmaceutical Ingredients (APIs)** for India's pharmaceutical industry.
- **Investment:** Economic Survey 2023-2024 recommended attracting "Chinese investment" to boost Indian manufacturing.
  - o **NITI Aayog** recently proposed easing additional scrutiny on Chinese enterprises.
- **Access to Critical Resources for India:** China accounts for 70% of global rare earth ore extraction and 90% of rare earth ore processing.
  - o India also relies on China for solar modules & cells, essential for its **renewable energy goals**.
- **Global Influence:** As major Asian powers, stable India–China ties enable constructive roles in global governance and amplify their influence through joint efforts in multilateral forums like BRICS and SCO.
  - o Cooperation between India and China can offer a **counterweight to Western influence** in international affairs, pushing for reforms in institutions like the WTO, IMF, and UN.
- **Countering Global Challenges:** Stable India–China relations facilitate collaboration on global challenges like **climate change, public health, and energy security**.
- **Regional Peace and Stability:** Reduces the risk of conflict along the disputed border and contributes to broader stability across South Asia and the Indo-Pacific region.
- **Boosting India-Russia-China Triangle**: They can expand investment opportunities and explore ways to withstand **US sanctions** and **tariffs**.

Read our previous coverage on China's Rising Influence

Conclusion

Strengthening dialogue through platforms like BRICS and SCO, coupled with cooperation in trade, water management, and cultural exchanges, can gradually rebuild trust. In that endeavour, both countries must be guided by the **three mutual – mutual respect, mutual sensitivity and mutual interest.**

2.3. INDIA-JAPAN PARTNERSHIP

Why in the News?

Prime Minister of India visited Japan and signed key agreements further strengthening the India-Japan partnership.

Key Outcomes of the Prime Minister's Visit

- **India - Japan Joint Vision for the Next Decade:** A **10-year strategic prioritization for economic and functional cooperation** in eight lines of effort viz., Economic Partnership, Economic Security, Mobility, Ecological Sustainability, State-Prefecture Engagements, etc.
  - o **State-Prefecture partnerships** have been established between Andhra Pradesh and Toyama, Tamil Nadu and Ehime, Uttar Pradesh and Yamanashi, Gujarat and Shizuoka.
- **Economic Security Initiative:** To **promote supply chain resilience** in strategic sectors such as semiconductors, clean energy, telecom, as well as new and emerging technologies.

- **Space Cooperation:** Agreement for cooperation between India and Japan on Joint Lunar Polar Exploration Mission (Chandrayaan 5).
- **Other outcomes:**
  o Joint Declaration on Security Cooperation
  o Action Plan for India - Japan Human Resource Exchange
  o India - Japan AI initiative
  o Sustainable fuel initiative
  o Next-Generation Mobility Partnership: (railways, aviation, roads etc., with a focus on Make-in-India).
  o India - Japan Small and Medium Enterprises (SMEs) Forum

Pillars of India-Japan Relations

- **Current status:** Upgraded to **Special Strategic and Global Partnership in 2014**.
- **Economic Cooperation: India-Japan Comprehensive Economic Partnership Agreement (CEPA)** came into effect in 2011 and covers trade in goods and services, movement of natural persons, investments, IPR, etc.
  o **Bilateral Trade** totalled **US$ 22.85 billion** during FY 2023-24 with exports from Japan to India at US$ 17.69 billion.
    > **India's primary imports** include nuclear reactors, copper, electrical machinery, etc., while **exports** include organic chemicals, vehicles, nuclear reactor, etc.
  o **India-Japan Industrial Competitiveness Partnership (IJICP)** was launched in 2021 to enhance India's industrial competitiveness.
- **Security Cooperation:** Key agreements include **2025 Joint Declaration on Security Cooperation** and 2015 pacts on defense equipment transfer and protection of classified information.
  o **2+2 Ministerial Dialogues** between both countries' defence and foreign affairs ministers.
  o Both countries participate in **bilateral exercises** like JIMEX and Dharma Guardian, and in **multilateral exercises** like MILAN and MALABAR.
- **Development Cooperation:** For e.g. **Mumbai-Ahmedabad High Speed Rail (MAHSR) flagship project**
  o **India Japan Act East Forum** provides a platform for India-Japan collaboration for the development of India's Northeast under India's "Act East Policy" and Japan's "Vision of a Free and Open Indo-Pacific".

Role of India-Japan in Global and Regional Order

- **Rules-based global order:** Both countries are committed to a **rules-based global order** and **free and open Indo-Pacific**.
  o Through QUAD, they coordinate on **maritime security, critical technologies, and resilient supply chains**, countering unilateralism in the Indo-Pacific.
- **Strengthening Multilateralism:** They **cooperate closely in G4** on UNSC reforms and support each other's candidacy for a permanent seat in a reformed UNSC.
- **African Development:** India and Japan have established trilateral cooperation with African countries to aid the African Development.
  o **Asia-Africa Growth Corridor (AAGC)** was jointly established (in 2017) by India-Japan to further democratic, sustainable, and inclusive development in Africa.
  o **Japan-India Cooperation Initiative for Sustainable Economic Development in Africa** has also been launched.
- **Supply Chain Resilience:** Both nations collaborate with Australia in the **Supply Chain Resilience Initiative** to diversify supply chains and reduce over-reliance on a single country.

Conclusion

Despite concerns like Japan's restrictions on nuclear technology transfers due to India's non-signatory status to the NPT, India–Japan partnership has evolved into a key pillar of the Indo-Pacific architecture. While Japan addresses Chinese assertiveness and unilateralism through the US-led alliance system, India follows a non-aligned, strategic autonomy approach balancing ties with the US, Russia, and the Global South. Anchored in shared democratic values and commitment to a rules-based order, the partnership promotes multilateralism, economic resilience, and inclusive growth, embodying cooperation based on trust and transparency in an evolving multipolar world.

2.4. NEWS IN SHORTS

2.4.1. NEW STRATEGIC EU-INDIA AGENDA

The European Commission and the High Representative adopted a Joint Communication outlining a **'New Strategic EU-India Agenda'**, marking a significant milestone in the India-EU relations.

Key highlights of New Strategic EU-India Agenda

- **Foundation:** Strategic Partnership established in 2004.
- **Aim:** To enhance prosperity, security and tackle major global challenges together.
- **5 Core Pillars:**
  - **Prosperity and Sustainability:** Drives economic growth, job creation, industrial development, and decarbonization.
    - **Trade and Investment:** Focusing on untapped potential in trade and investment, **finalizing the Free Trade Agreement (FTA)** negotiations by the end of 2025, concluding an **Investment Protection Agreement (IPA).**
    - **Economic Security and Supply Chains:** Strengthening economic security within the **Trade and Technology Council (TTC),** creation of **Blue Valleys** as platforms for private-sector engagement in selected value chains.
    - **Advancing clean transition and resilience**: Building on shared commitments – such as the EU's 2050 and India's 2070 net-zero pledges. E.g., creation of an EU-India Task Force on Green Hydrogen.
  - **Technology and Innovation:** Focuses on emerging technologies for open, secure, human-centric innovation.
    - **Supporting Critical Emerging Technologies:** E.g. Establish EU-India Innovation Hubs.
    - **Advancing a Conducive Digital Environment:** E.g. Collaborate on Digital Public Infrastructure (DPI) for service delivery.
  - **Security and Defence:** Addresses global security threats, geopolitical tensions, and **counterterrorism** and **transnational crime**. E.g. Coordinate on Indo-Pacific and promote rules-based maritime order.
  - **Connectivity and Global Issues:** Strengthens regional connectivity, cooperation in third countries (such as Africa), and global governance. E.g. Collaborate via **EU's Global Gateway** and India's **MAHASAGAR**.
  - **Enablers across Pillars:** Enhances skills mobility, knowledge exchanges, business engagement, and institutional cooperation.

Read our previous coverage on India–European Union (EU) Relations

The agenda highlights how closer EU-India cooperation is more important than ever in wake of ongoing weaponisation of dependencies, unilateral trade practices, and widening economic asymmetries across the globe.

2.4.2. INDIA-ISRAEL

Israel became first OECD country to sign bilateral investment agreement with India. The previous Bilateral Investment Treaty (BIT) signed **between India and Israel in 1996** got terminated in 2017.

Key Features of India-Israel BIT

- **Boost to Investment:** Increased bilateral investments, which presently stands at a total of **USD 800 million.**
- **Investor Protection:** Balances investor protection with the State's regulatory rights by ensuring a **minimum standard of treatment.**

- **Dispute Resolution:** Facilitating growth of trade and investments with dispute resolution mechanism **through arbitration.**

Evolving co-operation between India-Israel

- **Economic:** Bilateral trade was **USD 6.53 billion** (excluding defense) with India's exports surplus in FY 2023-24.
- **Regional co-operation: I2U2 Partnership's** first summit held in 2022, with India, Israel, UAE, and US participation.
- **Innovation & Science Technology:** E.g., **India-Israel Industrial R&D and Innovation Fund (I4F)** for 5 years (2023–27).
- **Defence:** Co-developed the **Barak-8 missile system**, regular port calls in **Haifa**, etc.
- **Other:** Cultural Exchange Programme, cooperation in health and medicine, MoUs on agriculture and water resource management, etc.

Bilateral Investment Treaty (BIT)

Definition: Reciprocal agreement between two States to promote and protect investments.

Legal Basis: Covered under **Art. 38(1)(a), ICJ Statute,** as part of international law.

India's Model BIT: New text adopted in 2015, replacing 1993 version.

Recent BITs: Uzbekistan (2024), UAE (2024), Kyrgyzstan (2025).
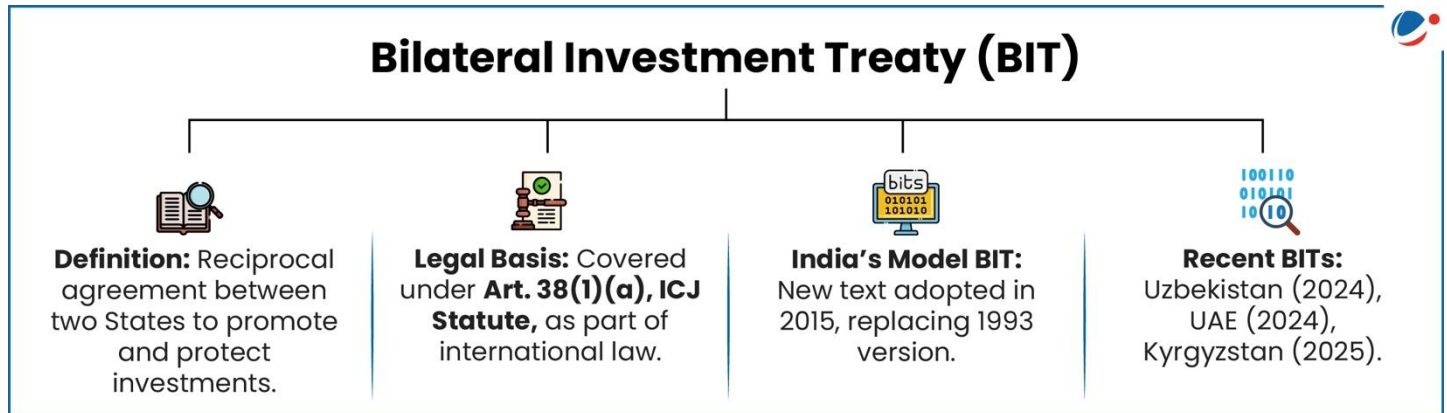
2.4.3. INDIA-SINGAPORE

Prime Minister of Singapore paid an official visit to India.

The visit commemorated **60 years of India-Singapore diplomatic relations**, reaffirming the shared legacy of friendship, trust, and mutual respect.

Key Outcomes: -

Both countries adopted a forward-looking and substantive **roadmap for Comprehensive Strategic Partnership (CSP)** aims to deepen cooperation in eight critical areas:

- **Economic Cooperation**: · Both sides will continue to engage in dialogue and make progress on initiation of the **3rd review of Comprehensive Economic Cooperation Agreement (CECA)** and achieve substantial review of the **ASEAN India Trade in Goods Agreement (AITIGA) in 2025**.
    - Supporting India's **semiconductor industry,** enhance India-Singapore capital market connectivity
    - **Space:** Promote joint collaborations between **Indian National Space Promotion and Authorisation Centre (IN-SPACe) and the Office for Space Technology & Industry, Singapore**
- **Defence and Security Cooperation**: Deepening defence technology cooperation in emerging areas like **Quantum Computing, AI, Automation, and Unmanned Vessels**.
    - Reaffirmed strong commitments to **combat terrorism**, including cross-border terrorism and terror financing.
- **Digitalisation**: Strengthening of **Digital Finance and Fintech cooperation**, cybersecurity, and capital market linkages.
    - Expanding and maximizing the potential of the **UPI-PayNow Linkage** for cross-border payments.
- **Skills Development**: Jointly developing a **National Centre of Excellence in Advanced Manufacturing in Chennai**, Tamil Nadu.
- **Sustainability**: Collaborating on green initiatives in multilateral frameworks like the **International Solar Alliance and Global Biofuels Alliance.**
    - Step up cooperation in **green hydrogen and ammonia production,** exploring **urban water management** and **civil nuclear domain** cooperation.

- **Connectivity**: Supported the establishment of an **India-Singapore Green and Digital Shipping Corridor (GDSC)** between the Port of Singapore and ports in India.
- **Healthcare and Medicine**: Deepening collaboration in digital health, disease surveillance.
- **People-to-People and Cultural Exchanges**: Strengthening social, cultural, and people-to-people linkages.

2.4.4. PAKISTAN AND SAUDI ARABIA STRATEGIC MUTUAL DEFENCE AGREEMENT

The agreement aims to develop aspects of defence cooperation between the two countries and strengthen **joint deterrence against any aggression**.

- It states that "**any aggression against either country shall be considered an aggression against both**".

Impacts of the Agreement

- **Nuclear Warfare:** It further raises the **fears of nuclear warfare,** as Pakistan extends its nuclear umbrella to Saudi Arabia, in the already tense region of West Asia.
- **Shifting power dynamics:** For Saudi Arabia, it strengthens defences against threats from Iran, Yemen's Houthi militias and Israel.
  - It signifies a **move away from traditional role of US as security guarantor** in the region due to US ally Israel's war on Gaza and its strikes on regional neighbours.
  - This could create a **strategic vacuum** for China to deepen its clout in the region.
- **Implications for India:** Pakistan may see the pact as strategic deterrence against India in **future military confrontation**, especially in response to cross border terrorism.

India-Saudi Arabia Relations

- **Strategic partnership** was formalised in 2010 via **Riyadh declaration.**
- **Economic:** India is the **second largest trade partner of Saudi Arabia**, whereas Saudi Arabia is the fifth largest trading partner of India.
  - **Bilateral trade** in 2023 was 42.98 billion and **India** remained a **net importer**
  - In 2024, Saudi Arabia contributed **6.7% of India's total inward remittances.**
- **Energy Partnership:** Saudi Arabia is third largest crude oil supplier to India.

2.4.5. PALESTINIAN STATE RECOGNISED BY MULTIPLE NATIONS

The four western nations, United Kingdom, Canada, Portugal and Australia, joined over **140 UN member states in recognizing Palestine as a state.**

- India recognized the **Palestinian State in 1988.**
  - Recently, India voted in favour of a **resolution in the UN General Assembly** endorsing the **'New York Declaration'** on the **peaceful settlement and implementation** of the **Two-State Solution.**

Recognition of States

- The process in which a **state acknowledges another entity** as a state is known as recognition.
- **Article 1 of the 1933 Montevideo Convention on the Rights and Duties of States defines the criteria for statehood:** Permanent population, definite territory, government and capacity to enter into relations with other states.
- **Effects of State Recognition**
  - It acquires the **capacity to enter into diplomatic relations** with other states.
  - It acquires the **capacity to enter into treaties** with other states.
  - The state is able to **enjoy the rights and privileges** of international statehood.
  - The state can become a **member of the United Nations organisation**.
    - Palestine is a UN **"Permanent Observer State,"** not a full member.

Recognition by United Nations (UN)

| Only States and Governments can recognize a new State/Government. | UN, being neither a state nor government, has no such authority. | UN can only admit new States as members or accept credentials of their representatives. |

2.4.6. NEW INITIATIVES FOR GLOBAL AI GOVERNANCE

Recently, UN General Assembly (UNGA) announced to establish **two mechanisms within the UN** to promote **international cooperation on the governance of Artificial Intelligence** (AI).

- It builds on the "**Pact for the Future**" and the "**Global Digital Compact**," outlining a significant step towards international, **non-military AI governance**.

About the new mechanisms

- **Independent International Scientific Panel on Artificial Intelligence:** To promote scientific understanding of AI by issuing evidence-based scientific assessments synthesizing and analysing existing research related to the opportunities, risks and impacts of AI.
- **Global Dialogue on AI Governance:** To serve as a platform to discuss international cooperation, share best practices and lessons learned, and to facilitate open, transparent and inclusive discussions on AI governance.

Other UN Mechanisms for Global AI Governance

- **Pact for the Future:** Adopted at the **Summit of the Future in September 2024** to chart a path toward **achieving the SDGs** and responding to emerging challenges and opportunities.
- **Global Digital Compact:** Annexed as part of the Pact for Future, it is a comprehensive global framework for digital cooperation and AI governance.
- **AI for Good Global Summit (organized by ITU since 2017):** Identified AI applications to advance on the SDGs and scale such applications for global impacts.
- **Others**: Adoption of the **first global standard on AI ethics in 2021; UNESCO Recommendation on the Ethics of AI**, etc.

2.4.7. CONVENTION ON THE PREVENTION AND PUNISHMENT OF THE CRIME OF GENOCIDE

Report of the UN-mandated Independent International Commission of Inquiry provided a **legal analysis of Israel's conduct in Gaza** concerning the **Convention on the Prevention and Punishment of the Crime of Genocide (Genocide Convention)**.

About Genocide Convention

- **Defines Genocide** as acts committed with the intent to destroy, in whole or in part, a national, ethnic, racial, or religious group.
  - Genocide is a crime that **can take place both in time of war as well as in time of peace.**
- **Membership:** Signatories – 41, Parties - **153 States**.
  - India has signed the treaty in 1949 and ratified in 1959.
- **International Court of Justice** (ICJ) adjudicates cases related to the interpretation and application of the convention.

2.4.8. INTERNATIONAL CRIMINAL COURT (ICC)

Burkina Faso, Mali and Niger recently withdrew from International Criminal Court (ICC).

In a joint statement, all three countries accused the ICC of being **"a tool of neo-colonial repression** controlled by imperialist powers."

About ICC (HQ: Hague, Netherlands)

- It is the **world's first permanent international criminal court.**
- **Origin:** Founded by **Rome Statue** (Adopted in 1998 and entered in force in 2002)
- **Jurisdiction:** investigate, prosecute, and try **individuals** (**not groups or States**) accused of committing serious crimes
  - **Crimes under ICC's jurisdiction:** Genocide, Crimes against humanity, War crimes, crime of aggression.
- **Membership:** 125 member countries
  - **India, Israel, the US, Russia and China** are not parties to the Rome Statute.
- **Funding**: mainly by States Parties
- **Enforcement:** ICC's decisions are binding.

Issues with International Criminal Court (ICC)

Perceived Bias: Seen as serving Western interests; accused of neo-colonial tendencies.	**Limited Jurisdiction**: Major powers not members; covers only post–July 1, 2002 events.	**Political Resistance:** States often refuse cooperation (e.g., France on Israeli PM case).	**Weak Enforcement**: No police force; relies on member states for arrests and support

2.4.9. SCARBOROUGH SHOAL

The **Philippines strongly condemned** China's move to set up a **nature reserve at Scarborough Shoal.**

About

- Scarborough Shoal, also called Huangyan Island in China and Panatag Shoal in Philippines, is a small **atoll in the South China Sea.**
- **Both China and the Philippines** consider it part of their territory.

2.4.10. BAGRAM AIR BASE

United States is in talks with Afghanistan to regain the control of the Bagram Air Base in Afghanistan.

About Bagram Air Base

* The **largest air base in Afghanistan** located **north of the capital Kabul.**
* **Originally built by the Soviets in 1950s** and after Soviet withdrawal in 1990s, it became a frontline in war between Taliban and Northern Alliance fighters.
* After 2001 terror attack on USA, it became the **centre of US operations** in their war against terror in Afghanistan.
* US and NATO troops **pulled out** of Bagram in 2021.

3. ECONOMY

3.1. GOODS AND SERVICES TAX (GST) REFORM

Why in the News?

The **56th meeting of the GST Council** has approved Next-Gen GST reform (GST 2.0) that includes **rate rationalization** with a **simplified two-slab structure**.

Evaluation of GST 1.0

- **About GST:** It is a **single indirect tax** on the supply of goods and services across India.
  - It was Introduced by the **101st Constitutional Amendment Act**, 2017.
- **Main components of GST:** Central GST (CGST), State GST (SGST), Union Territory GST (UTGST) and Integrated GST (IGST).
  - **CGST**, **SGST and UTGST are** on intra-state transactions; **IGST** is on inter-state transactions, collected by the Centre and shared with states
- **Destination-Based Tax:** Revenue goes to the state/UT where the goods or services are finally consumed.

Significance of GST

Subsumed **17 different taxes and 13 cesses** into one unified tax.

Eliminated **cascading of taxes (tax on tax)**.

GST taxpayer base has grown from **66.5 lakh in 2017 to 1.51 crore in 2025.**

FY 2024–25 saw ₹22.08 lakh crore in **gross GST collection** (Doubled in four years)

GST 2.0: Key Reforms and Recommendations

- **The New Rate Structure:**
  - **Two-slab system** of **5% and 18%,** removing the earlier 12% and 28% rate.
  - A **40% Special De-Merit Rate** applies to 'sin' goods and select luxuries, **replacing the compensation cess levy**.
  - The **median tax rate** effectively moves from 12% to **5%.**

Relief for Citizens and Key Sectors:

- **FMCG/Essentials (18% to 5%):** Items like hair oil, soap bars, shampoos, and toothpaste.
- **Health (18% to Exempt/5%):** GST is exempted on all **individual life and health insurance policies** and their reinsurance.
  - **Additionally,** 36 specific lifesaving drugs move to **Nil rate**, and most other medicines move from 12% to 5%.
- **Key Economic Drivers (28% to 18%):** Air conditioners, dishwashing machines, and all TV sets (uniform at 18%). **Cement** drops from 28% to 18%.
- **Transportation (28% to 18%):** Small cars (Petrol/LPG/CNG up to 1200cc; Diesel up to 1500cc, both under 4000mm length) and motorcycles up to 350cc.

- **Dispute Resolution:** The **Goods and Services Tax Appellate Tribunal (GSTAT)** is set to be operational for appeals before the end of September 2025.
  - It has been **formally launched** by the government (See in the next article).

- **Registration Ease:** A simplified, **optional GST registration scheme** is recommended for small and low-risk businesses, guaranteeing **automated registration** (operational from November 1, 2025).
  - **Simplified registration** for small suppliers using e-commerce operators (ECOs) has also been approved in principle.
- **Export Benefits:** Recommended that the place of supply for **"intermediary services"** will be determined as per the location of the recipient of such services (earlier it was decided by Place of supply).
  - This will help Indian exporters of such services to **claim export benefits.**
  - Intermediary services **involve facilitating the supply of goods or services** between two parties without altering them.

Benefits of the Recent Changes

- **Social Protection:** Exemption of GST on insurance and essential medicines strengthens household security and access to healthcare.
- **Lower Prices, Higher Demand:** Cheaper goods and services increase household savings and stimulate consumption.
  - The boost to **nominal GDP growth is estimated at 20-30 basis points (bps)**.
- **Support for MSMEs:** Reduced rates on inputs like cement, auto parts, and handicrafts lower costs and make small businesses more competitive.
- **Ease of Living:** A two-rate structure means fewer disputes, quicker decisions, and simpler compliance.
- **Wider Tax Net:** Simpler rates encourage compliance, expanding the tax base and improving revenues.

Key Challenges in recent changes

- **Revenue foregone:** It could lead to a revenue loss of ~₹48,000 crore (on the FY23-24 consumption base), as per the Finance Ministry.
- **Removal of input tax credit (ITC):** From goods such as healthcare products and insurance.
  - Earlier, insurance companies used ITC to reduce GST on premiums by adjusting it against GST paid on inputs.
  - Now, with no GST on policyholders, they can't claim this set-off, leading to higher costs.
- **Compliance Complexity and Technological Integration:** Despite rationalized tax slabs, businesses continue to face transitional challenges such as adjusting pricing structures and upgrading billing systems.
- **Issue of Inverted Duty Structure (IDS):** In some cases, the GST on raw materials is higher than on the final product. For example, bicycles are taxed at 5%, but inputs like plastic and steel are taxed at 18%.
- **Anti-Profiteering Mechanism**: National Anti-Profiteering Authority (under Section 171 of the CGST Act, 2017) was established to ensure that the reduction in rate of tax or the benefit is passed on to the recipient.
  - It was dissolved and integrated with the **Competition Commission of India (CCI)** in 2022.
  - There is a lack of **NAA or a similar dedicated body,** as GST 2.0 involves large rate changes, and profiteering is a tax compliance issue.

GST Council

New Delhi (Secretariat)

🎯 **Constitutional Basis:** Established under **Article 279A,** the apex decision-making body on GST matters.

🧪 **Key Role:** Recommends GST rates, exemptions, thresholds, model GST laws, special provisions for states, and dispute resolution mechanisms.

⛓ **Meetings:** Must meet at least **once every quarter;** special sessions can be called for urgent issues.

🔷 **Composition:** Chaired by the **Union Finance Minister,** with the Union MoS (Revenue/Finance) and Finance Ministers of all states/UTs with legislatures as members.

🗳 **Voting:** Uses a **weighted system;** Centre has **one-third vote,** states **two-thirds;** decisions need **three-fourths majority** of weighted votes.

⚙ **Significance:** Promotes **cooperative federalism,** ensuring uniformity and stability of GST across India.

Conclusion

The simplified GST structure with lower rates marks a new phase in India's tax system, aiming to boost affordability, business competitiveness, and compliance, while driving inclusive growth and economic transformation. Regular rate reviews, fiscal monitoring, and taxpayer awareness will further build trust, expand the tax base, and enhance revenue sustainability.

3.1.1. GSTAT AND GSTAT E-COURTS PORTAL LAUNCHED

About Goods and Services Tax Appellate Tribunal (GSTAT)

- It is a **second appellate authority** established under **Section 109 of the Central Goods and Services Tax Act, 2017.**
  - When a taxpayer has a dispute, the first appeal lies within the **tax administration.**
- **Purpose:** To hear appeals against orders passed by the **GST Appellate Authorities** and to provide taxpayers with an independent forum for justice.
- **Benches:** It will function through a **Principal Bench in New Delhi** and 31 State Benches across 45 locations in India, ensuring accessibility and nationwide reach.
- **Structure:** Each Bench of the GSTAT will comprise two Judicial Members, one Technical Member (Centre), and one Technical Member (State).
- **Significance:** Structure reflects the spirit of **cooperative federalism** and is designed to deliver impartial and consistent decisions.

About GSTAT e-Courts Portal

- It is a **digital platform to enable taxpayers** to file appeals online, track the progress of cases, and participate in hearings through digital mode.
- **Developed by:** Goods and Services Tax Network (GSTN) in collaboration with **National Informatics Centre (NIC).**

3.2. INDIA'S SEMICONDUCTOR ECOSYSTEM

Why in the News?

A **2 nm chip is being designed in India for the first time** after inauguration of ARM's new semiconductor design office in Bengaluru.

Why is 2nm chip significant?

- Semiconductors are the fundamental components of modern electronics devices.
- The semiconductor materials are used to create microchips that store, process, and transfer information.
- Each chip contains millions of micro-scale switches called transistors, which control electrical signals much like brain cells pass messages.
- **Thinner chips** mean **more processing capacity in less space** hence lighter products.
- **Smaller transistors** enable **greater efficiency** and **reduced power consumption.**
- They hold strategic importance for national security, space exploration and defence applications.

The global semiconductor industry is projected to reach USD 1 trillion by 2030. This is dominated byy Taiwan, South Korea, Japan, China and the United. Taiwan produces over 60 per cent of the world's semiconductors and nearly 90 per cent of the most advanced chips.

With supply chains concentrated in a few geographies, India is positioning itself as a trusted and reliable partner in diversifying global manufacturing.

Major ongoing Initiatives for Semiconductor Industry in India

- **India Semiconductor Mission (ISM):** Launched in 2021 with following schemes-
  - **Semiconductor Fabs Scheme:** Targets advanced nodes such as 28nm or below, as well as mature technologies and provides up to **50% fiscal support** for setting up semiconductor wafer fabrication (fab) units in India.

- o **Display Fabs Scheme:** Offers financial assistance of up to **50% of project cost** to set up display fabrication units in India and covers technologies such as AMOLED and LCD displays.
  - o **Compound Semiconductors & ATMP/OSAT Scheme**: Supports compound **semiconductors, silicon photonics, MEMS/sensors, discrete semiconductors.**
  - o **Design Linked Incentive (DLI) Scheme**: Promotes design startups & MSMEs through incentives up to ₹**15 crore per company.**
- **Semicon India**: It is one of eight annual **SEMICON expositions worldwide** that bring together **executives and leading experts** in the global semiconductor **design and manufacturing ecosystem.**
  - o **Semicon India, 2025** (4th edition) was co-hosted by India Semiconductor Mission (ISM) in partnership with SEMI (Semiconductor Equipment and Materials International), with the **theme** 'Building the Next Semiconductor Powerhouse'.
- **Skilling & Talent Development Programs:**
  - o **AICTE VLSI curriculum**: Courses updated to match industry requirements.
  - o **Skilled Manpower Advanced Research and Training (SMART) Lab (NIELIT Calicut):** To train 1 lakh engineers.
  - o **Chips to Startup(C2S) program:** For developing Specialized Manpower in Very Large-Scale Integration (VLSI)/Embedded System Design domain
  - o **Future Skills Program:** 20,000 engineers in Madhya Pradesh.
- **Global Collaboration:** India- U.S. **Initiative on Critical and Emerging Technology (iCET)** in deepening strategic cooperation across key technology sectors, including, semiconductors.
- **Promotion of Design & R&D:**
  - o **3 nm chip design** centres in Noida & Bengaluru inaugurated in 2025.
  - o Move towards **Silicon Carbide (SiC) & 3D Glass packaging** for EVs, defence & aerospace.
  - o **Vikram 32-bit processor**, India's first fully indigenous 32-bit microprocessor, **qualified for use in harsh launch vehicle conditions.**

Challenges in Semiconductor ecosystem

- **Limited Core IP and Indigenous Product Development:** Indigenous research and innovation remain weak, with few original patents in advanced chip technologies, AI chips, or quantum computing.
- **Geopolitical Risks:** E.g., Export controls by major powers (especially the US) may limit India's access to critical technologies and chipmaking equipment.
- **Low focus on advanced fab facilities:** Most Indian fabs/facilities target mature technology nodes (>28nm), while global market is shifting towards 3nm, 5nm, and specialized chips for AI and quantum computing.
- **Underdeveloped supply chain:** India lacks domestic sources for key materials like silicon wafers, specialty chemicals, and ultrapure gases needed for advanced chip manufacturing.
- **High Capital and R&D Costs**: Semiconductor fabs require **billion-dollar investments**; design costs are **prohibitively expensive for many startups etc**.
- **Other issues:**
  - o **Fragmented Collaboration and Ecosystem Creation** between manufacturers, design houses, fabs, research unit
  - o **Shortage of specialized manufacturing talent.**
  - o **Slow project execution and delays in regulatory approvals.**
  - o **Inadequate logistics and transport infrastructure**.
  - o **Environmental concerns** as Semiconductor fabs consume huge water and energy.

Way Ahead

- **Enhance Indigenous R&D and Intellectual Property Creation:** Increase **public and private funding** for **semiconductor R&D**; strengthen IP registration and enforcement for an **indigenous IP base** etc.
- **Leverage Geopolitical Shifts**: Position **India as a secure, transparent investment** destination amidst supply chain realignments.
  - o E.g., India can pursue alliances like joining U.S. led "Chip 4" alliance.

- **Expand incentives and R&D for advanced nodes**: Through joint ventures and technology transfer with global leaders. E.g., 12 MoUs were announced during Semicon India 2025.
- **Improve Manufacturing Infrastructure**: Establish an **initial refurbished fab for training and fabrication access;** incentivize **private investments with tax breaks** and infrastructure support etc.
- **Enhance production of raw material:** Establish local manufacturing plants for specialty chemicals etc.; Fast-track regulatory approvals for raw material industries etc.
- **Promote collaboration:** Across **Original Equipment Manufacturer (OEMs), design houses, fabs, and testing units** to build a complete semiconductor value chain.
- **Build Skilled Workforce**: Update academic **curricula with practical semiconductor training; set up dedicated training centers including refurbished fabs** for hands-on experience.

3.3. PRIME MINISTER MEGA INTEGRATED TEXTILE REGION AND APPAREL (PM MITRA) SCHEME

Why in the News?

Recently, the Prime Minister laid the foundation stone of **PM MITRA Park** in **Dhar District in Madhya Pradesh.**

About PM MITRA Scheme

- **Launched**: By the **Ministry of Textile** with an outlay of ₹ 4,445 crore **from 2021-22 to 2027-28**.
- **Objective:** To establish **large-scale textile manufacturing hubs** with world-class infrastructure and facilities. In 2023, **7 sites were identified across India (refer map).**
  - These parks will facilitate **total value-chain of the textile industry** including **spinning, weaving, processing, garmenting, textile manufacturing, and processing & printing machinery industry** at one place.

7 PM MITRA Parks

- Greenfield Uttar Pradesh (Lucknow)
- Gujarat (Navsari) Greenfield
- Madhya Pradesh (Dhar) Greenfield
- Maharashtra (Amravati) Brownfield
- Telangana (Warangal) Brownfield
- Karnataka (Kalaburagi) Greenfield
- Tamil Nadu Virudhunagar Greenfield

- **Vision**: **"5F" vision (Farm → Fibre → Factory → Fashion → Foreign)** to integrate and scale up the textile ecosystem.
- **Goals**
  - **Attract investment** of about **₹70,000 crore**
  - **Generate nearly 20 lakh direct and indirect jobs.**
- **Eligibility and Selection Criteria for States:** Contiguous and encumbrance-free **land parcel (at least 1000 acres)**, a conducive **textile and industrial policy** and **traditional strengths** in the textile sector.
- **Structure & Implementation:**
  - Each MITRA Park is to be developed under a **Special Purpose Vehicle (SPV)** jointly owned by the **Centre (49% equity)** and the respective **State Government (51% equity).**
  - The mode is largely **public-private partnership (PPP)**, with a master developer selected to build and maintain infrastructure.
- **Financial Incentives & Support:** Ministry of Textiles will provide **financial assistance up to ₹800 crore per park for Greenfield projects** and **up to ₹500 crore per park for Brownfield projects** in the form of
  - **Development Capital Support (DCS): Up to 30% of project cost**
    - **Greenfield Park (**fresh development): Support capped at **₹500 crore per park**.
    - **Brownfield Parks (**upgrading existing infrastructure): Support up to **₹200 crore** for remaining infrastructure development.
  - **Competitiveness Incentive Support (CIS):** Additional incentive of up to **₹300 crore per park** to encourage early setup and incentives for turnover etc.
  - **Convergence with other Government of India schemes** (for power, skill development, logistics) to enhance incentives and reduce duplication.
  - A **small portion (up to ~10% in area)** is allowed as **commercial development** (real estate, services) to help generate revenue for maintenance and sustainability of common assets.
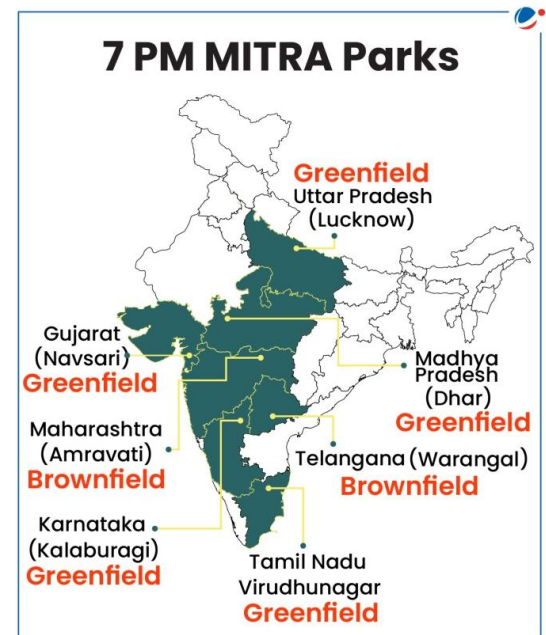
Why PM MITRA Scheme was launched?

- **Fragmentation & Lack of Complete Value Chains:** Many units (especially MSMEs / small firms) handle only one or two stages (e.g. spinning, or weaving, or garmenting) rather than a full integrated chain. This hinders **economies of scale, slows down response times, increases logistics cost, reduces quality contr**ol, etc.
- **Infrastructure Bottlenecks:** Poor processing & finishing units, lack of eco-friendly effluent treatment, standardization (testing, quality labs), power supply, etc. affects export competitiveness.
  - **Incubation centres, design labs, and training hubs** within the parks can drive product innovation and skilled manpower, especially for emerging areas like **technical textiles.**
  - **Centralized effluent treatment plants** in the parks ensure sustainable pollution control, addressing stricter global environmental norms and buyer requirements (e.g. in Europe).
- **Obsolete Technology & Low Productivity:** Many current textile units have older machinery, under-efficient dyeing/processing, and low automation. This **raises cost, reduces competitiveness** against global players, such as **China and Vietnam**.
  - With **plug-and-play factories and fiscal incentives**, the parks create an ecosystem to draw domestic and foreign investors, similar to how SEZs attracted electronics manufacturing.
- **Underinvestment & Poor Scale:** Existing schemes like **SITP (Scheme for Integrated Textile Parks)** have **not achieved size and scale** needed for global competitiveness.
- **Multiplier Effect**: As a **labor-intensive and export-oriented sector**, integrated parks can generate **large-scale jobs, raise rural incomes, and strengthen raw material linkages**, creating broad economic impact.

Overview of India's Textile and Apparel Sector

- **Status:** India has the **2nd largest manufacturing capacity** (after China) in textiles and **is 6th largest exporter** with **share of 3.91%** of the global trade.
- **Economy**: It contributes ~ **2.3% of GDP, 13%** to **industrial production**, and **12%** to **exports (US$ 34.4 billion** in **2023-24)**.
- **Employment**: It is **2nd largest employment generators**, after agriculture, with **over 45 million people** employed directly, including **women** and the **rural** population.
- **Inclusive:** Nearly **80%** of its capacity is spread across **MSME clusters.**

Other Key Government Initiatives & Supports

- **Production Linked Incentive (PLI) Scheme for Textiles / Apparel:** To incentivize large scale manufacturing in man-made fibre (MMF), technical textiles, etc.
- **Samarth Scheme**: To provide **demand-based skilled training** across the textile value chain to boost employability.
- **Amended Technology Upgradation Fund Scheme (ATUFS)**: To incentivize credit flow for **technology upgradation** of MSMEs.
- **Kasturi Cotton branding/certification**: A program for traceability and quality branding of Indian cotton.
- **National Technical Textiles Mission (NTTM)**: Focused push for technical textiles' research, production and export promotion.
- **Allowing 100% FDI via automatic route** in textiles to attract global investment.

Conclusion

The PM MITRA Scheme seeks to transform India's textile sector into a globally competitive hub by integrating the entire value chain, reducing logistics costs, and upgrading technology. With strong PPP support, fiscal incentives, and job potential, it can boost investment, strengthen exports, and promote sustainable, inclusive growth, advancing the 5F vision.

3.4. NATIONAL LOGISTICS POLICY, 2022

Why in the News?

Union Ministry of Commerce and Industry commemorated third anniversary of the National Logistics Policy (NLP), 2022.

About National Logistics Policy (NLP), 2022

- **Genesis**: It was launched to complement the **PM Gati Shakti National Master Plan (PMGS-NMP)**.
- **Vision:** To develop a technologically enabled, integrated, cost-efficient, resilient, sustainable and trusted logistics ecosystem for accelerated and inclusive growth.
- **NLP** addresses the **soft infrastructure** and **logistics sector** development aspect such as process reforms, improvement in logistics services, digitization, human resource development and skilling.
  - While, **PMGS-NMP** addresses integrated development of the **fixed infrastructure** and network planning.
- **Targets:**
  - **Reduce cost of logistics in India** to be comparable to global benchmarks by 2030.
  - **Improve the Logistics Performance Index ranking**: Endeavour is to be among top 25 countries by 2030.
  - **Create data driven decision support mechanism** for an efficient logistics ecosystem.
- **Implementation through Comprehensive Logistics Action Plan (CLAP):** It divided into 8 key action areas (See Infographic).
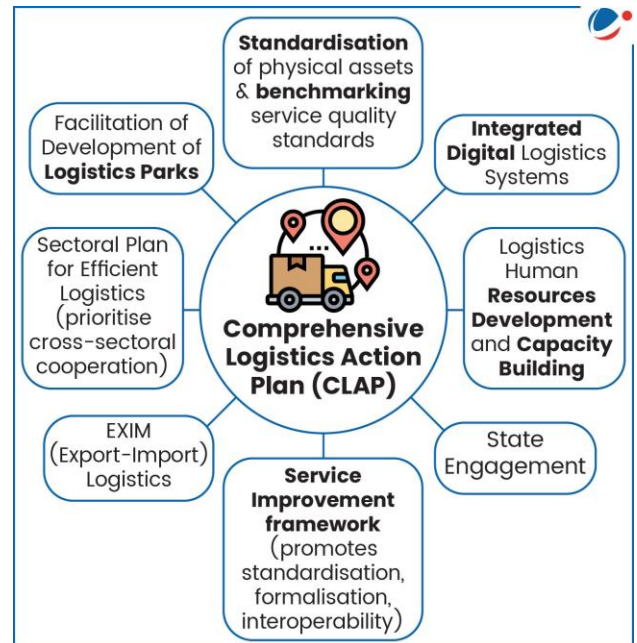
Key achievements under the National Logistics Policy (2022–2025)

- **Logistics Ease Across Different States (LEADS) Index:** Played a crucial role in promoting competitive federalism among states and supporting India's rise in the World Bank's **Logistics Performance Index 2023**.
  - LEADS Index assesses logistics performance across States and UTs.
    - **LEADS 2025** introduces performance assessment of **5–7 key corridors** (journey time, truck speed, waiting periods) and **API-based evaluation of section-wise speeds** on major road corridors.
- **Unified Logistics Interface Platform (ULIP)**: It has facilitated secure API integration across more than 30 digital systems, enabling over **160 crore digital transactions** as of August 2025.
  - **ULIP** is a digital platform that brings together data from various logistics-related ministries and departments on a single interface.
- **Improved Digital Integration: Ease of Logistics Services (E-Logs)** portal has onboarded **35+ logistics** and industry associations, and has **successfully resolved 100 out of 140 issues** submitted by stakeholders**.**
- **Logistics at regional level:** 27 States and Union Territories have **formulated State Logistics Policies**, 19 States have granted industry status to logistics, enabling **tax benefits and incentives.**

Other initiatives to Improve Logistics Sector in India

- **Grant of Infrastructure status**: It has enabled access to cheaper, long-term funding, similar to roads and railways, further solidifying its significant role in the growth story of India.
- **Integrated State and City Logistics Plans:** Under the **SMILE programme** in collaboration with the Asian Development Bank (ADB).
  - **Strengthening Multimodal and Integrated Logistics Ecosystem (SMILE) Program** aims to improve India's logistics infrastructure, reducing logistics costs, and increasing efficiency.
- **Logistics Data Bank (LDB) 2.0:** It enables enhanced **real-time tracking** of container movements, introducing export container tracking on high seas along with multi-modal shipment visibility.
- **Others:** Multi-modal Logistics Park under Bharatmala Pariyojana, Unified Logistics Interface Platform, Dedicated Freight Corridors, Gati Shakti Vishwavidyalaya, introduction of e-Way bills, etc.

🏛 **Data Bank**

India's Logistics Competitiveness
- ➤ **38th** rank in World Bank's Logistics Performance Index 2023 (from 44th in 2018).
- ➤ **7.97%** of the GDP is India's total estimated Logistics cost in 2023-24. (NCAER)

Comprehensive Logistics Action Plan (CLAP) infographic:
- Standardisation of physical assets & **benchmarking** service quality standards
- **Integrated Digital** Logistics Systems
- Logistics Human **Resources Development** and **Capacity Building**
- State Engagement
- **Service Improvement framework** (promotes standardisation, formalisation, interoperability)
- EXIM (Export-Import) Logistics
- Sectoral Plan for Efficient Logistics (prioritise cross-sectoral cooperation)
- Facilitation of Development of **Logistics Parks**

Challenges still persist related to Logistics sector

- **Modal imbalance:** Railways and road transport's modal share of freight traffic is 18% and 71%, respectively. (NITI Aayog, 2021)
- **Dominance of unorganized sector:** Highly fragmented logistics industry with domination of several small and unorganized players (~90%). (KPMG, 2022)
- **Digital literacy**: Digital adoption among **smaller logistics firms** and independent operators remains uneven, especially outside urban centres.
- **Regulatory complexity:** Overlapping state and Union regulations, inconsistent implementation of **GST for logistics**, and varied licensing norms create operational uncertainties for both **digital startups** and established companies.

Way Forward

- **Promote efficient modal mix:** Expedition of the completion of **Dedicated Freight Corridors (DFCs),** promoting Inland Waterways, promoting RORO (Roll-On/Roll-Off) service, etc., can reduce logistics cost and improve efficiency.
- **Adaptation to evolving formats:** With the rise of e-Commerce, logistics and warehouse companies can strategise and manage their operations as per the evolving formats such as omnichannel retail, quick commerce and other models such as Buy Online, Pick up in store (BOPIS).
- **Public-Private Partnerships**: Collaborations between startups like Rivigo and small fleet operators to provide affordable, plug-and-play digital solutions**.**
  - **E.g., Rivigo's** AI algorithms suggest optimal routes, reducing travel distance, fuel consumption, and delivery costs.
- **Technological integration:** Process-oriented automation systems that leverages scanners, barcodes, to streamline the data collection and integration process, on-demand warehousing through app-based tools, etc.

Conclusion

As India aspires to become a global manufacturing hub and achieve its sustainability goals, logistics will play the role in reducing costs, enhancing competitiveness, and fostering inclusive development. A forward-looking, innovation-driven and collaborative approach can turn India's logistics sector into not just a facilitator of commerce, but a strategic driver of national progress.

3.5. SARFAESI ACT, 2002

Why in the News?

Recently, the Supreme Court in a judgement highlighted anomalies in the **SARAFESI Act, 2002** and **SARFAESI Rules 2002**.

Key Observation of Supreme Court

- SC highlighted a contradiction between **Section 13(8) of the SARFAESI Act, 2002** and **Rules 8 & 9 of the SARFAESI Rules, 2002.**
- **Contradiction:**
  - **Section 13(8) (post-2016 amendment):** Borrower loses their **statutory right to pay back the debt in full** and recover the secured asset, once the **auction notice is published.**
  - **Rules 8 & 9:** Indicate borrowers still have a **window to redeem even after publication**, up until the auction date.
- **Court's Interpretation:**
  - **"Publication of notice"** under Section 13(8) must be read in line with the procedural steps under the Rules.
  - **Borrower's right to redeem** extinguish only after proper publication (newspaper, personal service, email, etc.) of auction notice.

> **Know the term** 📎
>
> **Non- Performing Assets (NPA)**
>
> - A NPA refers to a classification for loans or advances of a bank that are in **default** or **arrears.**
> - A loan is in arrears when principal or interest payments are late or missed and become an NPA when the interest and/ or instalment of principal remain **overdue for more than 90 days.**

Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002

- **Objectives**:
  - **Recovering** the financial institutions' and banks' **non-performing assets (NPAs)** in a timely and effective manner.
    - **Cooperative Banks** are also covered under it.
  - Allows financial organisations and banks to **sell residential and commercial assets at auction** if a borrower defaults on his or her debt.

Key Features of the Act

- **NPA Classification and Notices:** Loans are classified as NPAs per RBI guidelines, with a mandatory 60-day demand notice to borrowers before action to recover the asset.
- **Key Methods of Recovery:**
  - **Securitisation**: Involves transactions where **risk of recovery** in **stressed assets** is distributed, among investors, by repackaging such assets into tradable securities with different risk profiles.
  - **Asset reconstruction**: Act provides for the creation of the **Asset Reconstruction Companies (ARCs),** registered and regulated by RBI.
    - ARC is a **financial institution that buys the Non-Performing Assets (NPAs)** or bad assets from banks and financial institutions so that the latter can clean up their balance sheets.
  - **Court-Free Enforcement:** Secured creditors like banks and financial institutions, can take possession and sell assets except for agricultural land under Section 13 without judicial approval.
- **Central Database:** Established **Central Registry** for registration of transaction of securitisation and reconstruction of financial assets.
- **Borrower Rights:** Borrowers can approach the **Debt Recovery Tribunal (DRT)** to rectify their grievances against the creditor or authorised officer.
  - **DRT** are established under the **Recovery of Debts and Bankruptcy Act, 1993**.
- **Working**:
  - After the **declaration of the account or asset as NPA,** banks or financial institutions direct defaulting borrowers to discharge their liabilities within a 60 days period.
  - When failed to comply with the notice, then the **bank or financial institution takes action.**

Key Issues/challenges associated with the SARFAESI Act

- **Exclusion of Certain Borrowers**: The Act is not applicable on loans under ₹1 lakh and in cases where 80% of the loan has already been repaid.
- **Procedural and judicial delays:** Borrowers often approach Debt Recovery Tribunals (DRTs) to seek a stay on possession proceedings.
- **Complexities in Asset Recovery**: Lenders face challenges in identifying and liquidating collateral, e.g. transfer of assets to third parties.
- **Sub-optimal performance of the ARCs**: Banks and FIs could recover only about 14.29% of the amount owed by borrowers in stressed assets sold to ARCs from FY04 to FY13.
- **Socio-Economic Impact:** Forced asset dispossessions can lead to loss of livelihoods, increased indebtedness, and social instability, highlighting the need for a balanced recovery framework.
- **Other**: Infringement of Borrowers' Rights (Misusing of powers by creditors), disputes in valuation of the assets, exclusion of unsecured creditors etc.

Other initiatives for Securitisation and Reconstruction of Financial Assets/Resolving NPAs

- **Insolvency and Bankruptcy Code (IBC), 2016:** Introduced time-bound resolution framework for stressed assets, reducing delays in recovery.
- **RBI Prudential Framework (2019)**: Mandated early recognition and resolution of stressed assets through inter-creditor agreements.
- **National Asset Reconstruction Company Limited (NARCL), 2021**: A government-backed **bad bank** to aggregate and resolve high-value NPAs.

- o B**ad Bank is a financial institution set up to take over and manage non-performing assets** (NPAs) or bad loans from struggling banks.
- **Other**: **Indradhanush plan** for revamping Public Sector Banks (PSBs), etc.

Way Forward

- **Harmonise Law and Rules**: SC has urged the Ministry of Finance to make necessary changes to resolve anomaly issues.
- **Harmonization with IBC:** The SARFAESI Act should be harmonized with the IBC to ensure a cohesive and comprehensive framework for the resolution of stressed assets.
- **Technological Integration**: Leverage AI and data analytics for asset valuation and monitoring.
- **Specialized Debt Recovery Tribunals (DRTs):** With enhanced operational capacities to expedite the resolution of disputes.
- **International Best Practices:** E.g. United Kingdom's Insolvency Act incorporates debtor protection measures alongside creditor rights, ensuring that recovery does not disproportionately harm individuals/small businesses.

Conclusion

The Supreme Court's ruling clarifies redemption rights and reinforces purchaser protections under SARFAESI, but inconsistencies between the Act and its Rules continue to create uncertainty. Streamlining these provisions, strengthening institutional mechanisms like DRTs and ARCs, etc. is essential to ensure quicker resolution of NPAs.

3.6. PRADHAN MANTRI MATSYA SAMPADA YOJANA

Why in the News?

Pradhan Mantri Matsya Sampada Yojana (PMMSY) completed 5 years of its launch.

About PMMSY

- **Genesis:** Launched in 2010 by Department of Fisheries, under the Union **Ministry of Fisheries, Animal Husbandry and Dairying**.
- **Objective:** To address the **critical gaps** in fish production and productivity, quality, technology, post-harvest infrastructure and marketing.
- **Duration:** It is implemented in all States and UTs for a period of **five** years from **FY 2020-21 to FY 2024-25** (**extended up to FY 2025-26**).
- **Nodal Agency:** National Fisheries Development Board (NFDB) for implementing the training, awareness and capacity-building programmes.
- **Structure and Components:** It is an **umbrella scheme** with two separate components as below:
  - o **Central Sector Scheme (CS):** Fully funded and implemented by Central Government.
  - o **Centrally Sponsored Scheme (CSS):** Partially supported by the Central Government and implemented by the states.
    - › **Enhancement of Production** and Productivity.
    - › **Infrastructure and** Post-harvest Management.
    - › **Fisheries Management** and Regulatory Framework.

Targets and Achievements:

Area	Targets	Achievements
Fish Production and Fish Productivity	• Enhance aquaculture productivity from the national average of **3 to 5 tonne** per hectare. • **Enhancing per capita** fish consumption from the current **5-6 kg to 12 kg.**	• **Aquaculture productivity** increased to 4.7 tonne per hectare (as of Feb 2025). • **Per capita fish consumption** increased from **5-6 kg to 12-13 kg** (Feb 2025). • **India emerged as the second-largest fish producer** in world, contributing nearly **8%** of global **fish production**.

Economic Value Addition	**Reduction of post-harvest losses** from the reported 20-25% to about **10%.**	**Post-harvest losses** reduced to 10-15% (As of Dec 2024).
Enhancing Income and Employment Generation	**Generating 55 lakh** direct and indirect employment opportunities.	**58 lakh employment opportunities** created in fishing and aquaculture related activities (As of Dec 2024).

Important Key Initiatives under PMMSY

- **Empowering Women in Fisheries:** By providing up to **60%** of total project cost as **financial assistance** (up to ₹1.5 crore/project) under beneficiary-oriented activities and the **Entrepreneur Model.**
- **Building Climate Resilience:** Department of Fisheries has identified **100 coastal fishermen villages** as **Climate Resilient Coastal Fishermen Villages** (CRCFV).
- **Boosting Productivity through Biofloc Technology:** It is a sustainable aquaculture method that recycles nutrients in water using beneficial microbes.
- **Strengthening Post-Harvest and Marketing Ecosystems:** 2,195 fisheries cooperatives as Fish Farmers Producer Organizations (FFPOs) have been supported with a project outlay of **₹544.85 crore**.
- **Strengthening Value Chains and Resilience:** Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana **(PMMKSSY)**, a Central Sector Sub-scheme under PMMSY launched in 2024 for four years.

Challenges persist in Fisheries Sector

- **Governance issues:** Unlike Marine fisheries (fisheries beyond territorial waters), **inland fisheries are a State subject** resulting in variations in legislations and policies across States and gets neglected, despite their key contributions in livelihoods and nutritional security.
- **Global challenges:** Transport disruptions and shipping route instability due to global conflicts are pressuring Indian seafood exporters to maintain competitiveness against China, Vietnam, Indonesia and Ecuador.

Other Important initiatives taken for Fisheries Sector

Blue Revolution Scheme was launched in FY 2015-16 for increasing fisheries production and productivity.

Creation of **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)** for fisheries sector in 2018.

National Policy on Marine Fisheries (NPMF, 2017) places a strong emphasis on sustainability.

Geographic Information System (GIS) technology for mapping marine fish landing centers and fishing grounds, aiding in effective resource management.

- **Disease management:** e.g., shrimp farming industry in Andhra Pradesh is facing a serious threat from **Enterocytozoon hepatopenaei (EHP),** a microsporidian parasite.
  - During FY 2024-25, frozen shrimp remained the major export item accounting for a share of 40.19% in quantity and 66.12% in value of total seafood export basket.
- **Environmental damage from disasters / accidents:** e.g., **MSC Elsa-3** shipwreck off Kochi coast contaminated water & sediments, affecting plankton, benthos, fish eggs and larvae, and higher marine life.

Way Forward

- **Promote Research-farmer partnership:** E.g., ICAR-CIBA organized a training programme on effective management of shrimp diseases such as Hepatopancreatic Microsporidiosis (HPM).
- **Promote sustainability in global market**: Centre has initiated steps to secure **global eco-labelling tag** for Lakshadweep tuna fisheries using traditional fishing methods. Lakshadweep tuna can fetch premium prices, benefiting artisanal fishers.
- **Parliamentary Standing Committee on Agriculture** recommended to:
  - **Establish the Indian Council for Fishery and Aquaculture Research (ICFAR)** to facilitate focussed and in-depth research, but also address the challenges faced by the fishery sector.
  - Enforce **Minimum Legal Mesh Size (MLS) regulations** uniformly and ban destructive fishing methods.

Conclusion

To ensure the sustainable use and conservation of fisheries while balancing economic, social, and environmental priorities, it is recommended to focus on capacity building and adopt a participatory management approach supported by interdisciplinary and inter-institutional cooperation and collaboration.

3.7. NEWS IN SHORTS

3.7.1. STATE FINANCES 2022-23 REPORT

The report was released by released by the Comptroller and Auditor General.

The report is **first of its kind**, providing comprehensive **data, analysis, and trends on fiscal parameters** for all 28 states over a **10-year period (2013-14 to 2022-23).**

Key Findings

- States' total debt in 2022-23 was **22.17** % of the country's **Gross Domestic Product (GDP).**
  - o **Fiscal Responsibility and Budget Management (FRBM)Act (2003) benchmark:** State Government Debt shall be 20% of GDP by 2024-25
- **Debt-to-GSDP Ratio:** Highest ratio of **40.35** per cent was recorded in **Punjab**, followed by **Nagaland** (37.15 per cent) and **West Bengal** (33.70 per cent)
  - **Fiscal Deficit:** All 28 States in **deficit**; ranged from Gujarat (0.76% of GSDP) to Himachal Pradesh (6.46%).
  - o **FRBM benchmark:** States needed to achieve a fiscal deficit of 3.5 % of GSDP in FY 2022-23.
- **Wide gaps in revenue capacity:** States' Own Tax Revenue (SOTR) share **70% in Haryana and** as low as **9% in Arunachal Pradesh.**

Read our previous coverage on State Finances

Why is Public Debt High in Many Indian States?

Rising Subsidies: Farm loan waivers, free/subsidised electricity, cash transfers, etc.

High Committed Expenditure: Interest, salaries, wages—over 42% of revenue spend (2013-14 to 2022-23).

Weak Revenue Mobilisation: States rely heavily on central transfers and limited capacity to raise state-level taxes.

3.7.2. ANNUAL SURVEY OF INDUSTRIES (ASI) RESULTS FOR 2023-24 RELEASED

It is released by the **Ministry of Statistics and Programme Implementation (MoSPI).**

- It aims to provide meaningful insights into changes in the **composition, growth, and structure of manufacturing industries,** including **output, value added, employment, and capital formation.**
- The ASI is conducted annually under the **Collection of Statistics (Amendment) Act, 2017.**
- ASI covers factories registered under the **Factories Act, 1948,** Bidi and cigar units under the **Bidi and Cigar Workers (Conditions of Employment) Act, 1966, and electricity undertakings** not registered with the Central Electricity Authority (CEA).
- **Defence establishments, oil storage and distribution depots, departmental units** such as railway workshops, gas storage, etc., are **not covered** under ASI.
- The results are prepared at the **state and major industry level.**

Key highlights o'f the survey

- **The top 5 industries in terms of Gross Value Added (GVA)** are Basic metal, Motor vehicles, Chemical and Chemical products, Food Products, and Pharmaceutical products.
- **The top 5 States in respect of employment** are Tamil Nadu, Gujarat, Maharashtra, Uttar Pradesh, and Karnataka.
- **Gross Value Added (GVA) grew by 11.89%** over the previous year.
- **Industrial output increased** by more than 5.80% over the previous year.
- **Average emoluments per person engaged** grew by 5.6% compared to 2022-23.

Concepts and Definitions in Survey

Gross Value Added (GVA): Additional Value created in production = total output–total input.

Net Value Added (NVA): total output–total input–depreciation.

Fixed Capital: Depreciated value of long-term assets (buildings, machines, land) used in production.
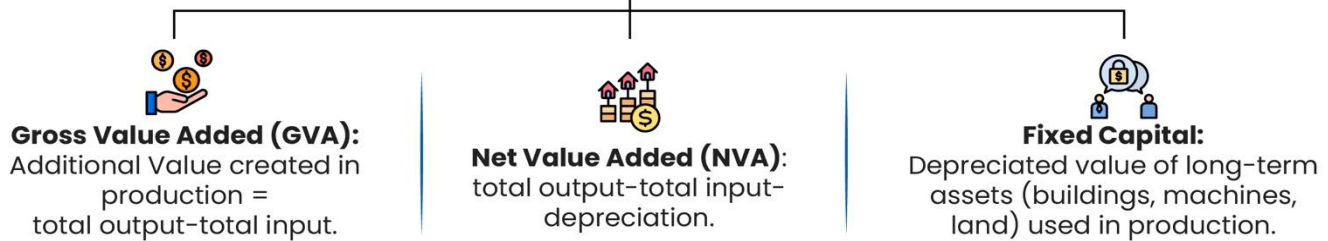
3.7.3. INDUSTRIAL PARK RATING SYSTEM (IPRS) 3.0

The Union Ministry of Commerce and Industry launched the **Industrial Park Rating System (IPRS) 3.0**.

- **IPRS** was introduced on a pilot phase in 2018 and IPRS 2.0 in 2021.
- **IPRS 3.0** introduced an **expanded framework** with **new parameters**, including **sustainability**, **green infrastructure**, **logistics connectivity**, **digitalization**, **skill linkages**, and **enhanced tenant feedback**.

About Industrial Park Rating System (IPRS) 3.0

- **Objective**: Strengthen India's industrial ecosystem and enhance the **competitiveness** of industrial infrastructure.
- **Developed by**: the Department for Promotion of Industry and Internal Trade (DPIIT) with support from the **Asian Development Bank (ADB)**.
- **Categorisation of Industrial park**: **Leaders**, **Challengers**, and **Aspirers** based on their performance across key indicators.
- **IPRS** is an integral part of the **India Industrial Land Bank** (erstwhile Industrial Information System).
  - **India Industrial Land Bank** serves as a one-stop Platform for all the **industrial information** by mapping the entire **industrial infrastructure** across the nation on the GIS platform.

About Industrial Parks

- Industrial parks are **economic zones** that are expressly developed to accommodate a **cluster of industrial activity.** E.g. **Narela Industrial Area**
- IP are also referred to by names such as **Special Economic Zones (SEZs)**, enterprise zones, etc.
- There are more than 4000 **operational industrial parks** in India.
  - Government is actively developing **20 plug-and-play industrial parks and smart cities under National Industrial Corridor Development Programme (NICDP)**.

3.7.4. MINISTRY OF FINANCE GIVES INFRASTRUCTURE STATUS TO LARGE SHIPS

Large ships are now included in 'Transport and Logistics' category of the Infrastructure **Harmonized Master List (HML) of Infrastructure Sector**, aimed to strengthen domestic shipbuilding and maritime industry.

- **A large ship** is defined as Commercial Vessel:
  - Having a gross tonnage (GT) of 10,000 or more, under the Indian ownership and flag; or
  - Having a GT of 1,500 or more which are **built in India** and are under Indian ownership and flag.
- **Significance of inclusion in HML:** Access to infrastructure lending at easier terms with enhanced limits, access to larger amounts of funds as external commercial borrowings (ECB), viability gap funding, tax incentives etc.

Planned Initiatives for Strengthening Shipping Sector

- Bharat Container Shipping Line under Shipping Corporation of India.
- Coastal Green Shipping Corridor (Kandla–Tuticorin will develop first).
- Sagarmala Startup & Innovation Initiative (S2I2) and Maritime Innovation Hubs.

Status of India's Shipping Sector

- **Foreign Dependence: 95% of India's trade relies on foreign ships** and India pays nearly $75 billion every year to foreign shipping companies for shipping services.

- **Share in Shipbuilding:** India currently accounts for only **0.06% of global shipbuilding**.
- **Target:** Government is aiming at becoming **one of the top five shipbuilding nations by 2047** and according to Maritime Amrit Kaal Vision 2047, government foresees an investment of **₹54 trillion into building indigenous shipping and shipbuilding capabilities** by 2047.
- **Issues in Shipping Sector:** Capital constraints with high borrowing costs, ageing fleet, tax anomalies, skill gaps etc.

3.7.5. CABINET APPROVES PACKAGE TO BOOST SHIPBUILDING

- The package introduces a **four-pillar approach designed to**
  - Strengthen domestic capacity
  - Improve long-term financing
  - Promote greenfield and brownfield shipyard development
  - Enhance technical capabilities and skilling, and implement legal, taxation, and policy reforms
- **The package includes**
  - **Extension of the Shipbuilding Financial Assistance Scheme (SBFAS)** until March 31, 2036, to incentivize shipbuilding
  - **A Maritime Development Fund (MDF)** will provide long-term financing for the sector.
    - MDF use cases would be for shipbuilding, shipbuilding clusters, ship repairs, ship ownership, port expansion, inland waterway transport, and coastal shipping.
  - **Shipbuilding Development Scheme (SbDS)** to expand domestic shipbuilding capacity to 4.5 million Gross Tonnage annually.
- A **National Shipbuilding Mission** will oversee all initiatives.

3.7.6. ADVANCE AUTHORISATION SCHEME

Union Government has **extended the Export Obligation Period** for products under **Advance Authorisation Scheme** to provide relief to textile exporters.

About Advance Authorisation Scheme

- **Meaning:** It is an **export incentive program**, which allows **duty free import of input**, which is physically incorporated in export product (making normal allowance for wastage) **without mandatory Quality Control Order (QCO)** compliance.
- It covers **manufacturer exporters** or **merchant exporters tied to supporting manufacturer(s)**.
- Quantity of inputs allowed for a given product is based on specific norms defined for that export product

3.7.7. BHARATI INITIATIVE

APEDA has launched BHARATI to support Agri Food Startups and boost India's agri Food Export.

About BHARATI

- It stands for **Bharat's Hub for Agritech, Resilience, Advancement and Incubation for Export Enablement.**
- **Key Objectives:**
  - It aims to support **100 agri-food startups,** and achieve **$50 billion in exports by 2030**.
    - Selected startups will undergo a 3 month acceleration programme on product development, export readiness, regulatory compliance, market access etc.
  - **Attract startups working on advanced technologies:** E.g. AI-based quality control, blockchain-enabled traceability, IoT-enabled cold chains and agri-fintech.
  - **Drive Innovation in high-value categories:** E.g. GI-tagged agri-products, Organic foods, Superfoods, Novel processed Indian agri-foods, Livestock products, AYUSH products
  - **Resolve export challenges**: E.g. related to product development, value addition, quality assurance, perishability, wastage and logistics.

3.7.8. GLOBAL INNOVATION INDEX (GII) 2025

World Intellectual Property Organisation released the Global Innovation Index (GII) 2025.

GII measures **innovation performance of 139 economies** through investment patterns, technological progress, adoption rates, and socioeconomic impacts.

- **Launched in 2007**, GII is recognized by the UN General Assembly as an authoritative reference for Science, Technology and Innovation (STI) policies.

Key Highlights of GII 2025

- **India's Rise:** India's rank rises to 38th position, a big leap from 81st in 2015.
  - **India along with Vietnam is the longest-standing overperformer**, performing above expectation for their level of development for 15th year.
- **Most Innovative Economies: Switzerland has been ranked first**, followed by Sweden, USA, South Korea and Singapore.
- **Top Innovation Clusters:** Shenzhen–Hong Kong–Guangzhou (China and Hong Kong), followed by Tokyo-Yokohama (Japan), and San Jose-San Francisco (USA).
  - **India has four clusters in top 100:** Bengaluru (21st), Delhi (26th), Mumbai (46th) and Chennai (84th).

India's Initiatives for Improving Innovation

- **Startup India Program:** Provides handholding support for startups, funding through Fund of Funds, credit guarantee, tax exemptions etc.
- **Atal Innovation Mission:** Develop new programmes and policies for fostering innovation in different economic sectors.
- **National Initiative for Developing and Harnessing Innovations (NIDHI):** Umbrella programme for nurturing ideas into successful startups.
- **Other:** Accelerating Growth of New India's Innovations (AGNIi) Mission, NITI Frontier Tech Repository, Prime Minister's Research Fellowship Scheme etc.
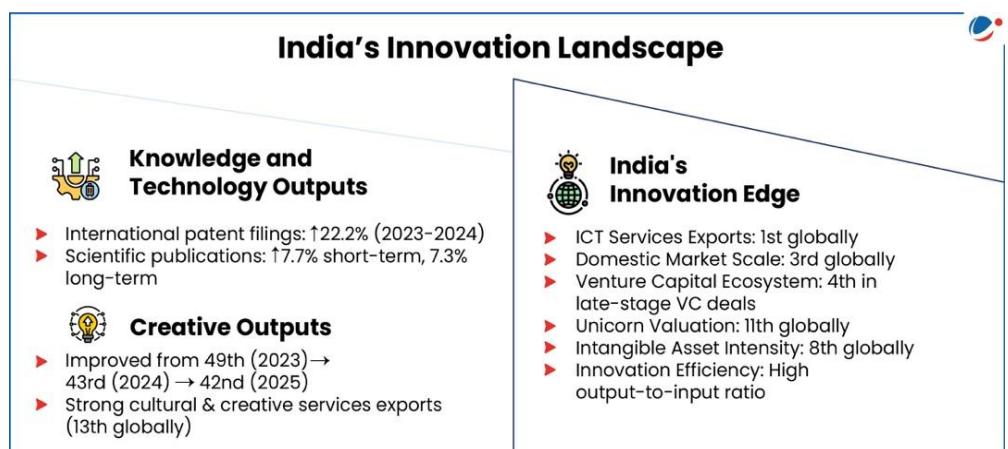
3.7.9. WORLD TRADE REPORT 2025

The report released by the World Trade Organization (WTO) recognizes the **transformative potential of AI** as a **general-purpose technology** that can **reshape wealth distribution and income across economies**.

How AI can act as catalysts for Trade and Inclusive Growth?

- **Reducing Trade cost and improving productivity:** By optimizing logistics, streamlining regulatory compliance, overcoming language barriers, and improving contract enforcement, AI could lead to 34-37% rise in global trade by 2040.
- **Reducing 'Skill Premium':** AI is expected to substitute tasks performed by medium- and high-skilled workers more than those of low-skilled workers, thereby reducing the relative demand for higher-skilled labor.
  - **Skill premium** is the wage ratio of high-skilled to low-skilled workers which is projected to decline by 3-4% globally.
- **Knowledge diffusion:** Economies more open to trade experience stronger innovation spillovers - a 10% increase in digitally deliverable services trade is associated with a 2.6% rise in cross-border AI patent citations.
- **New Development Pathways:** Economies rich in critical minerals or renewable energy can become hubs for upstream inputs like hardware manufacturing or data hosting and other labor-intensive activities like data collection and annotation.

What are the concerns demanding urgent Policy action?

- **Concentration of AI:** AI development is highly concentrated in a few firms and economies, which poses risks to equitable access.
- **Labor market disruption:** Displacement of some workers by automating tasks, requiring investment in education and active labor market policies to help workers adapt.

Conclusion

To realize the inclusive potential of AI and trade, there is a need for proactive and coordinated policies, including investing in digital infrastructure and skills, promoting regulatory coherence, ensuring competition, and leveraging international cooperation through organizations like the WTO.

3.7.10. OECD ECONOMIC OUTLOOK REPORT

OECD Upgrades India's 2025 GDP Forecast to 6.7% While Moderating Inflation Projection to 2.9%.

About Economic Outlook Report

Released by: Organisation for Economic Co-operation and Development (OECD)

- **Report: Biannual publication** analyzing global and national economic trends.
- **Coverage:** Includes **GDP, inflation, employment, trade, and investment.**
- **Risks: Highlights inflationary pressures, financial instability, and geopolitical tensions.**

3.7.11. POLYMETALLIC SULPHIDES

India has signed a 15-year contract to explore polymetallic sulphides (PMS) with ISA in Carlsberg Ridge in Indian Ocean.

It is India's third exploration contract with **International Seabed Authority (ISA),** and second for PMS.

- Previous exploration contracts are **Polymetallic Nodules in the Central Indian Ocean Basin** and **PMS in the Indian Ocean Ridge.**
  - **Polymetallic nodules, also called manganese nodules,** are rock concretions formed of concentric layers of iron and manganese hydroxides around a core, such as a shark tooth or shell.
- This is the **first licence granted globally** for exploring polymetallic sulphur nodules in the Carlsberg Ridge.
- The Carlsberg Ridge is a 3,00,000 sq km area in the Indian Ocean, specifically in the **Arabian Sea, northwest Indian Ocean.**
  - It forms the boundary between the **Indian and Arabian tectonic plates,** extending from near Rodrigues Island to the Owen fracture zone.
- Previously, India has also applied for the **Afanasy-Nikitin Sea (ANS) mount** which is yet to be approved.
  - ANS is located in the **Central Indian Ocean** and the territory has been claimed by Sri Lanka for exploration rights.

About Polymetallic sulphides (PMS)

- These deposits are **rich sources of metals such as** copper, zinc, gold, and silver, found on the ocean floor.
- These deposits occur in regions where **hot, mineral-rich fluids from the Earth's mantle mixed with cold Ocean waters**, leading to the precipitation of metal sulphides.

International Seabed Authority (ISA)

Kingston, Jamaica

🧪 **Genesis:** 1994, with **United Nations Convention on the Law of the Sea (UNCLOS)** entry into force.

ℹ️ **About:** Autonomous international organization under **1982 UNCLOS and 1994 Agreement.**

👤 **Mandate:** To ensure the effective protection of the marine environment from harmful effects that may arise from deep-seabed-related activities.

🔗 **Members:** 170 (including India).

3.7.12. UNIVERSAL POSTAL UNION (UPU)

Union Minister for Communication unveiled the **UPI- (Universal Postal Union) UPU Integration** project aimed at transforming **cross-border remittances**.

About the UPU

- **Established** in 1874.
  - It became a specialized agency of the UN in 1948.
- **Headquarters:** Berne.
- **It is the second oldest** international organization after the International Telecommunication Union (ITU) (1865).
- **Members:** 192 member countries, **India is member.**
- **Function:** Primary forum for cooperation between postal sector players. It helps to ensure a truly universal network of up-to-date products and services.

3.7.13. HALLMARKING

The Indian government has introduced **voluntary Hallmarking Unique Identification (HUID)**-based hallmarking for Silver jewellery under revised standard aligning with the gold hallmarking system and enhancing traceability.

Hallmarking

- Hallmarking is the accurate determination and official recording of the proportionate content of precious metal in precious metal articles.
- It ensures authenticity, consumer protection, quality and traceability of jewellery and articles.
- In India it is regulated by the **Bureau of Indian Standards** (BIS).

Bureau of Indian Standards (BIS) [HQ: New Delhi]

- National standards body under the **Ministry of Consumer Affairs**
- Established under the **Bureau of Indian Standards Act, 1986,** now operates under **BIS Act 2016.**
- **Formulates** standards, certifies products (ISI mark, Hallmarking) and operates testing labs.

3.7.14. OPIUM CULTIVATION

Union Government has announced Annual Licensing Policy for Opium Cultivation for 2025-26.

The licensing policy is announced annually under the Narcotic Drugs and Psychotropic Substances (NDPS) Rules, 1985, framed under the **NDPS Act, 1985.**

About Opium

- Opium poppy plant is the **source of opium gum** which contains **several indispensable alkaloids** (naturally occurring organic nitrogen-containing compounds) such as morphine, codeine and thebaine.
  - **Morphine is commonly used analgesic** (pain relieving medicine) while **codeine is used in manufacture of cough syrups**.
- It is also grown as a **source of edible seed and seed oil**.
- India is the **only country authorised by the United Nations Single Convention on Narcotic Drugs (1961)** to produce **gum opium**.
  - 11 other countries cultivate opium poppy, but **do not extract gum**.

Opium Cultivation in India

NDPS Act allows the Central Government to regulate opium poppy cultivation for **medica**l and **scientific** use.	Government annually notifies **licensed tracts,** currently in Madhya Pradesh, Rajasthan, and Uttar Pradesh.	**Central Bureau of Narcotics** issues licenses; cultivators must sell all opium to CBN at government-set prices.

4. SECURITY

4.1. CYBERCRIME IN INDIA

Why in the News

A Parliamentary panel on home affairs presented a report, titled **'Cyber Crime – Ramifications, Protection and Prevention',** highlights the evolution and growing complexity of cyber threats in India.

About Cybercrime

- The **National Cybercrime Reporting Portal (NCRP)** defines Cybercrime as any **unlawful act where a computer, computer network, or electronic device** is used as a tool or target to commit or facilitate a **crime.**
- **Types of Cyber Crime**
    - **Malware, Ransomware,** phishing, vishing (voice phishing), smishing (SMS phishing), identity theft, etc. are most common types of cybercrime.
    - **But new threats** continue to emerge as technology evolves, like **digital arrest, cryptojacking, deep fake scams, and CaaS** (Crime-as-a-Service).

Reasons for rise in Cybercrime

- **Rapid Digital Transformation:** The expansion of digital platforms and high-speed connectivity through initiatives like **Aadhaar, UPI, and DigiLocker,** etc. has correspondingly grown the opportunities for cybercriminals.
- **Transnational Nature of Cybercrime:** CBI highlighted that Indian citizens have been trafficked abroad and coerced into committing cybercrimes from foreign-controlled "scam factories", especially in Southeast Asia.
    - This includes fake loan apps, call center-based extortion rackets and even human trafficking using cryptocurrency payments.
- **Organised Nature of Cybercrime**: The emergence of Cybercrime-as-a-Service (CaaS) lowers the technical barrier for entry, allowing less-skilled individuals to launch powerful cyberattacks by purchasing ready-made tools from the dark web.
- **Jurisdictional Challenge:** The cross-border nature of these attacks complicates law enforcement efforts due to jurisdictional challenges and differing legal frameworks across countries, allowing criminals to operate from **"safe havens".**
- **Evolution of Criminal Methods:** Criminals hide identity via **VPNs, bulletproof hosting**, decentralised storage **(IPFS (Interplanetary File System), blockchain).**
    - Widespread **encryption** (E2E, secure protocols) in use, and new technologies **(5G, OTT apps) complicate lawful interception**.
- **Gaps in laws**: Gaps in the IT Act, lack of accountability for IT intermediaries, lenient penalties, poor grievance redressal, and a shortage of trained cyber experts hinder justice.

Impact of rise in cybercrime

- **Financial Losses**: India lost over **₹31,500 crore (2019–24) due to cybercrime** and most **crimes are financial (UPI, QR fraud, deepfakes, SIM swaps).**
- **Threats to Critical Infrastructure:** Multiple agencies have highlighted ransomware attacks targeting Critical Information Infrastructure (CII), which aim to paralyse essential services.
- **Social & Psychological Impact**: Victims of sextortion, cyberstalking, and deepfakes **face trauma, social withdrawal, and even suicidal tendencies**.
    - AI-driven deepfakes target students, hurting **mental health**.
- **Erosion of Trust**: Citizens, especially the **elderly, are losing faith in digital services** after repeated frauds.

Government Initiative to Tackle Cybercrime

- **Stronger Legal and Regulatory Framework:** The National Crime Records Bureau (NCRB) categorises cyber offences under the IT Act, 2000, Bharatiya Nyaya Sanhita (BNS) crimes, and Special and Local Laws (SLL).
    - Important sections of the IT Act include **Section 69A** (blocking public access to information), **Section 79** (intermediary liability and "safe harbour"), and **Section 70B** (establishing CERT-In)

- **Agencies and Institutional mechanisms**
  - **Indian Cybercrime Coordination Centre, I4C (2020):** National coordination hub; runs HELPLINE 1930 **& National Cybercrime Reporting Portal.**
  - **CERT-In:** Handles **cybersecurity incidents**, issues advisories. (EG: ALERTS ON AI-DRIVEN PHISHING).
  - **National Critical Information Infrastructure Protection Centre (NCIIPC):** Protects **Critical Information** Infrastructure **(power, banking, telecom).**
  - **CBI & NIA:** Specialised divisions **for cyber fraud and terrorism**-related crimes. (Eg: Operation Chakra against dark web fraud.)
  - **State Initiatives: Kerala** (Cyberdome) and **Maharashtra** lead in **cyber labs & forensics.**
- **Advanced Technology Tools**
  - **AI/ML for fraud detection:** (Eg, NPCI's FRM system, RBI's MuleHunter.ai.)
  - **Deepfake detection tools** by **MeitY & C-DAC** and **Cyber Swachhta Kendra** to clean **malware & botnets.**
  - **Blockchain & Tokenization:** Used by TRAI **(spam control)** & RBI **(card security).**
- **Inter-agency and International Cooperation: SAHYOG Portal (I4C)** Connects government, intermediaries, and platforms **for content takedown**.
- **Public Awareness: Campaigns like** Cyber Dost, **RBI Kehta Hai**
  - **Cyber literacy** in schools & universities, **SEBI's** Niveshak Shivir **for investors**.

Way forward

- **Empowering CBI**: Parliamentary panel on home affairs recommended amending the Delhi Special Police Establishment (DSPE) Act, 1946, to **empower the CBI to investigate cybercrime cases nationwide without needing general consent from state governments**.
  - This is aimed at overcoming operational delays, as eight states have withdrawn general consent.
- **Legal reforms**: Update the **IT Act** with stricter penalties, a **unified cybercrime law**, and **victim compensation.**
  - Regulate AI-driven content (**deepfakes**), **OTT** platforms **(age-gating, parental controls)**, and **online gaming.**
- **Intermediary Accountability**: **Mandate registration of platforms** in India, **appoint local grievance officers,** and ensure **quick takedowns**.
- **Cooperation**: Strengthen State Cybercrime Coordination Centres, create an **international liaison unit**, **a 24×7 cyber desk**, and faster **cross-border** data sharing.
- **Tech Upgrade**: Invest in **AI/ML**-driven threat intelligence**, blockchain** verification**, quantum-resistant encryption,** and an **indigenous** app store.
- **Data Protection**: Align with **DPDP Act 2023 for storage, KYC**, and privacy safeguards.
- **Capacity Building**: **Train police**, prosecutors, judiciary, and students in cybersecurity; expand **forensic labs and VR-based training**.
- **Public Awareness**: Run **multilingual** awareness campaigns**, financial literacy** drives, and regulate **finfluencers.**

Related News

SEBI Cyber security & Cyber Resilience Framework (CSCRF)

- CSCRF aim is to **address new cyber threats**, align with industry standards, enable efficient audits, and ensure compliance through standardised reporting formats.
- CSCRF **applies to a wide range of SEBI Regulated Entities**, including Stock Exchanges, Mutual Funds, Stockbrokers, Alternative Investment Funds (AIFs), and KYC Registration Agencies (KRAs), among others.
  - Recently, Sebi clarified that the **CSCRF applies only to systems used exclusively for its regulated activities.**
  - **Shared infrastructure** will also be audited **if not already covered by the RBI or another regulator**.

4.2. ENFORCEMENT DIRECTORATE

Why in News?

The Enforcement Directorate has reported conviction rate of 94% under Prevention of Money Laundering Act cases and helped recover over ₹34,000 crore for victims.

What is meant by Money Laundering?

- It is the processing of criminal proceeds to disguise their illegal origin. This process enables criminal to enjoy these profits without jeopardising their source.
- **3 Stages of Money Laundering:**
  - ○ **Placement** (moving the funds from direct association with the crime)
  - ○ **Layering** (disguising the trail to foil pursuit)
  - ○ **Integration** (making the money available to the criminal from what seem to be legitimate sources).

About Enforcement Directorate: (Headquarter: New Delhi)

- **Genesis:** 1956
- **Administrative Control:** Department of Revenue, Ministry of Finance.
- **ED is headed by the Director, who is not below the rank of Additional Secretary to the Government of India.**
- It is a multi-disciplinary organization mandated with **investigation of offence of money laundering and violations of foreign exchange laws.**
- **Statutory function of ED** includes enforcement of :-
  - ○ **Prevention of Money Laundering Act (2002)**: a criminal law enacted to prevent money laundering and to provide for confiscation of property derived from, or involved in, money-laundering
  - ○ **Foreign Exchange Management Act (1999):** ED has responsibility to conduct investigation into suspected contraventions of foreign exchange laws and regulations, to adjudicate and impose penalties on those adjudged to have contravened the law.
  - ○ **Fugitive Economic Offenders Act (2018):** ED is mandated to attach the properties of the fugitive economic offenders who have escaped from the India warranting arrest and provide for the confiscation of their properties to the Central Government.
  - ○ **Sponsoring agency for preventive detention under Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974, (COFEPOSA) (1974)** with regard to contraventions of FEMA.

Despite its crucial role in combating economic crimes, ED faces several operational and structural challenges that impact its effectiveness and credibility.

Challenges faced 'by the Enforcement Directorate (ED):

Operational Challenges:

- **Overreaching Jurisdiction and Federal Friction:** ED's actions have been subject to criticism by Supreme Court for sometimes exceeding its jurisdiction and potentially **"violating the federal structure".**
- **Political Targeting and Loss of Independence:** Concerns frequently surface regarding the agency's **operational independence** due to allegations of **political influence and partisan motivations**.
- **Resource and Manpower Constraints:** Sanctioned strength of ED has not increased since 2011, despite assuming additional responsibilities like enforcing the Fugitive Economic Offenders Act (FEOA), 2018.

Key Judgements regarding ED:

- **Abhishek Banerjee vs. ED (2022):** Delhi High Court upheld nationwide jurisdiction of ED to investigate money laundering cases.
- **Pankaj Bansal vs Union of India (2023):** Following this judgement by SC, ED officers are mandated to furnish the written grounds of arrest to the person being arrest in writing.
- **Manish Sisodia Vs Directorate of Enforcement (2024):** In order to avail the Right to fair trial, the accused cannot be denied the Right to have inspection of documents including the 'unrelied upon documents'.

Structural and Legal Challenges:

- **Broad Discretionary Powers:** Expansive powers vested in the ED under the PMLA, including the authority to arrest, provisionally attach assets, and **reversed burden of proof**, have generated debates regarding their potential negative impact on due process and civil liberties.
- **Judicial Backlogs and Constitutional Hurdles:** Pending constitutional challenges to the PMLA before the Apex Court have **delayed numerous trials**, a factor identified by the FATF.

- **Inter-Agency Litigation and Resource Drain:** Accused individuals frequently launch a **complex web of litigations** straining resources and delaying the resolution of cases.

Emerging Technological Challenges:

- **Surge in Digital and Crypto Fraud:** ED faces a rapidly evolving financial crime environment marked by a **notable surge in cyber and crypto-related frauds such as Pig Butchering and Phantom Hacking.**
- **Implementation Gaps:** FATF evaluation flagged gaps in AML/CFT implementation among smaller financial entities, **Virtual Asset Service Providers (VASPs)** and weak due diligence for **domestic Politically Exposed Persons** & **poor cash monitoring by precious metal/stone dealers.**

> **Know the term**
>
> ○ **Pig butchering:** It is a sophisticated scam that blends romance scams with investment fraud, particularly targeting **cryptocurrency investments.** The scam's name reflects the process of **"fattening"** the victim with trust before **"slaughtering"** them financially.
>
> ○ **Phantom hacking:** Also referred to as **"Phantom Hacker"** scam, it is an evolution of tech support scams, particularly targeting **vulnerable** or **senior citizens.**

Way Ahead for Strengthening the Enforcement Directorate

- **Strict adherence to Due Process:** Strict adherence to due process through well-defined Standard Operating Procedures can help counter allegations of political bias and harassment.
- **Evidence-Based Investigations:** Reorienting the ED towards intelligence-driven probes and focusing on evidence-backed prosecutions can improve conviction rates and strengthen institutional credibility.
- **Enhance Human Resources and Expertise:** There is a need to **increase** manpower of ED based on the country's size, risks, and the volume and complexity of ML investigations, as recommended by the FATF.
- **Deployment of latest technology:** E.g. ED uses advanced analytical AI/ML tools of the Financial Intelligence Unit (FIU) to detect suspicious monetary patterns.
- **Harmonization among different agencies**: E.g: Insolvency and Bankruptcy Board & ED have arrived at a solution to address problem related to the interface between the insolvency law and the PMLA in resolving stressed assets.

4.3. NEWS IN SHORTS

4.3.1. INDIAN OCEAN NAVAL SYMPOSIUM (IONS)

Recently, an Emerging Leaders Panel Discussion was held under the Indian Ocean Naval Symposium (IONS) at Kochi.

About IONS

- It is a voluntary initiative **launched by the Indian Navy in 2008.**
- **Aim:** To increase maritime co-operation among navies of the littoral states of the Indian Ocean Region
- Its **inaugural session** was held in 2008 in New Delhi
- **Membership:** 25 members and 9 observers
    - **Eligibility** -A nation state with permanent territory or border with Indian Ocean and which maintains a Navy or maritime agency
    - **Chair** of IONS will be rotated every **2 years**. India to chair during 2025-27.

4.3.2. FIRST OVERSEAS DEFENCE MANUFACTURING PLANT

Recently, the Defence Minister inaugurated **India's first overseas defence manufacturing plant** in **Morocco.**

- The facility will produce the indigenously developed **Wheeled Armoured Platform (WhAP) 8x8**, jointly designed by Tata Advanced Systems Limited (TASL) and DRDO.

About Wheeled Armoured Platform (WhAP)

- **India's First Amphibious Infantry Combat Vehicle (Wheeled)**: Designed for optimised **survivability, all-terrain performance and increased lethality.**
- **Critical Technologies Used: Integrated power pack** with automatic transmission, floatation and propulsion.

4.3.3. ANDROTH

The Indian Navy has received an indigenously built anti-submarine warfare ship Androth.

About Androth

- Second of the eight **ASW SWCs (Anti-Submarine Warfare Shallow Water Craft)**, being built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata.
  - **"Arnala"** was the first of eight ASW SWCs.
- The name derived from the **Androth Island in the Lakshadweep archipelago**.
- These ships are propelled by a diesel **engine-waterjet combination** and are equipped with state-of-the-art **lightweight torpedoes and indigenous anti-submarine** warfare rockets.

4.3.4. EXTENDED RANGE ATTACK MUNITIONS

The US has approved the delivery of **Extended Range Attack Munitions** (ERAMs) to Ukraine.

About ERAMs

- It is a **next-generation air-launched, precision-guided missile.**
- **Range:** 240 to 450 kilometers.
- **Warhead:** Carries a 500-pound high-explosive warhead, able to destroy hardened bunkers, fuel depots, or ammunition storage.
- **Guidance:** A combination of GPS, inertial navigation, and a terminal seeker provides accuracy within about ten meters.

4.3.5. PEACE PACT WITH KUKI-ZO GROUPS

Recently, a **tripartite Suspension of Operation (SoO) Agreement** was **renewed** between the Centre, the Manipur government, and insurgent groups comprising Kuki-Zo, Zomi and Hmars.

About the Agreement

- **Came into force:** from August 22, 2008
- **Objective:** to end hostilities by initiating political dialogue and finding a **political settlement within the Constitut**ion of India.

Other Peace Pacts in North East India

- **NLFT(SD) Agreement (2019)**: signed with **National Liberation Front of Tripura.**
- **Bodo Accord (2020):** with **Bodo groups (Assam);** disbanded by March 2020.
- **Karbi Accord (2021):** with **Karbi groups (Assam)**; over 1,000 cadres joined mainstream.

4.3.6. EXERCISES IN NEWS

- **Exercise Bright Star:** India will participate in 2025 edition.
  - **Origin:** Conceived as a **bilateral US–Egypt exercise** after the **Camp David Accord (1977)**.
  - **First edition:** 1980, Egypt.
  - **Expanded:** Since 1995, multiple nations included.
  - Among the **largest Tri-Service multilateral exercises** in the region.
- **Exercise Maitree:** The 14th edition of Exercise **MAITREE-XIV** commenced at Meghalaya, India.
  - Instituted in 2006, it is one of the important joint training exercises between **India and Thailand.**
  - The joint exercise will focus on **company level counter-terrorist operations** in semi-urban terrain under **Chapter VII of the United Nations Charter.**
- **Exercise Zapad: India participated** in the **Russia and Belarus** launched joint **military exercise Zapad-2025**, held in Russia.
  - **Launched in 1999**, it is a large-scale, **multilateral military event** conducted **every four years** since 2009.
  - **Objective:** Aims to **test defense** against external threats.

- **Weapons**: Incorporates training with **nuclear-capable systems,** including **Russia's hypersonic Zircon missile.**
- **Yudh Abhyas:** Indian Army contingent is participating in the **21st edition of military exercise India-US Joint Military Exercise Yudh Abhyas 2025**.
  - Since 2004, this joint Military Exercise has been held annually between **India and USA militaries.**
  - It will focus on UN peacekeeping operations and enhancing readiness for multi-domain challenges.
- **Pacific Reach 2025:** Indian Navy's latest indigenously designed and constructed **Diving Support Vessel (DSV) INS Nistar** is participating in Pacific Reach 2025 exercise in Singapore.
  - It is a **biennial, multilateral exercise**.
  - The exercise is split into **two main phases:**
    - > **Harbour Phase**: Includes **subject matter expert exchanges (SMEE), medical symposium, cross-deck visits, and detailed discussions** on submarine rescue systems.
    - > **Sea Phase**: Involves **intervention and rescue operations at sea** with participating assets.
- **Exercise Siyom Prahar:** The Indian Army conducted Exercise Siyom Prahar in Arunachal Pradesh.
  - **Aim**: To validate **drone integration** in tactical operations under battlefield-like conditions.
  - **Drone types used:** For surveillance, battlefield reconnaissance, target acquisition, and precision strikes.
- **Exercise Yudh Kaushal:** Indian Army has conducted Exercise Yudh Kaushal 3.0 in the Kameng region in Easter Himalayas.

4.4.7. OPERATION BLACK FOREST

'Operation Black Forest' is the **biggest anti-Naxal operation** ever conducted on Karregutta hill situated along the **Chhattisgarh-Telangana border**.

Other anti-Naxal mission

- **Mission Sankalp':** launched on sprawling hills of Karregutta and adjoining hills along the Chhattisgarh-Telangana border
- **Operation Green Hunt:** Began in late 2009. It takes place across five states - West Bengal, Jharkhand, Bihar, Orissa and Chhattisgarh.

5. ENVIRONMENT

5.1. UN 'HIGH SEAS' TREATY

Why in the News?

Treaty for the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ agreement) also known as the High Seas Treaty is set to enter into force after ratification by 60th country.

About BBNJ Agreement

- BBNJ treaty is aimed at ensuring the **conservation and sustainable utilisation of marine biological diversity** in areas beyond national jurisdiction, **i.e. area beyond economic exclusive zone**.
- It is an **international treaty under the United Nations Convention on the Law of the Sea** (UNCLOS).
  - The BBNJ Agreement will be the third implementation agreement under UNCLOS, others are
    - 1994 Part XI Implementation Agreement (which addresses the exploration and extraction of mineral resources in the international seabed area) and
    - 1995 UN Fish Stocks Agreement (which addresses the conservation and management of straddling and highly migratory fish stocks).
- The Agreement also **establishes a funding mechanism** and sets up institutional arrangements, including a **Conference of the Parties** and various subsidiary bodies, a Clearing-House Mechanism and a secretariat.
- The treaty is mandated to enter into force 120 days after 60 countries ratified it.
  - As on 30th September 2025, 145 countries signed, and 74 countries rectified the treaty.
  - **India signed the treaty but not ratified yet.**
  - Members not part of UNCLOS can also join BBNJ agreement

Key Pillars of the Treaty

- **Marine Protected Areas (MPAs):** The treaty will create a mechanism to establish MPAs and other conservation management tools on the high seas.
  - MPAs are typically clearly defined geographical spaces, recognized, dedicated and managed, through legal or other effective means, to conserve marine biodiversity and ecosystems.
- **Marine Genetic Resources (MGRs):** Share financial and non-financial benefits from the commercial application of genetic material sourced from high-seas marine organisms such as bacteria, corals or deep-sea sponges, that can be used in medicine, cosmetics, food, and biotechnology.
- **Capacity Building and Transfer of Marine Technology:** It aims to assist developing countries in implementing the treaty by sharing knowledge, skills, and technology.
- **Environmental Impact Assessments:** High seas activities such as deep-sea mining in areas beyond national borders to conduct assessments and follow international standards, that can be shared transparently.

Exceptions to agreement

- **Not apply to any warship**, military aircraft or naval auxiliary.
- **Not apply to fishing and fishing-related activities** that are regulated under other relevant international law.
- The obligations concerning the utilization of MGRs and their digital sequence information **do not apply to a Party's military activities**, including those by government vessels and aircraft in non-commercial service.
  - However, the obligations do apply to a Party's non-military activities.

Significance of the Treaty

- **Fill Critical Gaps in Ocean Governance**: The agreement provides for the common governance of about half of the Earth's surface and 95% of the ocean's volume.
  - Only about 1% of the high seas are currently protected.
- **To Promote Equity and Fairness:** Treaty aims to create a more just and equitable international order that considers the needs of all nations, especially developing States.
  - For small island nations like Vanuatu, the treaty marks a major step toward inclusion in decision-making that has long been beyond their reach.

- **Lowering temperature:** The treaty offers guidance to tackle the adverse effects of climate change and ocean acidification. The treaty aims at strengthening resilience and contains provisions based on the polluter-pays principle as well as mechanisms for disputes.
- **Indigenous and Local Knowledge:** Agreement acknowledges the importance of traditional knowledge held by Indigenous Peoples and local communities and integrates it into its core principles and operational processes.
- **Vital for realizing 2030 Agenda:** It directly supports **Sustainable Development Goal (SDG) 14**, which aims to prevent and significantly reduce all kinds of marine pollution.
  - The treaty is essential to achieving the **"30x30" target**, an international pledge to protect 30% of the planet's land and sea by 2030.
- **Significance for India:** Reinforces India's long-standing support for **UNCLOS as the "constitution of the oceans."**
  - Complements India's **Blue Economy Policy** and initiatives like **Deep Ocean Mission**.

Challenges

- **Lack of Universal Ratification:** The treaty's strength is uncertain because some of the world's biggest players, the U.S., China, India, are yet to ratify.
- **Conflict with National Interests:** The treaty calls for setting up Marine Protected Areas (MPAs), which conflict with many states' territorial claims in disputed waters, such as the South China Sea.
- **Enforcement Difficulties:** The treaty does not establish its own punitive enforcement body; it largely relies on individual countries (flag states) to regulate their own vessels and companies that violate the rules.
  - Treaty lacks enforceable accountability, as it does not compel high-income countries active in marine genetic research to disclose the resources accessed or the profits generated.
- **Limited Scope and Inconsistencies:** The treaty fails to include mechanisms to guarantee that developed countries fulfill their commitments regarding technology transfer and capacity-building for low- and middle-income countries.

Way Forward

- **Encourage major maritime powers to ratify**: Use platforms like the **UN General Assembly, G20, and UN Ocean Conferences** to build diplomatic momentum.
- **Strengthening Enforcement Mechanisms:** Develop a **global compliance and monitoring system** under the UN.
- **Resolving Conflicts with National Interests:** Promote **regional cooperation frameworks** (like ASEAN for the South China Sea or IORA for the Indian Ocean) to harmonize MPAs with national claims.
- **Assured Support for Developing Countries:** Establish **financial and technology transfer mechanisms** through the **Global Environment Facility (GEF)**, **UNDP Oceans Programme**, and the **Green Climate Fund**.
- **Strengthening Environmental Safeguards:** Expand Environmental Impact Assessments (EIAs) to include **unplanned and accidental activities** (oil spills, shipwrecks, deep-sea mining accidents).

United Nations Convention on the Law of the Sea (UNCLOS)

- **UNCLOS** often called the **"Constitution of the Oceans"**, is the primary international treaty governing use of the seas and oceans.
  - Adopted in **1982**, it entered into force in **1994**.
- **State Parties:** 171 State parties (including India) have ratified it. Kyrgyzstan ratified it on 20th September 2025
- **Maritime Zones**
  - **Territorial Sea**: up to **12 nautical miles (nm)** from baseline → full sovereignty of the coastal state.
  - **Contiguous Zone**: up to **24 nm** → enforcement rights for customs, immigration, sanitation, and security.
  - **Exclusive Economic Zone (EEZ)**: up to **200 nm** → sovereign rights for exploration and use of marine resources.

Legal Boundaries of Maritime Zones of Ocean and Airspace
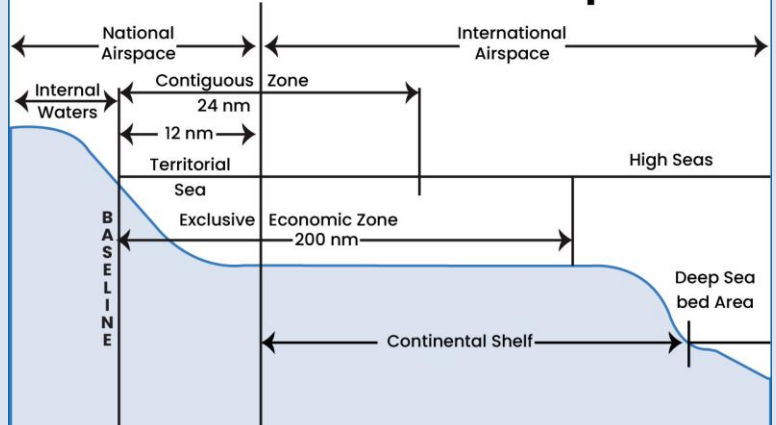
- o **High Seas**: beyond national jurisdiction → freedom of navigation, overflight, fishing, research.
- **Deep Seabed Mining:** Seabed beyond national jurisdiction is the **"common heritage of mankind"**, managed by the **International Seabed Authority (ISA)**.
- **Dispute Settlement:** Establishes mechanisms like the **International Tribunal for the Law of the Sea (ITLOS)**.

5.2. SUSTAINABLE DEVELOPMENT: HARMONIZING GROWTH WITH PEOPLE'S NEEDS

Why in the News?

The Uttarakhand Government recently granted in-principle approval for the **Netala bypass in the fragile Bhagirathi Eco-sensitive Zone,** despite earlier rejections by the Supreme Court's high-powered committee over ecological and social concerns.

More on the News

- Though the Ministry of Defence has classified the project as **strategically important, concerns persist regarding project's impact.**
- The recent **Dharali flash flood and expert analysis** strongly indicate that the proposed bypass alignment is prone to slope instability and subsidence.
- The decision highlights a potential conflict between **national security/strategic project designations, sustainable development and people's needs.**

About Eco-sensitive Zone

- They are **ecologically important and fragile areas** around protected areas.
- Notified by **central government** under the **Environment (Protection) Act, 1986.**
- **ESZ Guidelines classify activities under three categories:**
  - o **Prohibited:** Commercial Mining, Setting of industries causing pollution, etc.
  - o **Regulated:** Felling of Trees, Establishment of hotels and resorts, etc.
  - o **Permitted:** Ongoing agriculture and horticulture practices by local communities, dairy farming, etc.

Why is there conflict between Sustainable Development and People's needs?

- **Economic Dependence of People on Natural Resources**:
  - o **Livelihood Reliance**: Tribals, pastoralists, small farmers depend on forests, rivers, and grazing lands. E.g. National Parks restrict practices like grazing.
  - o **Small business:** Shutting down polluting industries like brick kilns or enforcing stricter regulations in the textile sectors reduces job opportunities for daily wage earners.
- **Development and Displacement**: More than 40% of the tribal population is being displaced by developmental activities like **large Dam projects, renewable energy projects, etc.**
- **For protecting national interest:** E.g., the Environment Ministry has exempted critical and atomic mineral mining from public consultation under the 2006 EIA Notification.
  - o Also, **Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025,** provide special dispensation to critical minerals sector for compensatory afforestation
- **Policy and Governance Gaps**:
  - o **Top-Down Decision Making**: Environmental regulations are often designed without local participation, ignoring poor people's needs.
  - o **Weak Social Safety Nets**: No direct support during "transition periods" (e.g., seasonal fishing bans, mining closure).
- **Environmental solutions are costly**:
  - o **Limited Access to Cleaner Tech**: Solar pumps and electric vehicles require upfront capital that poor households cannot afford.
  - o **Credit Constraints**: Lack of affordable credit or microfinance to shift to greener livelihoods. E.g., Shifting from cheap plastic packaging after plastic ban.

Initiatives taken by Government to reduce conflict

- **The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013**: It regulates land acquisition and lays down the procedure and rules for granting compensation, rehabilitation and resettlement.
  o **Social Impact Assessment** is mandated under this act.
- **Environmental Impact Assessment (EIA):** It is mandated under the Environment (Protection) Act, 1986.
- **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006:** To undo the historical injustice that occurred to forest-dwelling communities.
- **Compensatory Afforestation Fund Act (2016):** Mandates using funds partly for community development.
- **District Mineral Foundation (DMF), 2015**: Created under the Mines and Minerals (Development & Regulation) Act to channel mining revenues to local communities for health, education, and skill development.

Way Forward

- **Regional & Climate-Specific Planning**: Himalayas (landslide-sensitive infrastructure), Coastal Zones (mangrove buffers, cyclone shelters), Drylands (micro-irrigation, drought-resistant crops).
- **Strengthen Environmental Justice System**: Fast-track NGT, improve capacity of State Pollution Control Boards, and make EIAs more transparent.
- **Participatory Decision-Making**: E.g., Social audits can include local communities in project planning to balance needs and sustainability.
- **Green Livelihood Programmes**: Scale up eco-tourism, bamboo-based livelihoods, mangrove restoration, and forest produce value addition.
- **Just Transition Fund**: India can set up a fund for workers affected by mine closures, green shifts or seasonal bans (especially fisheries).

5.3. PUBLIC CONSULTATION AND ENVIRONMENT IMPACT ASSESSMENT (EIA)

Why in the News?

Ministry of Environment, Forest and Climate Change (MoEFCC) exempted **mining projects** involving **Atomic, Critical,** and **Strategic minerals (like Rare Earth Elements)** from **Public Consultation** under the **Environmental Impact Assessment (EIA), 2006.**

More on the News

- Exemption includes all mining projects of **atomic minerals** (e.g. uranium) and **critical and strategic minerals** (e.g. lithium) of 1st schedule of **Mines and Minerals (Development and Regulation) Amendment Act, 2023**.
  o Although exempted from **Public Consultation**, these projects will still undergo appraisal at the Central level.

Why have these projects been exempted from Public Consultation?

- **Ensuring Energy Security:** Exemption will enhance production of **Uranium** and **Thorium** minerals by operationalizing new deposits.
  o Thorium extracted from **Monazite** (Beach sand mineral) will be used in the **3rd stage** and **Uranium** in the **1st stage** of the country's **Nuclear Power Programme**.
- **Strategic Applications:** E.g., in the defence sector, Rare Earth Elements (REEs) are used in production of surveillance and navigational aids (such as radar and sonar), communication and display aids (such as lasers), etc.
- **Reducing Import Dependence and Vulnerability to Supply chain disruption**: REEs are scarce in India and their production and supply is concentrated in **limited geographies** around the world.
- **Other:** Attract investments by reducing operationalization time, enabling speedy approvals, promoting economic competitiveness etc.

What is Public Consultation in EIA?

- **Definition:** It is a process by which the concerns of **local affected persons** and **other stakeholders** in the **environmental impacts** of the project or activity design are ascertained.
- **Category of Projects:** It is required for usually all **Category A** and **Category B1** projects.

- **Two Components of Public Consultation:**
  - A **public hearing** at the site or in its close proximity.
  - **Obtaining written responses** from concerned stakeholders
- **Conducting Agency**: State Pollution Control Board (SPCB) or Union Territory Pollution Control Committee (UTPCC)
  - The proceedings must be sent to the **concerned regulatory authority** within **45 days** of receiving the applicant's request.

Steps in EIA Process

- Screening
- Scoping
- Public Consultation
- Appraisal

Concerns associated with Exemption of Public Consultation

- **Diluting Environmental Governance:** Undermines Legal Mandate under EIA 2006 and sets a precedent for **dilution of EIA norms**.
  - Exemption weakens Environmental Democracy guaranteed under **Article 21 (Right to Life, Clean Environment)** and **Article 48A (Protection of Environment).**
- **Reduces Quality** of **Project Appraisal**: Local population raises **site-specific concerns** as they are more aware about their places.
  - E.g., Silkyara tunnel under Char Dham project (Uttarakhand) which collapsed in 2023, was exempted from EIA.
- **Triggers Conflict**: Absence of early engagement can lead to protests, litigation, or unrest. E.g., Closure of Sterlite Copper Plant in Tamil Nadu after violent protest.
- **Undermines Participatory Governance:** It is based upon citizens **owning a voice in policy formulation** and **implementation** that impact or influence them.
  - **Erodes transparency** and **accountability** (Communities may remain unaware of projects).
- **Potential Violation of International Commitments:** Goes against principles of the Rio Declaration (1992) and Aarhus Convention (1998).
  - **1998 Aarhus Convention** concerns access to information, public participation in decision-making, and access to justice in environmental matters.
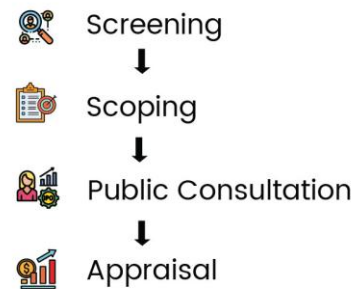
Environmental Impact Assessment (EIA)

- **Genesis:** In India, it initiated with the impact assessment of river valley projects in late 1970s.
  - In 1994, EIA notification was issued under the **Environmental (Protection) Act, 1986**.
  - It was overtaken by the **EIA notification, 2006.**
- **Objectives:** Evaluates the **environmental impacts** of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.
- **Categorisation of Projects**:
  - **Category A**: Require prior **Environmental Clearance (EC)** from the Central Government
  - **Category B**: Require prior **EC** from the State/Union Territory Environment Impact Assessment Authority (SEIAA)
    - Subdivided into **B1** (requires EIA) and **B2** (exempted from EIA)

Comparison of Projects (with EIA and without EIA)

Project without EIA
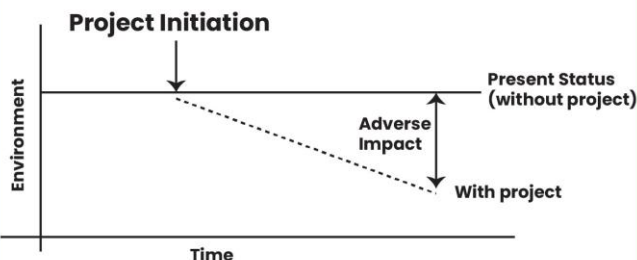
Project with EIA
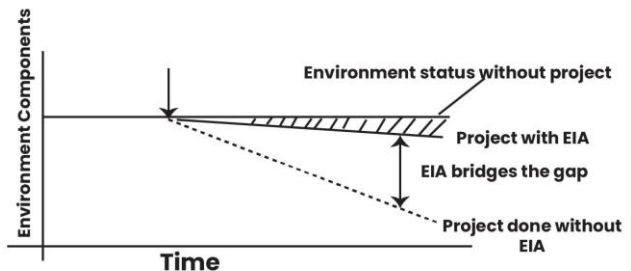
Conclusion

Exemption of public consultation raises serious concerns of diluting environmental governance, undermining participatory democracy, etc. A balanced approach i.e. ensuring speedy approvals without compromising transparency, accountability, and sustainability is essential.

5.4. ENVIRONMENT AUDIT RULES, 2025

Why in the News?

The **Ministry of Environment, Forest and Climate Change** (**MoEFCC)** notified **Environment Audit Rules, 2025**.

What is an Environment Audit (EA)?

- It is a systematic audit, **verification**, **examination**, **inspection**, or **analysis** of any project, activity or process having a bearing on the environment.
    - EA differs from **EIA**, as the latter is conducted prior to the establishment of a project.
    - It determines the extent to which the activities and programs **conform to the approved Environmental Management Plan (EMP).**
- In India, the concept of environmental auditing was **introduced in 1992** through **Rule 14 of the Environment (Protection) Rules.**
    - This rule mandates that entities engaged in industries, operations, or processes requiring consent under the **Water (Prevention and Control of Pollution) Act, 1974**, the **Air (Prevention and Control of Pollution) Act, 1981**, or authorization under **the Hazardous Wastes (Management and Handling) Rules, 1989**, must submit an annual environmental statement (Report).
        - The report is to be submitted to the **State Pollution Control Board (SPCB) each year.**

About Environment Audit Rules, 2025

- **Objective:** Creating a **formal framework for environmental auditing** across the **country** aimed at **enhancing environmental compliance monitoring** & **ease of doing business**.
- **Significance:** Strengthens compliance through third-party audits, aligns with global frameworks (Eco-mark, EPR, ESG, green bonds), generates reliable environmental data, and enables early risk detection and corrective action.
- These rules are developed under the **Environment Protection Act (1986).**
    - Rules comply with legal safeguards under various laws including the **Van (Sanrakshan Evam Samvardhan) Adhiniyam (1980),** the **Wildlife Protection Act (1972),** etc.
- **Certification and Registration**: Environment Auditors (EAs) will be **certified** and **registered by Environment Audit Designate Agency (Notified by MoEFCC).**
    - **EADA** will also monitor their performance, take disciplinary action, facilitate capacity building, and maintain an online register.
    - **Modes of Certification:**
        - **Recognition of Prior Learning (RPL)** or National Certification Examination (NCE)
    - **Responsibility**:
        - **Compliance evaluation** and **related activities of sampling, analysis, compensation calculation, verification** under **Green Credit Rules**, and under various other environment and forest related legislations.
        - Registered EAs may also undertake auditing assignments by the Project Proponents (PPs) **including for verification of self-compliance reports.**
        - Undertake environment audit under Environment Impact Assessment (EIA), 2006, Coastal Regulation Zone (CRZ), 2011, etc.

Conclusion

The outcome of environmental audits will offer vital inputs for effective conservation and rejuvenation efforts, while also supporting India's climate commitments through the adoption of LiFE (Lifestyle for Environment) principles.

5.5. VAN (SANRAKSHAN EVAM SAMVARDHAN) AMENDMENT RULES, 2025

Why in the News?

MoEFCC has notified the **Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025** marking significant changes in the Van (Sanrakshan Evam Samvardhan) Rules, 2023.

More on the News

- The rules are made by the Central Government under the **Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980** (Forest Conservation Act 1980).

Major highlights of the Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025

- **Compensatory Afforestation (CA):** The new rules **make protected forest notification optional**, allowing CA land to be either **transferred to Forest Department** or notified as protected area under Indian Forest Act, 1927 or other laws.
  - Compensatory Afforestation means **afforestation done in lieu of the diversion of forest land** for non-forestry use under the Forest (Conservation) Act, 1980.
- **Provision for Critical & Strategic Minerals:** Mining of critical/strategic minerals (under MMDR Act, 1957) must undertake Compensatory Afforestation on **degraded forest land, minimum double the extent**.
- **Working Permission:** Rules allow state governments to **grant initial 'working permission' for linear projects** activities such as roadworks (other than blacktopping and concretization), laying railway tracks, and installing transmission lines.
  - Previously, state governments could mobilize resources **only after receiving in-principle or Stage-I approval for a project.**

Evolution of Forest Conservation Act in India

- **Indian Forest Act 1865:** It merely sought to **establish the claims of state to the forests it immediately required**, subject to the provision, that existing rights were not abridged.
- **Indian Forest Act 1878:** Act classified the forests into three – **reserved forests, protected forests and village forests.**
  - It attempted to regulate the collection of forest produce by forest dwellers and some activities declared as offences and imprisonment and fines were imposed in this policy to establish the state control over forests.
- **Indian Forest Act of 1927:** It was a **consolidation of previous forest laws** aimed at **establishing state control over forests** and regulating the movement and duties on forest produce.
- **Pre 1980s Era:** Before the 42nd Constitutional Amendment of 1976, forests were a state subject, but the amendment transferred them to the Concurrent List.
- **Forest Conservation Act 1980:** It tried to **stop deforestation by centralizing the process** of forest land diversion.
  - **Core Restrictions: No State Government or authority** can, without **prior approval from the Central Government**-
    - **Dereserve** any reserved forest.
    - Use any forest land for a **non-forest purpose**.
- **Forest Conservation amendment act 1988:** Amendment prohibited the **assignment of forest land on lease to private entities** and **expanded the definition** of activities considered a "**non-forest purpose**"
- **Forest (Conservation) Amendment Act, 2023:**
  - **Definition of forest:**
    - **Land declared or notified as a forest** under any law (e.g., Indian Forest Act, 1927).
    - Land recorded as forest in **Government records** (Revenue or Forest Dept.) on or after 25th October 1980.
      - ✓ This does not include land which has been officially changed from **forest use to use for non-forest purposes on or before 1996.**
    - In 2024, the Supreme Court directed States/UTs to follow the **1996 T.N. Godavarman case** definition of "forest" until the identification of forest land under the 2023 Forest (Conservation) Act amendment is completed.

- o **Categories of land exempted from the provisions of this Act:** Land within 100 km of India's border is exempted for projects related to national security, public roads leading to habitations.

T N Godavarman Thirumalpad v. Union of India case (1996)

- It is a landmark 1995 Supreme Court decision that established a **broad and comprehensive definition of "forest".**
- **Definition of "forest" expanded to include:**
  - o All areas recorded as **"forest" in any government (Union and State) record**, irrespective of ownership, recognition, and classification.
  - o All areas that conformed to the **"dictionary" meaning of forest.**
  - o **Areas that are identified as "forest" by expert committees** set up by the State governments following the 1996 order.

Conclusion

The Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025, modernize forest governance, clarify approvals, promote afforestation, support strategic projects, and align the Act with national climate, biodiversity, and carbon sink goals.

5.6. GREEN CREDIT PROGRAM

Why in the News?

The Ministry of Environment, Forests, and Climate Change (MOEFCC) has issued a **new methodology for calculating Green Credit** for tree plantation under the Green Credit Rules, 2023

More on the News

- **Green Credit Rules, 2023,** were enacted under the **Environment (Protection) Act, 1986.**
- These are **provisions for Forest Departments** of all States and Union territories to identify degraded land parcels under their control to enhance green cover.

Revised Green Credit calculation Methodology with respect to Tree plantation

- **Claim of Green Credit**: After 5 years of restoration on degraded forest land, and achieving a minimum 40% canopy density.
- **1 Green Credit** = 1 new tree (over 5 years old).
- **Credit Transfer:** Credits are **non-tradable and non-transferable** and may be **exchanged once but cannot be reused.**

About Green Credits

- Green Credit means a **singular unit of an incentive provided** for a specified activity, delivering a positive impact on the environment.
  - o These credits can be **traded on a dedicated exchange**, similar to how carbon credits are traded.

Green Credit	Carbon Credit
Under **the Green Credit Program (GCP)** operating under The Environment (Protection) Act, 1986.	Under the **Carbon Credit Trading Scheme** operating under The Energy Conservation Act, 2001.
Provides advantages **to individuals and communities.**	Primarily benefit **industries and corporations.**
Green credit activities may qualify **for carbon credits**, leading to climate co-benefits like carbon emissions reduction, **but not vice versa.**	

About the Green Credit Program

- It is an innovative **market-based mechanism** to encourage voluntary plantation activity across the country for afforestation and water conservation.

- It is an **initiative within** the **Lifestyle for Environment or LIFE movement**.
  - **Mission LIFE (2021)** is an India-led global mass movement to nudge individual and community action to protect and preserve the environment.
- **Established under**: "The Environment (Protection) Act, 1986" with MoEFCC as Nodal Agency.
- **Objectives:**
  - **Land Bank Creation:** Through registration of degraded forest lands by Forest departments.
  - **Encourage Participation:** Of Government entities, Private companies, NGOs, Individuals/group of individuals (registered under the Societies Registration Act)
- **Governance Structure**
  - Governance framework supported by an **inter-ministerial Steering Committee.**
  - **Administrator:** Indian Council of Forestry Research and Education (ICFRE), responsible for program implementation, management, monitoring, and operation.
  - **User-friendly digital platform:** To streamline **Project Registration, Verification and Issuance** of Green Credits

Activities for which Green Credit is Generated

Tree Plantation	Water Conservation	Sustainable Agriculture	Water Management	Air Pollution Reduction	Mangrove Conservation and Reduction	Ecomark label development	Sustainable building and infrastructure
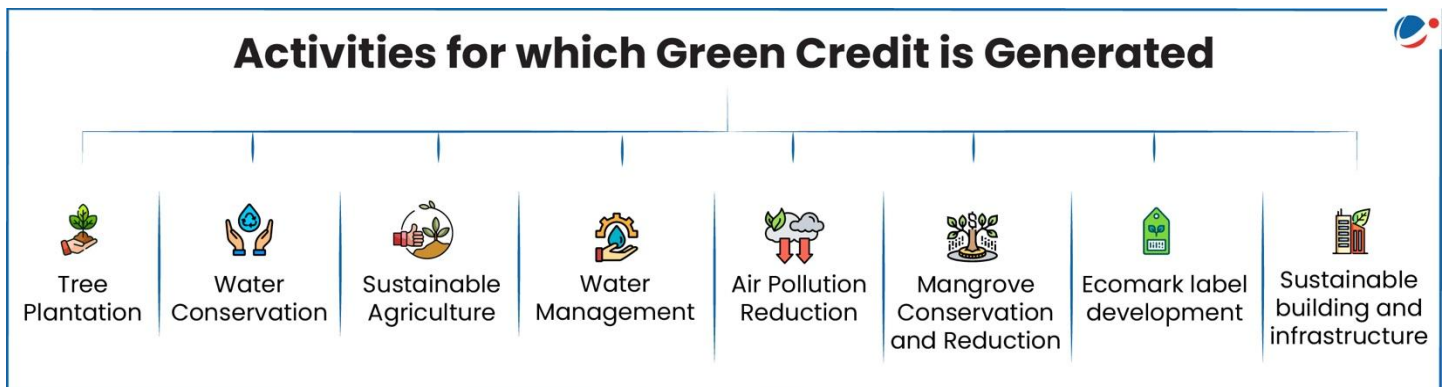
Other Initiatives taken for Afforestation

- **Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) (2023)**: To restore and promote mangroves as a unique, natural ecosystem.
- **Compensatory Afforestation Fund Act, 2016**: Provides the legal framework to compensate for forest and ecosystem loss from diversion of forest land, as per the provisions of the Forest (Conservation) Act, 1980.
- **National Mission for a Green India (2014)**: This scheme aims to undertake afforestation activities in degraded forest areas with people's participation.
- **National Bamboo Mission (2006)**: It aims to promote holistic growth of the bamboo sector through region-specific strategies for cultivation and marketing.

5.7. NATIONAL POLICY ON GEOTHERMAL ENERGY

Why in the News?

The Union Ministry of New & Renewable Energy (MNRE) notified **National Policy on Geothermal Energy (2025),** India's first such Policy to reinforce efforts for an energy transition.

About Geothermal Energy

- It harnesses heat stored within the Earth's crust.
- **Key Sources and applications-**
  - **High-enthalpy (~200°C) resources:** Like volcanic regions, geysers and hot springs suitable for electricity generation.
  - **Low- to medium-enthalpy (100–180°C) resources:** Like hot rocks and shallow ground layers suitable for **direct-use applications** like heating and cooling, agri-food, aquaculture and geothermal heat pumps.

Significance of Geothermal Energy

Renewable	**Clean**	**Reliable**	**Economic**
Inexhaustible energy from Earth's heat. Doesn't deplete resources	95% lower emissions than fossil fuels. Minimal footprint.	24/7 operation regardless of weather. Perfect baseload power.	Reduces imports, creates jobs, long term stability

- **Estimated Potential in India:** 10,600 MW (Geothermal Atlas of India, 2022)
  o GSI identified 381 hot springs and 10 geothermal provinces (see infographic)

Challenges related to development of Geo Thermal Energy in India

- **High Upfront Cost: Exploration and drilling** are capital intensive.
- **High investment risk**: Due to uncertainty of finding commercially viable **reservoirs** which **deter private players.**
- **Exploration & Data Gaps:** Limited deep drilling assessment and data with geological complexity (Himalayas, volcanic zones) making resource assessment more difficult.
- **Lack of Commercial Projects**: Only one 20 kW pilot plant (Manuguru, Telangana) exists and no utility-scale projects are established yet.
- **Technology & Skill Gaps:** India lacks **indigenous drilling and reservoir management** technology and expertise.
- **Environmental & Social Concerns:** Risks of **land subsidence, seismicity, and water contamination** if reinjection is not managed.

About National Policy on Geothermal Energy (NPGE, 2025)

- **Vision**: To establish geothermal energy as a **major pillar of India's renewable energy mix, achieving net zero carbon emission by 2070.**
- **Nodal Ministry for implementation of GE based projects:** MNRE
- **Goals of NPGE, 2025**
  o **Improve research** on GE development and deployment, advanced exploration, drilling techniques, reservoir management & cost-effective power generation
  o **Collaborate with Ministries, international geothermal development bodies and national research institutes** to incorporate global best practices
  o **Deploy geothermal heating and cooling solutions, and other direct-use applications** to decarbonize buildings, agriculture, industries, etc.
  o **Build an enabling ecosystem** with public-private partnerships, capacity building, and knowledge sharing.

Key features of the Policy

- **Scope of policy:**
  o **Geothermal Resource Assessment**, **Power Production systems,** Direct use, Ground (geothermal) Source Heat Pump (GSHP) etc.

India's Geothermal Provinces (GPs)

GP Himalayan GP — 1
Aravalli GP
Cambay Basin GP
Naga-Lushai GP — 1
9
11
2
6
4
7 — Mahanadi Valley GP
West Coast GP — 5
8
SONATA
Godavari Valley GP
10
3 — Andaman Nicobar GP
10 — South Indian Cratonic GP
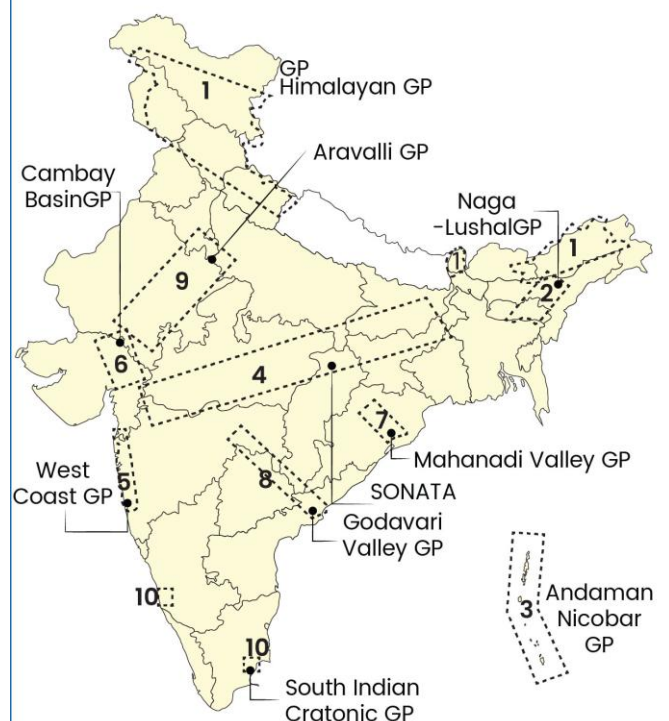
Note: Provinces 1, 2, and 3 are orogenic, while Provinces 4 to 10 are non-orogenic.

- o **Emerging Innovative Technologies** such as Enhanced Geothermal Systems (EGS), Advanced Geothermal Systems (AGS), geothermal energy storage, offshore geothermal wells etc.
  - o **Extracting GE from abandoned oil and gas wells**.
  - o **Mineral by-products** such as silica, borax, cesium, lithium, etc. subjected to rules and payment of royalty under MMDR Act.
- **Creation of a geothermal resource data repository:** Through Intergovernmental/inter-agency collaboration, e.g., with Ministries of Mines, Earth Sciences etc.; institutes like Geological Survey of India (GSI), National Data Repository (NDR), etc.
  - o **Operators/developers** will be permitted to **conduct geothermal resource assessment surveys** for R&D, assessment etc.
- **Developmental Model**
  - o **Preference to indigenous geothermal technologies:** By encouraging local innovation.
  - o **Economic feasibility models:** like revenue sharing, milestone based payment etc.
  - o **Central funding assistance:** To Northeastern Region and special category states.
  - o **Joint ventures:** Between oil and gas companies, mineral companies, and geothermal developers
  - o **Repurposing oil and gas production facilities:** like pipelines, etc.
  - o **Pilot projects** and **Centres of Excellence (CoEs) for R&D and training.**
- **Sustainability**
  - o **Promotion of Technology for safe, non-polluting use** of geothermal fluids or by-products.
  - o **Developing Environmental & Social Impact Assessment guidelines** for geothermal projects.
- **Financing Mechanisms**
  - o **Renewable Energy Research and Technology Development Programme (RE-RTD)** provides up to 100% financial support to Government/non-profit research organizations and upto 70% to Industry, start-ups, private Institutes, entrepreneur, and manufacturing units
  - o **Long-term concessional loans**, **Sovereign Green Bonds**, Viability Gap Funding (VGF), etc.
- **Fiscal incentives:** GST/Import duty exemptions on equipment, services; Tax holidays etc.
- **Support mechanisms**: Inclusion in Indian **Carbon Credit Trading Scheme;** Inter-State Grid Access; Open Access charges waiver; eligibility for Renewable Purchase Obligation (RPO) etc.
- **Guidelines for States and Union Territories**
  - o Responsible for granting geothermal **exploration/development permit and land lease**
    - > Exploration leases may be **granted for 3 to 5 years.**
    - > Lease for development for power generation or direct-use applications for up **to 30 years.**
  - o **Single-window clearance mechanisms** managed by designated state **nodal agencies.**
  - o **Ensure stakeholder consultations and adequate compensatory measures,** particularly in tribal and remote areas.

Conclusion

The NPGE, 2025 directly addresses sector challenges by streamlining approvals, encouraging R&D and partnerships, and providing fiscal incentives and financial support. With mechanisms for local innovation, stakeholder consultation, and dedicated pilot projects, the policy creates a strong foundation for sustainable, reliable geothermal growth.

5.8. NATIONAL BIOFOUNDRY NETWORK & BIOE3 POLICY

Why in the News?

India's first **National Biofoundry Network** was launched on **August 25, 2025,** which also marked the first anniversary of India's BioE3 Policy.

About National Biofoundry Network

- **Objectives:** To aid in the scale-up of proof-of-concept projects into viable technologies.
  - o **Proof of Concept (POC):** A demonstration to test if an idea is feasible and viable, not to assess market demand or production methods.

- **Component of:** BioE3 Policy and categorized as **Bioenablers**.
- **Biofoundry:** It is an automated facility that rapidly designs, builds, and optimizes engineered organisms by integrating DNA synthesis, gene editing, and high-throughput biomanufacturing workflows.
- **Functions:**
  - **Scaling up research activities** across various thematic areas. **Examples:**
    - > International Centre for Genetic Engineering and Biotechnology (ICGEB) working on **engineering microbial strains for first and second-generation biofuels**,
    - > IIT-Madras advancing **animal-free production of hyaluronic acid**.
  - The network offers **shared infrastructure** for startups, Small and Medium Enterprises (SMEs), industries, and academic institutions.
  - It also provides **training and internships** to build human resources with the necessary interdisciplinary and cross-functional technical skills for biomanufacturing.

Data Bank
Current Status of Bioeconomy
- → **4.25%** bioeconomy contribution to national GDP.
- → **20%** ethanol blending (E20) achieved in 2025.
- → **13,000** biotech startups in 2025, showing **142% growth**.

About BioE3 (Biotechnology for Economy, Environment and Employment) Policy

- **Approved** in 2024, as India's first policy in Biotechnology.
- **Ministry:** Department of Biotechnology (DBT), under the Ministry of Science & Technology.
- **Objectives:**
  - To **revolutionize biomanufacturing for enhanced efficiency, sustainability, and quality**, while accelerating the development and production of high-value bio-based products.
    - > Biomanufacturing includes sectors like **precision biotherapeutics, carbon capture and utilisation, functional foods and smart proteins,** etc.
  - To **double India's bioeconomy to US$300 billion by 2030**.
- **Key Features of BioE3 Policy:**
  - **Innovation-Driven R&D & Entrepreneurship:** Provides strong support to foster research and startups.
  - **Technology Development & Commercialization:** Accelerates progress through Biomanufacturing, Bio-AI hubs, and Biofoundries.
  - **Green Growth Models:** Prioritizes regenerative and circular bioeconomy practices.
  - **PPP-Based Implementation:** Leverages Public-Private Partnerships to boost industry participation, expand skilled workforce, and generate employment.

Key Achievements of BioE3 Policy:

- **Infrastructure:** Established **21 advanced BioEnabler facilities**, BRIC National Agri-Food Biomanufacturing Institute (BRIC-NABI).
- **Inter-Ministerial Cooperation: DBT- ISRO MoU** for space biotechnology, leading to life sciences experiments on the International Space Station.
- **Centre-State Partnerships:** Initiated a partnership with the **Government of Assam** to leverage regional biodiversity for biomanufacturing.
- **Human Capital Development:** BioE3 Youth Challenge launched for grassroots innovation for healthcare, agriculture, environment, and industry.
- **Gene-Edited Crops:** India became the first country to develop **gene-edited rice varieties** for nutritional security and climate resilience.

Challenges of BioE3 Policy:

- **Lack of Milestones:** Difficulty in tracking policy progress.
- **Human Capital Gaps:** Critical expertise shortages, particularly in microbial strain engineering and bioprocessing, requiring stronger hands-on training and interdisciplinary programs.

- **Scale-up Bottlenecks:** The "valley of death" challenge between discovery and commercialization due to limited funding and developmental stalls.
- **Commercialization Barriers:** High capital investment for Good Manufacturing Practices (GMP) units, limited local supply chains for raw materials, dependence on costly imported materials, and fragmented logistics hinder the growth prospects.
- **Biosafety and Public Trust:** Ongoing debates over biosafety concerns for gene-edited crops and the need for proactive, responsible science communication to build public trust.

Conclusion

The BioE3 Policy, with the National Biofoundry Network, marks a pivotal step in India's journey towards building a **sustainable, self-reliant, and green bioeconomy**. With an ambitious target of reaching a **US$300 billion bioeconomy by 2030** and potentially **US$2.7 trillion by 2050**, India is poised to emerge as a **global bioeconomy powerhouse**, playing a critical role in achieving national and international net-zero carbon emission goals.

Read our previous coverage on India's Bio-Economy

5.9. RIVER POLLUTION IN INDIA

Why in the News?

Central Pollution Control Board (CPCB) released assessment report on "**Polluted River Stretches for Restoration of Water Quality - 2025**".

More on the News

- CPCB executes **National Water Quality Monitoring Programme (NWMP)** in association with State Pollution Control Boards/ Pollution Control Committees for assessing the water quality of aquatic resources in the country.
- CPCB initiated the exercise of identifying polluted river stretches (PRS) in the country since 2009.

About Polluted River Stretch

- **Polluted River Stretch (PRS):** Two or more polluted locations identified on a river in a continuous sequence are considered as a stretch and identified as PRS.
- **Criteria:** Stretches where the Biochemical Oxygen Demand (BOD) exceeds 3 milligrams/litre (mg/L) are identified as polluted stretches by CPCB.
  - BOD is a key indicator of water quality and it measures the oxygen needed to break down organic matter.
- **Categories:** PRS are categorized under five Priority Classes (I to V) on the basis of maximum BOD level observed. For e.g. **Priority Class I**: Monitoring locations exceeding BOD concentration 30.1 mg/L
- **Polluted Stretches:** 296 river stretches were polluted on 271 rivers (out of 645 rivers assessed) across 32 states and Union Territories.
  - **Total number of PRS has decreased** from 351 (in 2018) to 296 (in 2025).
- **Geographic Distribution:** Maharashtra continues to have the highest number (54) of polluted river stretches.
- **Notable PRS:** Includes Yamuna in Delhi, Sabarmati in Ahmedabad, Chambal in Madhya Pradesh, Tungabhadra in Karnataka, and Sarabanga in Tamil Nadu.

Sources of River Pollution

- **Untreated Sewage:** According to the CPCB, more than 60% of untreated sewage water is released into rivers daily.
  - A CPCB **National Inventory of Sewage Treatment Plants (2021)** found that **urban centres generate 72,368 MLD of sewage daily**, far exceeding treatment capacities.
- **Untreated industrial effluents:** Industries such as those producing chemicals, sugar, paper, and tanneries generate wastewater that contains toxic chemicals, which poses serious risks.
- **Others:** Municipal solid waste, agricultural runoff, sand mining and illegal encroachments.

Framework for rejuvenation of rivers

- **Legal Framework:**
  - **Water (Prevention and Control of Pollution) Act, 1974:** Establishes the CPCB as the central unit for planning and regulating environmental matters and SPCB as a state-level major institution with the responsibility to enforce environmental standards.
  - **Environment (Protection) Rules:** Notified under the Environment Protection Act, 1986, these rules lay down standards for industrial discharge.
  - **Waste Management Rules:** Government has notified rules on solid waste, biomedical waste, E-waste, etc.
- **River Rejuvenation Programmes:**
  - **Namami Gange Programme:** Superseded Ganga Action Plan (GAP) – launched in 1985 – and is being implemented by the National Mission for Clean Ganga (NMCG).
  - **Yamuna Action Plan:** Launched in 1993, it aims to clean the stretch of river Yamuna.
  - **Centrally Sponsored Scheme of National River Conservation Plan (NRCP):** NRCP is implemented in identified stretches of rivers, excluding those in Ganga basin, by providing financial and technical assistance to states/UTs.
  - **National Water Quality Monitoring Programme (NWQM):** Through its network of SPCBs, it advises central and State governments on prevention, control, abatement of water pollution and sets standards on water quality in streams and wells.
- **Schemes for Sewerage Infrastructure:** Atal Mission for Rejuvenation & Urban Transformation (AMRUT), Smart Cities Mission, and Swachh Bharat Mission.

Key Recommendations

- **Source control:** Like identification and management of polluting sources including functioning/ status of Sewage Treatment Plants (STPs) / Effluent Treatment Plants (ETPs) and solid waste management and processing facilities, etc.
- **Basin Management:** River catchment/basin management and flood plain zone protection and its management such as protection and management of Flood Plain Zones, rain water harvesting, maintaining minimum **environmental flow (e-flow)** of river and plantation on both sides of the river.
  - **e-Flow** is the quantity, timing, and quality of water flows required to sustain freshwater and estuarine ecosystems and the human livelihoods and well-being that depend on these ecosystems. (**Brisbane Declaration, 2007**)
- **Removing Encroachment:** Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important component for river rejuvenation.
- **Sewage Treatment:** Focus on proper interception and diversion of sewage carrying drains to the STP and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water.
- **Use of Technology:** Advanced technology, including AI, robotics, Remote sensing, etc., may be harnessed for real-time monitoring and waste management.

Conclusion

The declining number of polluted river stretches shows that collective efforts are beginning to yield results. By strengthening sewage and waste management, enforcing strict industrial compliance, and harnessing technology for real-time monitoring, India can transform its rivers into lifelines of prosperity.

5.10. GREAT NICOBAR ISLAND PROJECT

Why in the News?

Union Ministry of Tribal Affairs recently sought a factual report from the Andaman and Nicobar Islands administration on complaint that **forest rights had not been settled** under Forest Rights Act, 2006 before diverting forest land for Great Nicobar Island Project.

More on the News

- Tribal Councils in the Andaman and Nicobar Islands are **statutory bodies established under the Andaman and Nicobar Islands (Tribal Councils) Regulation, 2009.**

- They have **limited advisory and executive powers**, unlike autonomous councils under the Sixth Schedule of the Constitution, which have legislative, executive and limited judicial powers and enjoy greater autonomy.
- Andaman and Nicobar Islands administration has maintained that it **does not need to implement the Forest Rights Act (FRA),** arguing that tribes people's rights to the forest were already protected on the Islands under the **Protection of Aboriginal Tribes Act, 1956 (PAT,56).**
- **PAT,56** gives the local **administration unilateral authority to divert forest land**, whereas the **FRA** mandates **consent to be obtained from the Gram Sabhas** concerned after recognising and vesting rights in them.

About Great Nicobar Island Project

- **Genesis:** It is a massive Greenfield infrastructure project conceived by NITI Aayog and approved by the Union Cabinet in 2021.
- **Nodal Agency:** Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO), incorporated in 1988 as a **Government Undertaking under the Companies Act 1956**.
- **Project Components:**
  - **International Transshipment Port – Galathea Bay:** A deep-sea port to be developed at Galathea Bay on the island's southern coast.
    - > Ministry of Ports, Shipping and Waterways (MoPSW) will oversee transhipment port project.
  - **A Greenfield international airport**
  - **A 450 MW** power plant
  - A modern **township**
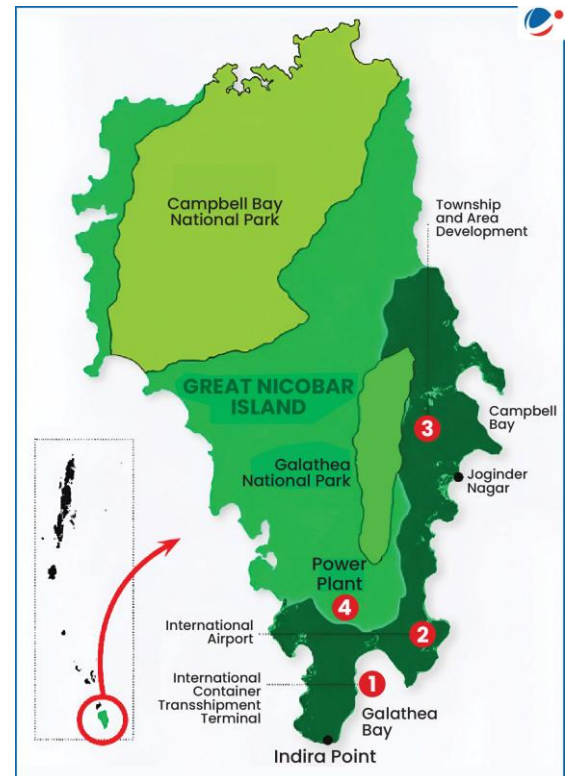
Significance of the Project

- **Strategic location:** Great Nicobar Island's **geostrategic position** makes it critically important for India's security and maritime influence.
  - It is located at the **mouth of the Malacca Strait**, one of the world's busiest shipping lanes, accounting for passage of one-third of global sea trade.
  - It is also close to **Sunda Strait, Lombok Strait,** and **the Coco Islands**, all of which are important choke-points in the Indo-Pacific region.
- **Regional maritime hub:** Transhipment port will attract cargo traffic that currently goes through Singapore or Colombo by leveraging Great Nicobar's proximity to the busy Malacca Strait.
  - Currently, nearly 75% of India's transhipped cargo is handled at ports outside India.
- **Improving connectivity:** Island's connectivity to the Indian mainland and other destinations will improve, making the island more accessible for tourism, trade, and strategic logistics.
- **Defence:** By developing a naval-capable deep-water port and airfield on Great Nicobar, the project will **bolster the existing tri-services military command** in the Andaman & Nicobar Islands.
  - The project will allow India to station ships, aircraft and drones closer to the strategic crossroads of the eastern Indian Ocean to **monitor critical sea lanes and enhance India's security sphere** in the region.
- **Economic growth and regional development:** Transhipment port will accrue significant benefits such as **forex savings, foreign direct investment, increased economic activity** at other Indian Ports, enhanced logistics infrastructure, etc.

Ecological, Social and Geological Concerns

- **Tribal Rights:** There are concerns that project will negatively impact the tribes of Great Nicobar Island, **Shompens** (a Particularly Vulnerable Tribal Group) and **Nicobarese**.
  - It can lead to displacement of the tribal population; large-scale migration of workers and settlers could **expose the Shompen to infectious diseases** against which they have no immunity, etc.

- **Ecological Concerns:** Great Nicobar is one of the richest biodiversity zones in India with over 85% still covered in tropical rainforest.
  - **Impact on Species: Galathea Bay**, the site of new port, is a **protected wetland** under Ramsar Convention and is most important **nesting site for endangered Leatherback Sea Turtle**.
    - Conservationists fear that constructing the port will require **dredging millions of cubic meters** of seabed, which could destroy coral reefs and seagrass meadows, and disturb the turtles' nesting beaches.
  - **Deforestation:** Project will lead to the cutting of approximately 9.6 lakh trees and **negatively impact the carbon sequestration capacity** of the region.
  - **Shoreline Changes:** Development also **undermines natural coastal defences**. e.g., the mangrove belts at Galathea that help buffer tsunamis and storms would be removed.
- **Geological and Disaster Risks:** Great Nicobar is located in a **highly seismic zone** and sits atop the same **megathrust fault line** that triggered the devastating Indian Ocean tsunami in December 2004.

Conclusion

While Great Nicobar Project has the potential to strengthen connectivity, trade, and defence is undeniable, the ecological fragility, tribal rights, and disaster vulnerabilities of the island cannot be overlooked. A path forward lies in adopting a phased, ecologically sensitive, and community-inclusive model of development that safeguards biodiversity and cultural heritage, while ensuring national interests are advanced responsibly.

5.11. DAM SAFETY IN INDIA

Why in the News?

Researchers from **IISER Bhopal developed** a comprehensive assessment of **sedimentation-induced vulnerabilities** in large **reservoirs** across India.

More on News

- The study analysed data from the **Central Water Commission's** recent report, 'Compendium on Sedimentation of Reservoirs in India'.
  - Sedimentation is a process in which **soil particles are eroded and transported** by flowing water or other transporting media and **deposited as layers of solid particles in water bodies.**
- The study included more than 300 large reservoirs with storage exceeding 100 million cubic meters.

> **Do you know** ❓
> ➤ Indira Sagar dam on the Narmada River in Madhya Pradesh is **country's largest reservoir** in terms of volume.

Key Findings on **Status of Sedimentation:**

- Many reservoirs have lost nearly or above 50% of their **designed storage capacity** due to **sedimentation**.
  - By 2050, many reservoirs in **East flowing rivers beyond Godavari and West flowing rivers beyond Tapi** are projected to surpass 50% storage capacity loss.
- **Regional Variation**: Himalayan Region (HR), West Flowing Rivers, Narmada–Tapi (NT), East Flowing Rivers, and Indo-Gangetic Plains (IGP) are emerging as the vulnerable regions.
  - The **HR region** showed the highest annual storage capacity loss due to sedimentation among all regions.
- **Key Driving factors of Sedimentation:** Deforestation, agricultural runoff, soil erosion due to monsoon in fragile terrains, and unregulated land-use changes.
- **Consequences**: Sediment starvation, reduced water security,

> 🏛 **Data Bank**
> » India is **3rd** largest dam-owning nation in the world after China and USA.
> » There are **around 6000 large dams in India (2023).**
> » **Maharashtra** has highest number of dams in India.
> » **>80%** of the large dams are already over 25 years old.

increased energy deficits, diminished agricultural productivity and higher risks of water-related conflicts.
  - **E.g. East-flowing Rivers beyond Godavari** (having nearly 160 reservoirs) are in a critical zone in meeting South India's agricultural and industrial water needs.

Other key Issues Associated with the Dam Safety in India

- **Ageing of dams**: As of 2023, out of India's large dams, 1,065 are between 50–100 years old, while 224 are more than 100 years old.
- **Structural failures:** It is mainly due to **seepage, corroded piping, and/or weak foundations.**

- **Seismic vulnerability**: E.g. the earthquake in Bhuj (Gujarat) in 2001, led to liquefaction in the foundation of **Chang Dam**.
- **Vulnerability to Glacial Lake Outburst**: E.g. in 2023, **Chungthang Dam** (Sikkim) was washed away during flash floods caused by a **glacial lake outburst**.
- **Overtopping (flood waters pass over the dam's pinnacle)**: India's first recorded dam failure of the Tigra Dam in 1917, was also due to overtopping.
- **Management/Compliance Issues**: E.g. CAG audit report of Gandhi Sagar (Madhya Pradesh) highlighted that the **State Dam Safety Organisation (SDSO)** did not comply with recommendations by the CWC on remedial measures.

Impact of Dam Failures

- **Loss of Life & Property:** E.g. **Machhu Dam, Gujarat (1979)** failure caused deaths and massive destruction in Morbi town.
- **Environmental Damage:** E.g. **South Fork Dam, USA (1889)** failure destroyed forests, farmland, and aquatic systems.
- **Economic Loss:** Agriculture, industries, power generation, and livelihoods suffer heavy damage.
- **Social Displacement:** Communities near dams are often displaced.
- **Psychological & Governance Impact:** Survivors face trauma, and public trust in authorities weakens

Initiative taken to ensure Dams Safety in India

- **Dam Safety Act, 2021:** Provides for proper surveillance, operation and maintenance of the specified dams to prevent dam failure. The Act has provision for setting up institutional frameworks at the Central and State level.
  - **At National level**: National Committee on Dam Safety and National Dam Safety Authority.
  - **At State level**: State Committee on Dam Safety (SCDS) and State Dam Safety Organization (SDSO)
- **National Register of Large Dams (NRLD)**: It is the nationwide register of Large Dams compiled and maintained by CWC.
- **Dam Rehabilitation and Improvement Project (DRIP)**: The 2nd and 3rd Phase of DRIP envisages comprehensive rehabilitation of 736 dams across 19 States.
  - The Project receives loans from the **World Bank** and the **Asian Infrastructure Investment Bank (AIIB)**.
- **Seismic hazard analysis information system (SHAISYS) tool**: Aims to ascertain the extent of seismic forces and their implication on the safety of the dam structures.
- **Dam Safety Review Panel**: Some states have created these panels for comprehensive audit of their dams.
- **Other**:
  - National Centre for Earthquake Safety of Dams (Located at MNIT Jaipur (Rajasthan)),
  - Dam Health and Rehabilitation Monitoring Application (DHARMA), Dam Safety Review Panels by States, etc.

Global steps taken to ensure Dams Safety

- **World Commission on Dams:** Established by the World Bank and IUCN in 1998 to review the development effectiveness of large dams and develop guidelines for the planning, monitoring and decommissioning of dams.
- **International Commission on Large Dams (ICOLD):** It is a non-governmental International organisation founded in 1928. It provides a forum for the exchange of knowledge in dam engineering.
  - **Indian National Committee on Large Dams (INCOLD)** is the Indian Committee interacting with ICOLD.

Way-Forward for Ensuring Dams Safety in India

- **Managing Sedimentation:** Adopting best International practices like **sediment bypass systems** in Japan and c**ontrolled sediment flushing in Switzerland**
  - Implementing a **region-specific approach**.
    - In highly vulnerable regions, targeted interventions such as afforestation, Integrated Watershed Management practices, conducting periodic Desilting operations.
    - And **erosion control structures** (check dams) can mitigate sediment inflows.
- **Subsurface dams:** Countries like **Japan** have created multiple sub-surface dams as an alternative to surface dams. This could be **replicated in India as well.**
- **Use of Technology:** E.g. use of Advanced monitoring and sensing (using satellites to monitor changes in dams), using Internet of Things (IoT)-enabled sensors etc.

- **Others:**
  - Mandatory **periodic safety inspections** by **independent** agencies.
  - Dams that pose **serious safety risks** should be listed and then **decommissioned** in a phased manner.
  - Developing a **risk-based decision-making system** to determine the most effective risk mitigation measures, and for prioritizing dam-related works.

Conclusion

India's dams face rising risks from sedimentation, ageing, seismic and climatic stresses, and weak compliance. Adopting global best practices, region-specific strategies, and phasing out unsafe structures are essential to ensure dam safety and harness the full potential of the country's water resources.

5.12. DISASTER RISK FINANCING

Why in the News?

Chief Minister of the State of Himachal Pradesh urged the **16th Finance Commission** to **reframe the Disaster Risk Index (DRI)** to more accurately reflect the **unique vulnerabilities of hill states.**

Reasons for higher vulnerability of hill States in the Indian Himalayan Region to disasters

- **Geo-physical:** Himalayas are **tectonically active** and are mostly made-up of **unconsolidated and semi-consolidated deposits.**
  - **Under-cutting by river currents** in valleys like Alaknanda, Bhagirathi, Mandakini, etc.
  - **Hill washing and percolation of waters** due rain, cloud-bursts, and melting of snow resulting in **land subsidence** like the one witnessed in Joshimath in 2023.
- **Climatic impacts:** Changes and variability in temperature and rainfall trends creating glacial retreat, intense rainfall, cloudbursts, and avalanches. (e.g., Uttarakhand floods 2013)
- **Socio-economic: Deforestation** for agriculture, grazing, construction, etc., on hill slopes giving rise to avalanche, landslide, etc.
  - **Obstruction of natural flow of water** due to construction various mega hydel Power Projects, like Tehri Dam Reservoir in Tehri Garhwal district.
- **Anthropogenic:** Road construction, tunneling, hydroelectric projects, encroachment on riverbanks and floodplains, etc.
  - Rising tourism: IHR records about **100 million tourists every year** and the number is **expected to increase to 240 million by 2025**, putting huge pressure on resources.

About Disaster Risk Index

- **Measurement Tool:** DRI is a **composite measure** that quantifies the **level of risk a region faces** from multiple hazards and used as a metric in disaster risk financing. It is designed to:
  - assess the **likelihood and potential severity** of disasters,
  - capture **vulnerability and exposure levels**,
  - support **evidence-based decision-making**, and
  - guide **resource allocation** for disaster mitigation and preparedness.
- **Genesis: 15th Finance Commission** (2021–26) formally adopted the DRI to guide disaster funding. It integrated each state's DRI score into a formula for distributing the National Disaster Response Fund (NDRF) and state contingency funds.
- **Components:** DRI uses the probability of **hazards** (score of 70) and **vulnerability** (score of 30) to arrive at a composite score.
  - The **hazards** mainly focus on the probability of events such as landslides, flood, earthquakes, drought, and other natural calamities.
  - The **Below Poverty Line (BPL) population** is used as a basic measure to assess **vulnerability**.

Disaster Risk Financing (DRF) in India

- **New Methodology:** 15th Finance Commission adopted a new methodology for state-wise allocations, which replaces the earlier expenditure driven methodology.

- o The new methodology is a combination of **capacity** (as reflected through past expenditure), **risk exposure** (area and population) and **proneness to hazard and vulnerability** (disaster risk index).
- **Disaster Mitigation Funds:** 15th Finance Commission recommended the **creation of National Disaster Mitigation Fund (NDMF) and State Disaster Mitigation Fund (SDMF).**
  - o Consequently, Central Government has constituted the NDMF and so far, **all the States, except Telangana**, have intimated setting up of SDMF.
  - o **Central Government contributes 75%** for all States (90% for North-Eastern and Himalayan States) as Centre share in SDMF.

Concerns and Limitations with DRF

- **Uniform Matrix:** A one-size-fits-all approach fails to capture the **unique vulnerabilities** of **hill states**, **coastal areas** and other vulnerable regions.
  - o For instance, the matrix **does not include hazards like landslide, snow avalanches, cloudbursts, forest fires and Glacial Lakes Outburst Flood (GLOFs),** whose frequency has increased in recent past.
- **Insufficient Resource Allocation:** Because of low DRI, some states like Himachal Pradesh, do not get adequate resources from 15th Finance Commission to meet its requirement of disaster relief, despite facing disproportionately higher brunt of disasters.
- **Geographical Inequalities:** Geographically larger states receive more funds even if they face less risk or vulnerability, leading to unfair distribution.
- **Weightage to Past Expenditure:** Current mechanism also heavily relies on the average expenditure on relief measures from the past seven years, which accounts for 70% of the allocation criteria.
  - o This leads to states with higher past expenditures receiving more funds, regardless of their current risk and vulnerability to natural disasters.

Way Forward

- **Adaptive DRI:** Scientifically validated DRI formula incorporating hazard, vulnerability, exposure, and resilience indicators.
  - o Also, **expanding its hazard list** to include landslides, cloudbursts, avalanches, and pest attacks
- **Geographic Distinctness:** In DRF, instead of considering only the geographical area, geographical sub-divisions more prone to natural disasters, such as hilly areas, wetlands, and coastal lines, need to be incorporated.
- **Incorporate Socio-Economic Indicators:** The poverty-based vulnerability assessment should be replaced with a **Composite Vulnerability Score**.
  - o **Composite Index** of NDMA, which considers unsafe buildings, social infrastructure, industries, rural-urban population, deforestation etc., will provide more accurate picture of vulnerability.
- **Data Integration:** Strengthen **local data collection** via remote sensing, IoT sensors, and panchayat-level mapping and establish **District Disaster Data Repositories** for better assessing DRF needs.
- **Periodic Review:** Institutionalise five-yearly DRF methodology review aligned with latest available quality data related to climate and hazards.

Conclusion

The Disaster Risk Finance is a cornerstone of India's disaster governance architecture, offering a scientific lens for resource allocation and resilience planning. However, in the era of climate change, regional asymmetries, and complex hazard interactions, the DRF must recognise hill vulnerabilities, local adaptive capacities, and climate realities. A reframed, equitable DRF framework will not only ensure justice in fiscal devolution but also strengthen India's pathway toward a climate-resilient and disaster-prepared future.

5.13. NEWS IN SHORTS

5.13.1. STATE ENERGY EFFICIENCY INDEX (SEEI), 2024

Maharashtra, Andhra Pradesh, Assam, Tripura are top performers in their respective groups in State Energy Efficiency Index 2024(**sixth edition**).
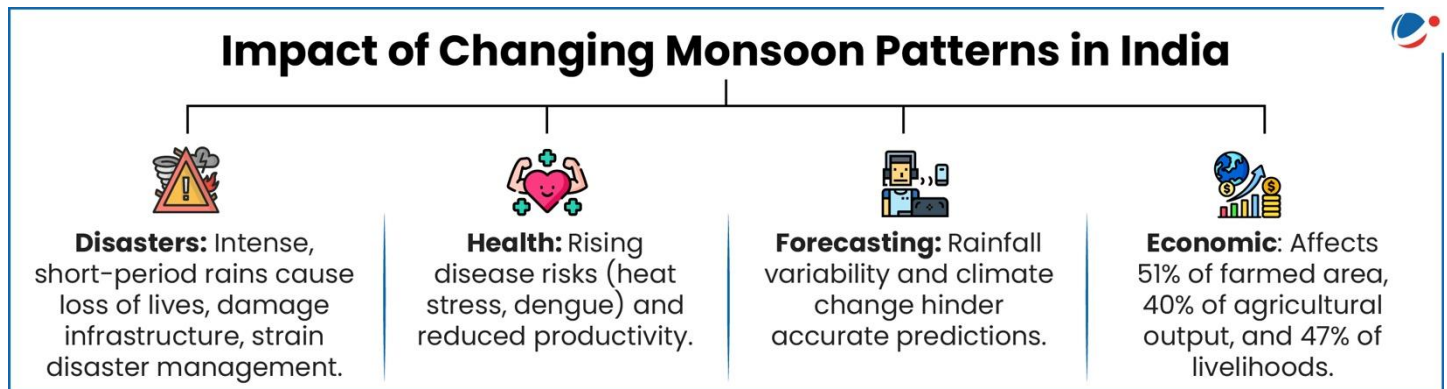
About State Energy Efficiency Index (SEEI)

- **Developed by:** Bureau of Energy Efficiency (BEE) in association with the **Alliance for an Energy Efficient Economy (AEEE)**.
- **Purpose:** The index assesses the energy efficiency performance of **36 States and Union Territories (UTs)** supporting data-driven monitoring, best practice sharing, and healthy competition.
- **States are classified into four performance categories:** Front Runners (>60%), Achievers (50-60%), Contenders (30-50%), and Aspirants (<30%).
    - The State Energy Efficiency Action Plans initiated by BEE, are crucial in integrating energy efficiency into the most energy-intensive sectors.

5.13.2. MONSOON-RELATED EXTREME WEATHER EVENTS

Recent events like the Punjab floods, **landslides and flash floods** in Uttarakhand, Himachal Pradesh and Jammu and Kashmir highlight the **growing frequency and intensity of monsoon-related extreme weather events.**

Changing nature of Monsoon

- **Erratic patterns of rainfall:** Research suggests that monsoon winds are weakening. However, rising temperatures are increasing atmospheric moisture, creating **more intense bursts of rainfall separated by frequent dry spells.**
- **Changing El Niño-monsoon relationship: Weakening** of the correlation between El Niño and reduced monsoon rainfall over India due to changes in global atmospheric circulation patterns.
- **Spatial distribution of monsoon: Humid** regions are becoming **drier** and dry regions are becoming wetter.
    - E.g., decreasing rainfall along the **Ganga basin states** while increasing rainfall in **Gujarat's Saurashtra, Rajasthan.**
- **Climate change: Rising sea levels and temperatures** result in changes in monsoon patterns, increasing **water vapour holding capacity of clouds,** impacting intensity of rainfall.

Impact of Changing Monsoon Patterns in India

Disasters: Intense, short-period rains cause loss of lives, damage infrastructure, strain disaster management.

Health: Rising disease risks (heat stress, dengue) and reduced productivity.

Forecasting: Rainfall variability and climate change hinder accurate predictions.

Economic: Affects 51% of farmed area, 40% of agricultural output, and 47% of livelihoods.

Conclusion

This shift in monsoon patterns highlights the need to move from a **post-disaster response** to a **pre-disaster focus** on reducing vulnerabilities through **sustainable infrastructure and effective early-warning systems.**

5.13.3. STATE OF GLOBAL WATER RESOURCES 2024

The report **released by World Meteorological Organization (WMO)** highlights that **water cycle has become increasingly erratic and extreme**, swinging between deluge and drought.

Key Highlights of Report

- **Glacier Melt:** All glacier regions worldwide report losses due to melt for third straight year.
    - Many small-glacier regions have already reached or are about to pass the so-called **Peak Water Point** - when a glacier's melting reaches its maximum annual runoff, after which this decreases due to glacier shrinkage.
- **Erratic Water Cycle:** Two thirds of global river catchment area have **too much or too little water**.
    - This is leading to **increasing extreme events** – unusual heavy rainfall in Africa's tropical zone, extensive flooding in Europe and Asia, drought in Amazon Basin etc.

Water Cycle

- Water cycle describes the **continuous movement of water within the Earth and atmosphere** and involve pools and fluxes.
    - **Pool** refers to many forms and places where water is stored like lake, glacier, atmosphere etc.
    - **Fluxes** are ways that water moves between the pools, including state changes like evaporation or condensation.
- **Impact of Climate Change:** Warming global climate **intensifies water cycle** as it increases the role of evaporation.
    - It leads to more water being stored in atmosphere, **increasing extreme weather events** such as droughts, heavy precipitation, and hurricanes.
    - It is causing **sea level rise** through melting glaciers and expansion of ocean water, flooding coastal areas.

5.13.4. PRODUCTION GAP REPORT 2025

Production Gap Report 2025 has been released by Stockholm Environment Institute, Climate Analytics, and International Institute for Sustainable Development.

Key Highlights

- **Massive Overproduction:**
    - Planned **fossil fuel production in 2030 will exceed levels** consistent with limiting warming to 1.5°C by more than 120% and to 2°C by 77%.
    - Coal remains the most misaligned, with **projected 2030 global output 500 % higher** than the 1.5°C pathway.
- **Fossil fuel subsidies** by **governments** remain near record highs despite pledges to cut them.

5.13.5. GREY RHINO EVENT

A study has revealed that **Wayanad landslides** were **grey rhino event**.

What is a Great Rhino Event?

- Grey Rhinos are defined as **highly probable, high impact but yet neglected** systemic disruptions.
    - These are **not random surprises** (like Black Swan events) but **occur after clear warnings and accumulating evidence.**

Why Waynad landslides were Great Rhino Event?

- As per the study, **Wayanad landslide** happened in an area that has been categorised as a **landslide-prone area**, repeatedly hit by landslides in the recent past, yet ignored by government.

5.13.6. SUPER TYPHOON

Philippines was affected by Super Typhoon Ragasa.

About Super Typhoon

- It is a **tropical cyclone with maximum wind speed exceeding 185 kph or more than 100 knots.**
    - Tropical cyclones are **warm-core low pressure systems** associated with a spiral inflow at the bottom level and spiral outflow at the top level.
    - They always form over oceans where **sea surface temperature is greater than 26°C.**
    - They develop at **latitudes usually greater than 5°** from the equator.

Terms for Tropical Cyclones:

- **Hurricane** – North Atlantic, Eastern North Pacific and South Pacific Ocean.
- **Cyclone** – Indian Ocean.
- **Typhoon** – Western North Pacific Ocean.
- **Willy-willy**: Eastern part of the Southern Indian Ocean.

5.13.7. HYDRO ELECTRIC PROJECTS IN NEWS

- **Sawalkote Project:** A run-of-the-river project proposed **on the river Chenab.**
  - **Location:** District Ramban & Udhampur of UT Jammu & Kashmir.
- **Heo and Tato-I:** Projects on **Siyom River**, in Arunachal Pradesh, close to the border with China.
  - **Siyom River originates** from the eastern Himalayas and flows for much of its range from West to East, before joining the **Siang (name used for Brahmaputra River in Arunachal Pradesh)**.
- **Oju Hydroelectric Project:** Project on **Subansiri River** near the India-China Border.
  - **Subansiri River** originates in Tibet and is Largest tributary of the Brahmaputra. It is a **trans-Himalayan antecedent river.**
    - Enters **Arunachal Pradesh, India, flows into Assam,** and joins Brahmaputra.
    - The River is also called the **"Gold River"** because of the gold dust found in its waters

5.13.8. BARREN ISLAND VOLCANO

Fresh Eruption Reported at Barren Island Volcano, Andaman Islands.

About Barren Island

- **Location:** Situated in the **Andaman Sea,** Andaman and Nicobar Islands, India. **Northeast of Port Blair**
- **Status:** India's **only active volcano.**
- **Type: Stratovolcano,** part of the Andaman volcanic arc.

6. SOCIAL ISSUES

6.1. GEN Z PROTEST IN NEPAL

Why in the News?

Sushila Karki was appointed as interim Prime Minister of Nepal until 2026 elections after the fall of the government due to "Gen Z protest" in Nepal.

Reasons for Gen Z protests in Nepal

- **Nationwide Ban on Social Media Platforms:** Government suspension of 26 major social media platforms (WhatsApp, Instagram etc.) was widely seen as an attempt to curb freedom of expression and violate citizens' fundamental rights.
- **Corruption and Lack of Accountability:** Entrenched corruption, high-profile scams, and lack of progress on legal reforms led to public mistrust.
  - Viral social media posts highlighted gap between struggling ordinary youth and luxurious lifestyles of children of political leaders.
- **Other reasons:** Extreme State Response**; Youth Bulge** as Nepal's 21% population is between (15–24 years), Inspirations from **Global Youth Movements** such as Bangladesh, history of Political protests such as Jana Andolan in 1990 and 2006 etc.

The Gen Z protests highlighted the changing nature of protests and role played by young population.

Unique Characteristics of Youth protests

- **Decentralized & Leaderless:** "Be Water" strategy flexibility and adaptability without fixed leaders.
  - **E.g., Hong Kong protests (2019)** where absence of central leadership made it hard for authorities to dismantle the movement.
- **Technology & Digital means:** Use of encrypted apps (Telegram, Signal), VPNs, and online anonymity tools to bypass surveillance.
  - **E.g., Myanmar youth activists using VPNs** after military banned social media during 2021 coup.
- **Social Media Mobilization:** Creating cross-national solidarity through viral hashtags, memes, and influencers to amplify causes.
  - **E.g., MilkTeaAlliance** (Hong Kong, Taiwan, Thailand, and Myanmar**.) ArabSpring** (Tunisia, Egypt, 2011).
- **Hybrid Tactics: E.g., in Hong Kong protesters u**sed online forums for planning and offline "Lennon Walls" for physical expression**.**
- **Youth-Centric & Student Driven:** Gen Z sees themselves as change agents, more willing to confront authority compared to older generations.
  - **E.g., Thai student-led** protests for **monarchy reform (2020).**
- **Intersectional Issues: E.g.,** FridaysForFuture for climate change, **Iranian Gen Z women leading "Women, Life, and Freedom" protests (2022) etc.**
- **Unconventional & Symbolic Protest Styles:** Cultural Hybridization (use of international songs, art), Silent protests, blank placards, flash mobs, viral dance challenges etc.
  - E.g., Blank paper protests in China for freedom of speech (2022).
- **Short-Lived but High-Impact Waves**: E.g., sudden flare-ups in Sri Lanka's "Aragalaya" movement (2022) for short duration.

Role of youth in civilian protests

- **Decolonization Movements:** E.g., Youth wings of Congress with led peaceful movement and revolutionary groups (Anushilan Samiti, Yugantar) conducted armed resistance in India.
- **Civil rights activism**: E.g., US Civil Rights Movement, Vietnam War protests led by students where they highlighted youth opposition to authoritarianism, war, and social inequality.
- **Democratic Rights:** E.g., Student protests in **Belarus (2020)** against electoral fraud and authoritarian crackdown.

- **Good governance and transparency:** E.g., India against Corruption movement (2011) against systemic corruption led to formation of Lokpal in India.

Way forward

- **Youth-Centred Economic Policy:** E.g. support entrepreneurship, vocational training, and skill development.
  - E.g. in, **Medellín (Colombia)** library parks, Ruta N (innovation hub) turned youth away from crime to catalyst of growth.
- **Actively engage youth in policy making:** Meaningful participation can channel young aspirations constructively, preventing alienation and ensuring social cohesion and stability.
- **Broadening Urban Resilience:** E.g., **Cape Town's Resilience Strategy,** by integrating youth unemployment and social vulnerability into its resilience agenda, through community safety programmes, and civic participation platforms in poorer neighborhoods.
- **Responsive Governance:** Leveraging Digital Platforms effectively by using social media for dialogue, grievance redressal and policy outreach while countering misinformation and enabling civic engagement.
- **Soft Power & Community Engagement:** Promote civic education, volunteerism, cultural programmes to foster belonging by engaging youth in climate action, SDGs, local problem-solving.

Conclusion

"There may be times when we are powerless to prevent injustice, but there must never be a time when we fail to protest"- (Elie Wiesel). Gen Z protests symbolize similar civic activism challenging authority, amplifying marginalized voices, and reshaping democratic participation.

6.2. PROTECTION OF WOMEN FROM DOMESTIC VIOLENCE ACT (PWDVA), 2005

Why in the News?

The Protection of Women from Domestic Violence Act, 2005 has completed 20 years.

About the PWDV Act, 2005

- The act aimed to ensure the fundamental rights of women guaranteed under **Articles 14, 15 and 21.**
- India, as a signatory to **Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW),** was required to legislate specifically against domestic violence, recognizing it as a violation of human rights.

Key provisions of the Act

- **Wide definition of Domestic Violence (DV):** Includes actual abuse or threat of abuse including **physical, sexual, emotional, verbal, and economic abuse.**
  - **Harassment by way of unlawful dowry demands** to women victim or her relatives also constitutes DV.
- **Scope:** Applies to all women in **domestic relationships: marriage, live-in relationships, familial ties, and shared households.**
- **Rights of Women:**
  - Right to reside in **shared household (irrespective of ownership).**
  - Provides **temporary custody of child.**
  - Reliefs include **protection orders** to prevent acts of domestic violence, **Monetary Orders** for maintenance for herself and her Children, and **Compensation order** for damages caused to her.
- **Institutional Framework**
  - **Protection Officers:** Appointed to **assist victims, coordinate support, provide legal aid**, and **ensure enforcement** of orders.
    - They are required to **report the cases of DV to the Magistrate** upon receipt of complaints and to assist Magistrate in discharge of functions.
  - **Service Providers:** NGOs and government agencies to **provide counseling, shelter, medical assistance, and legal help.**
  - **Government Duties**: Promote **awareness, training, and coordination** among stakeholders.

- **Procedure and Enforcement**
  - **Time-bound justice**: Woman victim can get immediate civil remedies within 60 days.
  - **Evidence:** Sole testimony of the aggrieved woman is admissible as proof, easing the burden on the victim.
  - **Penalties:** Breach of court orders **punishable with imprisonment/fine**.

Has it been successful?

- **Judicial Expansion of Protection Scope:** Landmark court judgments expanded the Act's reach.
  - For instance, **extending protection to women in live-in relationships (D. Velusamy v D. Patchaiammal, 2010)** and removing **gender-specific restrictions on who can be named as respondents (Hiralal P. Harsora v. Kusum Harsora, 2016).**
- **Decline in Registered Domestic Violence Cases:** From **507 cases** registered under the Act in **2021** to **468 in 2022. (NCRB Report, 2022)**
  - Similarly, there is **reduction in spousal violence**, 31.2**%** (NFHS-4, 2015–16), 29.3% (NFHS-5, 2019–20).
- **Recognition of Women's Rights and Cultural Shift:** By framing domestic violence **as a serious social and legal issue** rather than a **private family matter,** the Act has helped **drive a cultural shift**.
- **Civil Remedies for Immediate Protection:** Unlike criminal laws which may deter women from filing complaints against husbands or relatives, PWDVA offers civil remedies focused on protection and safety such as **protection orders, residence rights, and maintenance**.
- **Other key achievements:**
  - **Legal Recognition of Diverse Forms of Abuse** beyond physical cruelty and dowry harassment covered by earlier laws like IPC 498A.
  - **Enhanced Accessibility Through Multiple Avenues**.

Challenges in implementation

- **Low Conviction Rate**: Conviction rate under the PWDVA **was around 18% (2022 National Crime Record Bureau Report)** reflecting that **only a fraction of cases registered leads to conviction**.
- **Judicial and Legal Limitations:** Restrictive judicial interpretations, such as the Supreme Court ruling in **S.R. Batra v. Taruna Batra (2007) narrowing the definition of "shared household,"** have **limited the scope of protection** for many women.
  - Challenges in **evidence and proof, where lack of concrete witnesses and documentation** makes **enforcement difficult** despite acceptance of oral testimonies.
- **Social and Cultural Barriers:** Deep-rooted patriarchal mindsets normalizing DV as a private family matter and social stigma linked to divorce or separation, discourage women from seeking help.
- **High Incidence of Domestic Violence despite Legal Safeguards**: Cruelty by husband or his relatives **(IPC Sec. 498A) accounted for 31.4% of all crimes** against women in 2022.
- **Other challenges:**
  - **Inadequate training and understaffing of Protection Officers** hampers effective assistance.
  - **Limited availability of shelter homes and service providers**, especially in rural areas.
  - **Insensitive handling of cases** by police officers.
  - **Gender-specific approach** that excludes male victims.

Key measures taken by Indian Government for tackling DV

- **One Stop Centre (OSC):** A component of Mission Shakti Umbrella Scheme providing integrated support and assistance under one roof to women affected by violence and those in distress.
- **Emergency Response Support System (ERSS-112)**: Established in all States and UTs for various emergencies, with computer aided dispatch of field/ police resources.
- **Nirbhaya Fund:** Under it, Bureau of Police Research and Development (BPR&D) has undertaken training and skill development programs for Investigation Officers, Prosecution Officers and Medical Officers.
- **Other measures:** Women Help Desks (WHDs) at Police Stations; Universalization of Women Helpline Numbers (WHL) etc.

Way Forward

- **Strengthen standards and training** for Protection Officers for improved victim support and accountability.
- **Sensitize and expand women-focused police units** to enhance reporting and trust.
- **Increase shelter homes and rehabilitation programs** with holistic survivor support.
- **Promote women's education, economic empowerment, and community engagement** to dismantle patriarchal mindsets.
- **Incorporate emerging amendments** to address female perpetrators and expand rehabilitation frameworks.
- **Leverage government schemes** (like STEP programme) to enhance survivor independence.

Conclusion

Two decades later, the **PWDVA stands as both a milestone and a mirror**. It reflects the progress India **has made in recognising women's rights** and **the long road ahead** in dismantling **the social, economic, and cultural barriers** that keep women trapped in violent homes.

6.3. DECLINE IN FERTILITY RATE IN INDIA

Why in the News?

According to the **Sample Registration System (SRS) statistical report, 2023** shows Total Fertility Rate (TFR) for rural India for the first time touched 2.1, the replacement rate.

Key Highlights of the report

- **TFR** indicates the average number of children a woman would have during her reproductive life
  - **National Level:** The TFR for India in 2023 is **1.9**.
    - > 18 States and UTs had reported a TFR of below the replacement level TFR of 2.1.
  - **Rural vs. Urban:** The TFR in rural areas is **2.1**, while in urban areas it is **1.5.**
    - > This is the first time that TFR in rural India has touched replacement rate.
  - **Highest TFR:** Bihar (**2.8**)
  - **Lowest TFR:** Delhi (**1.2**)
- **TFR by Education:** There is an inverse relationship between the mother's education level and the Total Fertility Rate
  - The TFR for illiterate women in India was **3.3** while the TFR for literate women was **1.8**.
- **Gross Reproduction Rate (GRR)**: average number of daughters a woman would have during her lifetime.
  - **National Level**: 0.9
  - **Rural vs Urban:** Rural GRR (1.0) was slightly higher than urban GRR (0.7), which suggests that women in rural areas are having more daughters than women in urban areas.
- **Age-Specific Fertility Rates (ASFR)** measures the number of live births in a specific age group per 1,000 female population of that same age group.
  - ASFR have sharply **decreased for younger women (ages 15-29) but have increased for older women** (ages 30-49).
  - **Highest fertility rate is in the 25-29 age group** (136.8), followed by the 20-24 age group (107.5).
- **Crude Birth Rate (CBR)** is the number of live births per 1,000 population in a year
  - **National Level:** The CBR for India stands at **18.4** in 2023, showing a decline of 0.7 points from 2022.
    - > The national CBR has declined by 1.6 points over the last five years
  - **Rural vs. Urban:** CBR is higher in rural areas (**20.3**) compared to urban areas (**14.9**)
  - **Highest CBR:** Bihar (**25.8**).
  - **Lowest CBR:** Tamil Nadu (**12.0**)

Reasons for Decline in Fertility Rate

- **Effective family planning Programme Implementation:** It help create a social atmosphere that is favourable to family planning, promoting the acceptance of a "small family norm".
- **Changing Social Attitudes towards marriage and reproduction:** Women are increasingly exercising choice by marrying late or not at all, often prioritizing careers and financial independence over motherhood.

- **High Parenting Standards:** The social expectation of **intensive parenting** (spending significant time and resources on each child's development) makes having many children seem overwhelming or impractical.
- **Improved Health and Lower Infant Mortality:** Better health conditions, indicated by a lower Infant Mortality Rate (IMR), are linked to higher contraceptive use and lower fertility.
- **Weakening of Son Preference:** A strong

> **Some Government Initiatives for Population growth**
> - **National Population Policy (2000):** Set the goal of **stabilising population by achieving replacement-level fertility**, focusing on **maternal and child health** and wider access to contraception.
> - **Expanded Contraceptive Basket:** New options **like Injectable contraceptive (Antara) and Centchroman (Chhaya)**
>   - Added **alongside condoms, pills, IUCDs, and sterilisation** to give people more choice.
> - **Mission Parivar Vikas:** Focused programme in **7 high-fertility and 6 North-Eastern states** to make family planning services more accessible.

preference for sons can keep fertility rates high, as couples may continue having children until they achieve a desired number of sons.
- **Rising Infertility and Use of Abortion:** Many experts observe that rising rates of infertility in both men and women and abortions are important factors which could be contributing to this decline in fertility.

Impact of declining Total Fertility Rate

Positive impact

- **Economically Active Population:** As fertility rates have declined, the proportion of the population in the "economically active" age group of 15-59 years has **correspondingly increased.**
- **Stimulate Economic Growth:** Falling fertility rates can boost economic growth by encouraging higher workforce participation, greater savings, and increased investment in physical and human capital.
- **Reduce Social Inequities:** The slowing of population growth provides an opportunity to ensure that public services like education and health are available to everyone which can help reduce social and regional disparities.
- **Environmental Sustainability:** Reduce pressures on the environment associated with climate change, depletion of natural resources, and environmental degradation.

Negative Impact

- **Impede economic and social progress**: Fewer births and smaller populations naturally mean fewer workers, savers, and spenders, potentially sending an economy into contraction.
- **Ageing population:** States with a longer history of low fertility rates, such as Kerala (TFR 1.5), now have the highest proportion of elderly persons at 15.1%.
- **Uneven Regional Growth:** Fertility variations may deepen **regional inequalities and affect representation**.
  - All States reporting higher than replacement level TFR are in northern India — Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, and Chhattisgarh.
- **Irreversibility of Fertility Decline:** Once fertility declines, it rarely rebounds.
  - Countries like South Korea, which tried to stem the demographic crisis have failed and the fertility rate plunged from 0.78 in 2022 to 0.72 in 2023.

Way Forward

- **Adopt a differential policy approach:** While low-TFR states may need pro-natal incentives, high-TFR states still require sustained investment in female education and accessible health services.
- **Rights-Based Family Planning:** Maintain the current rights-based approach to family planning by expanding the basket of contraceptive choices (moving beyond female sterilization).
- **Plan for an Ageing Population:** This includes considering the sustainability of social security and pension systems.
- **Affordable and Subsidized Childcare:** Implement universal, high-quality, and subsidized **crèche/childcare** facilities (like the "Palna Scheme") across urban and semi-urban centers to ensure women can continue their careers.
- **Gender-Neutral Parental Leave:** Enforce and encourage the use of **paid parental leave for** *both* **parents** to normalize shared caregiving and reduce the career penalty for mothers.

6.4. OBESITY AND OVERWEIGHT

Why in the news?

According to UNICEF's 2025 report, for **the first time, the prevalence of obesity among children and adolescents has overtaken the proportion of underweight**, highlighting a major shift in global child nutrition trends.

Key Findings of the UNICEF Report

- Obesity among children and adolescents **aged 5–19 (9.4%) surpassed that of underweight (9.2%).**
  - Obesity among this age group **has tripled since 2000, rising from 3% to 9.4%,** while **underweight dropped** from nearly 13% to 9.2%.
- Globally**, one in twenty children** under the age of 5 (5%) and one in five children and adolescents aged 5–19 (20%) **is living with overweight.**
- **Low- and middle-income countries are experiencing the steepest rise** in overweight.
- Obesity rates exceed underweight in every region except **sub-Saharan Africa and South Asia.**

> **Rising Rates of overweight and obesity in India from NFHS-3 (2005–06) to NFHS-5 (2019–21)**
> - **Children (Under 5 years)**: 1.5% to 3.4%.
> - **Adolescents**:
>   - **Girls: 2.4% to 5.4%.**
>   - **Boys**: 1.7% to 6.6%.
> - **Adults**:
>   - **Women**: 12.6% to 24.0%.
>   - **Men**: 9.3% to 22.9%.

Causes of Rising Childhood Obesity

- **Shift to Unhealthy Diets**: Ultra-processed foods (UPFs), high in sugar, salt, unhealthy fats and additives, dominate children's diets and are aggressively marketed, influencing children's diets.
- **Economic Factors**: Ultra-processed foods are often cheaper than nutritious, fresh foods.
  - This price disparity is partly due to agricultural subsidies for key ingredients like corn, soy, and wheat, and the use of preservatives that extend shelf-life.
- **Processed Foods in School Programs**: According to 2024 Global Survey of School Meal Programs, one in four school meal programmes globally serves processed meat, and many offer sweets, deep-fried foods, and sugary drinks.
- **Increased Physical Inactivity:** There has been a global increase in physical inactivity due to lack of open spaces, changing modes of transport, and increased urbanization.
- **Genetic Variants and Disorders:** In some cases, obesity is a multifactorial disease influenced by genetic variants.
- **Weak Policies:** Only 7% have mandatory front-of-pack nutrition labelling and only 8% have food subsidies for healthy foods.

Impact of Rising Childhood Obesity

- **Double Burden of Malnutrition:** In countries like India, **overweight coexists with undernutrition**, showing a dual challenge for policy makers.
- **Higher Risk of Non-Communicable Diseases (NCDs):** Children and adolescents with overweight and obesity are at a greater risk of developing serious NCDs later in life, including type 2 diabetes, cardiovascular disease, musculoskeletal disorders etc.
- **National Economic Costs**: Childhood obesity rise **healthcare costs** and **reduced workforce productivity**.
  - **Global obesity costs** projected surpassing US$4 trillion by 2035.
- **Mental Health Challenges**: Overweight and obesity are associated with **low self-esteem, anxiety, and depression** among children and adolescents.

> **Government Initiatives**
>
> - **POSHAN Abhiyaan:** To improve **nutritional outcomes for children, adolescent girls, and mothers.**
> - **Eat Right India Movement:** Ensures safe, healthy, and sustainable food via **consumer awareness, supply-side programs, and school interventions.**
> - **'Aaj Se Thoda Kam' Campaign:** Nationwide campaign encouraging **gradual reduction of fat, sugar, and salt intake.**
> - **RUCO (Repurpose Used Cooking Oil) Initiative: Collects used cooking oil to safely repurpose it for biodiesel or soap,** preventing re-entry into the food chain.

> **Global Policy Actions**
>
> - **WHO & UNICEF Frameworks:** Supportive school environments, **taxation of sugary drinks**, food marketing regulations, and **national surveillance** of childhood obesity trends.
> - **SDG Target 3.4:** Focuses on **reducing premature mortality** from non-communicable diseases, highlighting childhood obesity as a key intervention area.

Way forward

- **Promote nutritious foods:** Improve the availability and affordability of nutritious foods through social transfers (food, cash, vouchers) strengthening local food systems etc.
- **Protect Breastfeeding:** Implement the International Code of Marketing of Breast-milk Substitutes, including restrictions on digital marketing.
- **Legal Measures:** Enforce rules on **marketing, labeling, and taxation** of unhealthy/ultra-processed foods to protect children. **E.g., 40 percent GST on sweetened carbonated drinks.**
- **Promote Physical Activity:** Encourage **active lifestyles** through programs like **Fit India Movement and Khelo India**.
- **Public Awareness:** Educate families and communities about **healthy eating, risks of junk food, and physical activity**.

Conclusion

Tackling childhood obesity **requires holistic, multi-sectoral action, aligned with SDG targets**, combining legal measures, access to nutritious food, public awareness, and physical activity to ensure healthier, stronger, and empowered children.

6.5. NEWS IN SHORTS

6.5.1. SEXUAL HARASSMENT OF WOMEN AT WORKPLACE (PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013 (POSH ACT)

The Supreme Court upheld that political parties **cannot be** treated as "workplaces" excluding them from POSH act.

About POSH act 2013

- **Judicial precedent**: Based on **Vishaka judgement 1997**
- **Scope**: Applies to all workplaces: government, private sector, NGOs, educational institutions, hospitals, sports facilities, etc.
  - Covers domestic workers as well.
- **Internal Complaints committee (ICC)**: Mandatory in every workplace with 10 or more employees.
  - At least 50% of members and presiding officer shall be women.
- **Local complaints committee (LCC):** In each district to deal with complaints in workplace with less than 10 employees.
- **Complaint:** To be made within a period of 3 months from the date of incident to ICC or LCC which are to complete inquiry within 90 days.

6.5.2. SWASTH NARI SASHAKT PARIVAR ABHIYAN

Recently, Prime Minister launched '**Swasth Nari Sashakt Parivar' Abhiyan**.

About Swasth Nari Sashakt Parivar **Abhiyan**

- The Abhiyan will organize over one lakh health camps **to screen women** for **anaemia, hypertension, diabetes, and cancer**, while supporting **immunization and nutrition** to reduce maternal and child mortality.
- **Ministries:** Joint effort of **Ministry of Health & Family Welfare** and **Ministry of Women & Child Development.**
- **Technology: SASHAKT portal** will track progress and ensures accountability in real time.
- **Community Role**: Anganwadis, Nikshay Mitras, private hospitals, etc. will also participate.

6.5.3. "PROGRESS ON THE SUSTAINABLE DEVELOPMENT GOALS: THE GENDER SNAPSHOT 2025"

The document jointly released by the **UN Women and UN DESA** (Department of Economic and Social Affairs) offers a comprehensive **overview of the global state of gender equality** across all **17 Sustainable Development Goals** (SDGs).

Key Highlights of the Gender Snapshot 2025

- **Poverty & Food Security: 376M women** in extreme poverty **(9.2%)**; anaemia projected to rise to **33% by 2030.**
- **Health:** Maternal mortality **decreased by 39% (2000–23)**, but women spend 3 **more years in poor health than men.**
- **Education:** Girls surpass **boys in enrolment, yet lag in secondary completion** in Africa & Asia; women rarely head schools.
- **Leadership & Work:** Women hold **27% of parliamentary seats, 30% of management roles.**
- **Violence: 12.5% women face** intimate partner violence; **19% of young women married before 18.**
- **Digital Divide**: **65% women online vs 70% men;** women's jobs more exposed to **AI automation.**
- **Climate & Resources**: Climate change could push **158M more women into poverty; 896M lack clean cooking fuels.**
- **Peace & Security: 676M women lived near deadly conflict** in 2024.
- **Intersectionality:** Women with disabilities **face limited reproductive rights,** Internet access, and **political participation.**

Priority Actions under Beijing+30 Action Agenda

Digital Revolution: Close the gender **digital divide**.

Freedom from Poverty: Invest in **social protection, health, education, care economy**.

Zero Violence: Eliminate **gender-based violence** with strong laws & services.

Equal Decision-Making Power: Ensure women's leadership in **politics & governance.**

Peace & Security: Fully fund Women, **Peace & Security agenda,** ensure **participation.**

Climate Justice: Integrate **gender** into climate action & resource rights.

6.5.4. UDISE+ 2024-25 REPORT

- Unified District Information System for Education Plus (UDISE+) 2024-25 Report was recently released by **Ministry of Education.**
- It aligns its findings as per NEP 2020 recommendations and has shifted to individual student-wise data collection mechanism.

Major Findings for the year 2024-25

- The **total number of teachers has crossed the 1 crore mark in 2024–25 (rise of 6% from 2022-23)** for the first time since the beginning of UDISE+.
- **Pupil-Teacher Ratios (PTRs)** have surpassed NEP's recommended 1:30 ratio.
  - Present PTR: **Foundational (10), Preparatory (13), Middle (17), and Secondary levels (21)**.
- **Drop-out rates:** It has decreased to 2.3% (Preparatory), Middle (3.5) and Secondary (8.2).
- **Gross Enrolment Ratio: It has improved to 90.3% (Middle)** and **68.5%** (**Secondary) levels**
- **Zero enrolment (decreased by 6%)** and **single-teacher schools (38% decrease)** has shown progressive changes.

Data and Trends in Indian School Education in percentage terms (2022-23 to 2024-25)

Category	Indicator	2023-24	2024-25
Infrastructure Facilities	Computer access	57.2	64.7
	Internet	53.9	63.5
	Girls Toilet	97.2	97.3
Female Representation	Girls Enrollment	48.1	48.3
	Female Teachers	53.3	54.2

6.5.5. COMPREHENSIVE MODULAR SURVEY (CMS) ON EDUCATION

The Comprehensive Modular Survey (CMS) on Education, which forms part of the 80th round of the **National Sample Survey (NSS)** was recently released.

- It is released by **the National Statistics Office (NSO**), Ministry of Statistics and Programme Implementation (**MoSPI**)
- It used **Computer-Assisted Personal Interviews (CAPI)** for data collection
- This survey differs from previous surveys (the most recent CMS undertaken by NSS was the 75th Round (July 2017– June 2018))
  - **Coverage**: Unlike the previous survey, which included all levels of education, this one focuses only on school education.
  - **Anganwadi Centres:** Classified under pre-primary education in this survey, unlike the 75th Round, where they were counted as 'other non-formal' education.
  - **Private Coaching:** Unlike the 75th Round, the CMS **separately** collected and presented spending on school education and private coaching.

Key Highlights of the Survey

- **Role of Government Education:** Government schools account for **55.9 %** of total enrolments.
  - It is higher in **rural areas (66%),** in comparison to **urban areas (30.1%).**
  - **Private School Enrolment:** Private unaided (recognised) schools account for **31.9 %** of total enrolment across the country.
- **Prevalence of private coaching:** 27% of students were taking/had taken private coaching,
  - It is **more prevalent in urban areas** (30.7 %) than in rural areas (25.5 %).
  - **Family Funding as main source of education:** Approximately 95.0 % of students rely on other household members as their primary source of funding for education expenditure.

6.5.6. NATIONAL INSTITUTIONAL RANKING FRAMEWORK (NIRF) 2025

Recently, NIRF rankings 2025 were released by the Union Government.

Key highlights

- **IIT Madras** topped the overall category
- **Indian Institute of Science, Bengaluru** topped the Universities Category.

About NIRF

- **Origin**: Launched in 2015 by the Ministry of Education to rank Indian institutions.
  - Provides a transparent, reliable system **for students, parents, and policymakers** to evaluate colleges and universities.
- **Assessment Parameters:** 5 broad categories with different weightage are used
  - Teaching, Learning & Resources (0.30)
  - Research and Professional Practice (0.30)
  - Graduation Outcome (0.20)
  - Outreach and Inclusivity (0.10)
  - Perception (0.10)

6.5.7. ROAD ACCIDENTS IN INDIA 2023 REPORT

Road Accidents in India 2023 Report was recently released by Ministry Of Road Transport And Highways.

Key Statistics

- **Total Accidents and Fatalities:** In 2023, **480,583 road accidents** occurred (increased by 4.2% compared to 2022).
  - **Young adults** in the age group of **18 - 45 years** accounted for **66.4%** of victims during 2023.
- **Highest Share: Tamil Nadu** recorded the highest number of road accidents in 2023 followed by **Madhya Pradesh**.

- o **Uttar Pradesh** had the most fatalities followed by **Tamil Nadu**.
- **Accident prone Highways:** Highways with **~5% of the total road network** accounted for > **53% of total accidents and 59% of fatalities.**
- **Road user categories: Two-wheeler riders** constituted the highest percentage of accident deaths (45%) followed by **pedestrians.**

Major causes of Road Accidents:

- **Human Error:** It includes **traffic rule violations**, **driving without a valid driver license** and **non-use of safety devices**.
- **Road Environment:** It includes accidents happening in a **particular geographical area (residential etc.),** those related to **road features, weather conditions etc.**
- **Vehicular conditions: E.g.,** Age of vehicle and Overloading.

Read our previous coverage on Road safety

Mitigation Measures by Ministry of Road Transport & Highways

Education: Road Safety Advocacy, National Road Safety Month/Week awareness campaigns.

Engineering: Road safety audits, accident-spot identification, vehicle safety features (airbags, child safety).

Enforcement: Penalties (Motor Vehicles Act, 2019), electronic monitoring.

Emergency Care: Good Samaritan protection, victim compensation, ambulance services.
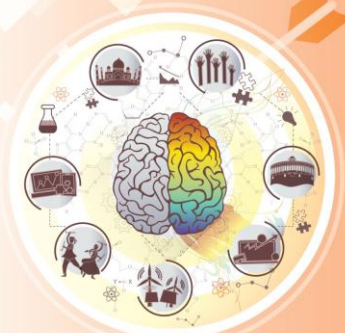
SMART QUIZ

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.

7. SCIENCE AND TECHNOLOGY

7.1. ARTIFICIAL INTELLIGENCE & HEALTHCARE

Why in the News?

India joins Health AI Global Regulatory Network (GRN) to strengthen oversight of AI in healthcare.

More on the News:

- **HealthAI** is a **Geneva-based, independent non-profit organization** that aims to advance **development and adoption of Responsible AI solutions** in health through collaborative implementation of regulatory mechanisms and global standards.
- GRN members have exclusive access to the **'Global Public Repository of AI-related Registered Solutions for Health',** where participating regulatory authorities can showcase AI-related registered solutions from their countries.
  - **Indian Council of Medical Research -National Institute for Research in Digital Health and Data Science (ICMR - NIRDHDS)** & **IndiaAI** will work with HealthAI alongside fellow GRN members, such as **UK and Singapore**.
- It supports **IndiaAI** strategy, which aims to build a comprehensive and inclusive AI ecosystem.
  - **IndiaAI** operates under **Ministry of Electronics & Information Technology (MeitY)** via the **Digital India Corporation**. It aims to position India as a leader in AI innovation and development.

Need for strengthening oversight of AI in Healthcare:

- **Patient Safety and Risk Minimization:** AI in healthcare directly impacts diagnosis and treatment, so regulation is required to ensure safety, minimize risks, and prevent harm.
- **Data Privacy and Security:** Healthcare AI uses sensitive patient data, making regulation vital to protect privacy and ensure data security. India's ICMR ethical guidelines emphasize safeguarding personal health data at various stages.
- **Ethical Use and Fairness:** AI can exhibit biases based on training data, risking unfair discrimination. Regulations are needed to ensure fairness, non-discrimination, and ethical deployment of AI tools.
- **Transparency and Accountability:** Many AI systems operate as **"black boxes" i.e. they generate results without explaining how they arrived at them**. Regulators are likely to insist manufacturers explain how these devices arrive at decisions.
- **Managing Liability:** The potential utilization of AI in healthcare has raised substantial concerns regarding the assignment of liability for medical errors arising from AI-augmented healthcare delivery.

Applications of AI in Healthcare:

AI in Diagnostics	AI in Hospitals and Clinical Settings	AI in Health Data Management
- **Early Detection: iOncology.ai** (AI platform developed by AIIMS and CDAC) helps in early detection of cancer. - **Drug Discovery and Development:** accelerates creation of new medications by analysing molecular structures and identifying candidates for clinical trials	- **Robotic surgeries- da Vinci robot** (AIIMS, Delhi) performs complex procedures with precision. - **Virtual Health Assistants-** **'Clinical Decision Support System'** integrated into **eSanjeevani** provides AI-based differential diagnosis recommendations.	- **Electronic Health Records-** helps find patterns in patient's data and make better decisions. Eg- AyushMaan Bharat Digital Health Mission. - **Automating mundane tasks:** such as data entry, claims processing and appointment scheduling etc.

Challenges of integrating AI in Healthcare:

Technological Challenges

- **Interoperability and Standardization**: Diverse healthcare technologies and limited standardization hinder AI integration and raise risks of unauthorized data access.

- **Algorithmic Bias: E.g. predictive models inaccurately assessed Black patients' health needs which used cost as a proxy for healthcare needs**.

Ethical Challenges

- **Justice and Fairness:** AI should enable equitable access and unbiased decisions, preventing the widening of healthcare inequalities.
- **Patient Consent and Privacy**: AI must safeguard sensitive health data with strong consent and protection mechanisms.
- **Misinformation and Dehumanization**: AI errors or overreliance can spread misinformation and reduce meaningful patient-provider interactions.

Inclusivity and Access Challenges

- **Representation bias:** Representation bias is present when samples from urban, wealthy, or connected groups lead to the ignoring of samples from rural, indigenous, or disenfranchised groups
- **Resistance and Trust:** Healthcare professionals may resist AI adoption due to limited understanding, fear of job loss, or doubts about AI reliability.

Global Innovations India Can Learn Through

- **AI for Remote Patient Monitoring: Finland** uses AI-enabled wearables to monitor chronic patients in real-time, reducing hospital visits and offering a model for **India's non-communicable diseases management.**
- **Federated Learning for Data Security: Singapore** applies federated learning to train models on decentralised data without sharing sensitive information, a practice **India can adopt under Ayushman Bharat for stronger privacy safeguards**.

Recommendations for integrating AI in Healthcare in India

- **Improving data diversity and reducing bias**: Training AI on diverse socio-economic, geographic, and demographic datasets enhances accuracy and reduces bias.
- **Bridging the Urban-Rural Divide:** E.g.: AI-powered telemedicine connects urban doctors with rural communities, expanding equitable healthcare access.

WHO's guiding principles for use of AI in Healthcare

- Protect Autonomy
- Promote Human Well-being, Human Safety, and the Public Interest
- Ensure Transparency, Explainability, and Intelligibility
- Foster Responsibility and Accountability
- Ensure Inclusiveness and Equity
- Promote AI That Is Responsive and Sustainable

- **Embrace regulatory sandboxes approach:** Countries like the USA, Canada, Japan, and Indonesia use sandboxes to foster regulatory innovation and evaluate AI-driven digital health solutions.
- **Use 'Human in The Loop' model of AI technology** which gives room for humans to oversight the functioning and performance of the system.

Conclusion:

AI offers transformative potential for diagnostics, treatment, and healthcare access, but must be regulated to address challenges of safety, bias, privacy, and inclusivity. Coordinated efforts in innovation, capacity building, ethical governance, and international collaboration will enable India to harness AI for improved healthcare outcomes at scale.

7.2. NEWS IN SHORTS
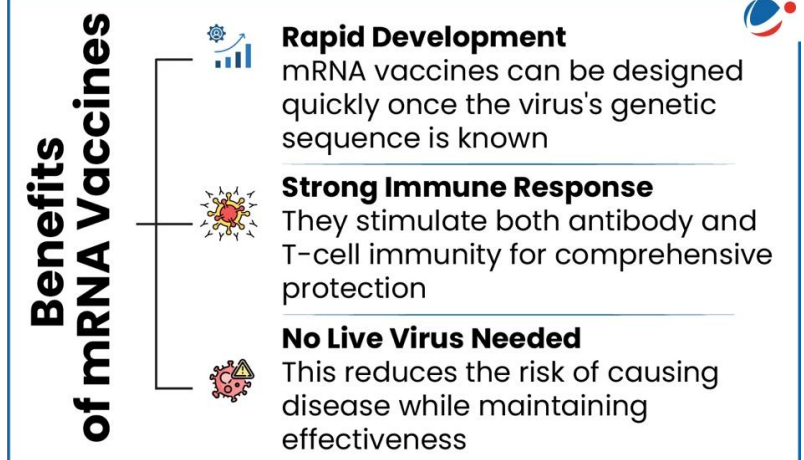
7.2.1. ONCOLYTIC & PERSONALIZED MRNA VACCINES

Russia is developing oncolytic vaccine Enteromix and Personalized mRNA cancer vaccines for cancer treatment.

About oncolytic vaccine Enteromix

- Oncolytic vaccines are a type of cancer therapy that **uses oncolytic viruses (OVs)** to directly **kill cancer cells and stimulate an anti-tumor immune response.**
- Enteromix is based on a **combination of four non-pathogenic viruses** that have the ability to destroy malignant cells and simultaneously **activate the patient's antitumor immunity.**
  o Vaccine showed **100% success in preclinical trials.**
- Initial target of vaccine is **colorectal cancer,** Moreover, promising progress has been made in developing vaccines for glioblastoma and specific types of melanoma.

About Personalized mRNA Vaccines

- **Personalized Vaccine:** Based on the genetic analysis of each patient's tumor, a unique vaccine is created that can "teach" the immune system to recognize cancer cells.
- mRNA vaccines are a type of vaccine that **use a small piece of messenger RNA** (mRNA) to instruct our cells to **produce a protein specific to a virus.**
- mRNA **delivers genetic material,** encapsulated in **lipid nanoparticles**, into body to prompt protein production that match up with parts of pathogen called antigens.
  o E.g., the mRNA vaccine for COVID-19 directed cells to produce copies of a protein on the outside of the coronavirus known as the spike protein.
- Immune system sees these **foreign antigens** as invaders, dispatching **defenders called antibodies and T-cells** and training immune system for potential future attacks.

Benefits of mRNA Vaccines

Rapid Development
mRNA vaccines can be designed quickly once the virus's genetic sequence is known

Strong Immune Response
They stimulate both antibody and T-cell immunity for comprehensive protection

No Live Virus Needed
This reduces the risk of causing disease while maintaining effectiveness

Challenges of mRNA vaccines:

- **Storage requirements:** Require ultra-cold storage, making distribution difficult.
- **Short-term side effects:** E.g. fever, fatigue, and soreness at the injection site.
- **Long-term safety:** mRNA vaccines are relatively new, so long-term effects are still being studied.

7.2.2. WORLD'S LARGEST NEUTRINO DETECTOR ACTIVATED

The detector, known as the **Jiangmen Underground Neutrino Observatory, or JUNO,** is located in **China.**

- The observatory is situated **700 meters underground.**
  o Most of the neutrino observatories are underground, as the physical bulk of the Earth's crust helps **block most other interfering particles**, like muons (elementary subatomic particles similar to the electron).
- **Main goals of the JUNO**
  o **Mass Hierarchy:** To determine the hierarchy of masses between the three neutrino types.
    > The three neutrino types are **Electron neutrino, Muon neutrino, and Tau neutrino**, each linked to their respective particles.
  o **Oscillation Frequency:** To measure the frequency of neutrino oscillation (how often the neutrino types shift, or change, from one type to another).

About Neutrinos

- **Nature:** Subatomic particles (often called **ghost particles)** that have zero electrical charge, zero size and tiny mass.
- **Occurrence: Second-most abundant particle after photons** (particles of light) and most abundant among particles found in the universe.
- **Detectability:** Difficult to detect as they only interact with matter via **weak nuclear force and gravity.**
- **Features:** Undisturbed by even the strongest magnetic field, Travel in straight lines from their source, Travel at nearly the speed of light, etc.

Other Key Neutrino Observatories

- **India-based Neutrino Observatory (INO):** Funded by DAE & DST; located in Bodi West Hills, Tamil Nadu.
- **IceCube Neutrino Observatory:** First deep-ice cosmic neutrino detector at the South Pole.
- **Tropical Deep-sea Neutrino Telescope (TRIDENT) and Deep Underground Neutrino Experiment (DUNE):** China and USA projects, respectively.

7.2.3. EXTREME NUCLEAR TRANSIENTS (ENTS)

Astronomers identified a new category of events: Extreme Nuclear Transients (ENTs).

About ENTs

- ENTs occur when **stars with masses at least three times** greater than that of the sun are torn apart by supermassive black holes.
- As a **star nears a black hole's event horizon,** extreme tidal forces stretch and compress the star into a long, thin spaghetti-like shape, releasing enormous amounts of electromagnetic energy. This emission is the ENT.

7.2.4. QUASI-MOON

Astronomers have identified a tiny quasi-moon, 2025 PN7, orbiting near Earth for about 60 years.

About Quasi-Moon (a.k.a. Quasi-satellite)

- A quasi-moon is a celestial body that:
  - **Orbits the Sun,** appearing to travel with a planet due to a synchronized orbit.
  - Primarily influenced by the sun's gravity, not the planet.
  - Is **not a true moon**, as it does not directly orbit the planet.
- Astronomers have previously identified **around 6 known quasi-moons of Earth.**

7.2.5. INDIA'S LARGEST LITHIUM-ION (LI-ION) BATTERY MANUFACTURING PLANT

India's Largest Lithium-ion (Li-ion) Battery Manufacturing Plant was inaugurated in Haryana.

- When fully complete, it will produce about **20 crore** battery packs every year, covering **nearly 40% of India's annual requirement of 50 crore packs**.
- It was established under the Centre's **Electronics Manufacturing Cluster (EMC) scheme**.
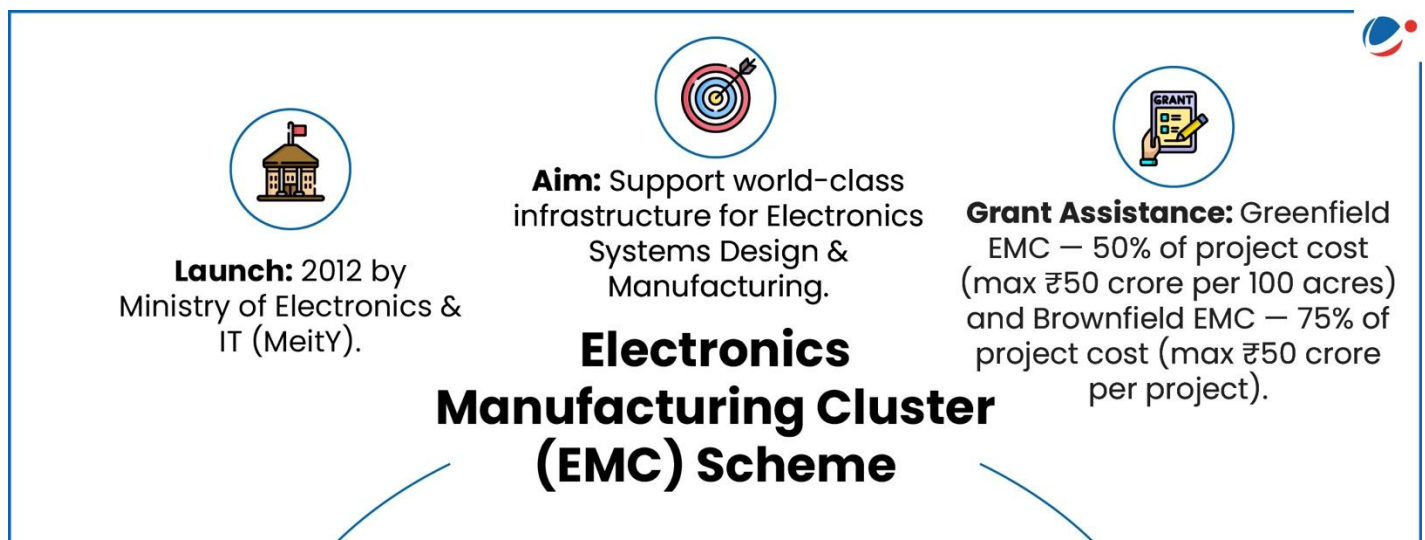
About Li-ion Battery

- It is a type of **rechargeable battery** where lithium ions move between a negative electrode (graphite) and a positive electrode (Li transitional metal oxides) through a non-aqueous electrolyte during charging and discharging.

Benefits of Lithium-ion Batteries

- **High energy density**: At 75-200 Watt-hours /KG, stores more energy compactly, and offers **longer cycles** between charges.
- **Lightweight and Lower Toxic Heavy Metals**: Compared to older **lead-acid batteries**, it is much lighter due to use of less toxic and lightweight **Li and carbon electrodes**.
- **Excellent performance**: They provide **good cycle stability, efficiency, and reliability**, with low self-discharge and generally **no memory effect (**slow-down due to repeated charging**)**.

Challenges

- **Supply Chain Vulnerability: E.g.** China controls half of global Li production and 70% of Li-ion battery production.
  - India imported Li-ion batteries worth **US$ 1.2 billion (2018-2022).**
- **Safety hazards**: They contain a **flammable electrolyte**, which can lead to explosions if manhandled.
- **Environmental impact**: E.g., Lithium mining is **water-intensive** (Apprx. 2,000 tonnes per tonne of lithium).
  - **Lack of Recycling Units** exacerbates the issue of safe disposal.

Launch: 2012 by Ministry of Electronics & IT (MeitY).

Aim: Support world-class infrastructure for Electronics Systems Design & Manufacturing.

Grant Assistance: Greenfield EMC — 50% of project cost (max ₹50 crore per 100 acres) and Brownfield EMC — 75% of project cost (max ₹50 crore per project).

Electronics Manufacturing Cluster (EMC) Scheme

7.2.6. HIERARCHICAL REASONING MODEL (HRM)

Sapient's scientists have developed a new AI modeled on the human brain. **Current Large Language Models (LLMs)** like ChatGPT have certain **limitations** due to use of Chain-of-Thought (CoT) reasoning.

About Hierarchical Reasoning Model (HRM)

- **Modelled on**: Human brain's hierarchical, multi-time scale processing.
  - Mimics how different brain regions integrate information across durations.

7.2.7. AYURVEDA AHARA

Recently, FSSAI and Ministry of Ayush released definitive list of **'Ayurveda Aahara'** Products.

Ayurveda Aahara

- It is a part of the **Food Safety and Standards (Ayurveda Aahara) Regulations, 2022.**
- It gives clear rules for **Food Business Operators (FBOs)** making Ayurvedic food products, so consumers know they are authentic and safe.
- These formulations are **drawn** from **classical Ayurvedic texts**
- The food products include preparations such as, **Angarkarkati (**baked wheat balls), **Krishara** (Khicdi), **Panaka** (fruit drinks), **Dadhi** (curd-based), and **Gulkand** (rose petal jam).

7.2.8. DRAVYA PORTAL

DRAVYA (Digitized Retrieval Application for Versatile Yardstick of AYUSH Substances) portal was launched on **National Ayurveda Day (Sep 23, 2025).**

About DRAVYA Portal

- **Ministry**: Initiatives of **Ministry of Ayush.**
- It is the **largest collection of data on Ayurvedic Ingredients and Products** made available to everyone.
- It is an ever growing, ever evolving database that covers **classical Ayurveda textbooks** as well as **contemporary scientific literature** and field studies.

8. CULTURE

8.1. 200TH BIRTH ANNIVERSARY OF DADABHAI NAOROJI

Why in the News?

Recently, the **200th Birth Anniversary of Dadabhai Naoroji** was celebrated across the nation.

About Dadabhai Naoroji (1825–1917)

*   He was an **Indian scholar, trader and politician**.
*   He was known as the **"Grand Old Man of India"** and **"Unofficial Ambassador of India"**.
*   He was a **founding member and three time president of the Indian National Congress** (in 1886, 1893, and 1906).
    *   In **1906,** He was elected as president of the Congress in order to bridge the differences between **moderates and extremists.**
*   He became the **first Indian to be appointed as Professor at Elphinstone** and taught in the special classes held for the spread of women's education.
*   In 1855, he left for London to join a business. He became **Professor of Gujarati at University College London**.
*   In 1875, he was elected a **Member of the Municipal Corporation, Bombay**

Key Contributions of Dadabhai Naoroji

*   **Social Reform**
    *   **Promoted Women's Education**: Founded the **Student Literary and Scientific Society (1848),** which established 6 schools for girls by 1849.
    *   **Spread reformist ideas**: Founded **Rast Goftar newspaper**, Co-founded **Rahnumai Mazdayasan Sabha** (1851) to reform Parsi society.
*   **Economic**
    *   **Drain of Wealth Theory**: Highlighted how British policies drained India's wealth through taxation, salaries, pensions, and remittances.
    *   **Major Literary works**: Poverty of India, Poverty and Un-British Rule in India.
        *   His efforts led to appointment of a **Royal Commission, the Welby Commission (Chairman),** to enquire into the financial policy of the India Government. **(Dadabhai Naoroji was a member)**
        *   He also started a **newspaper called 'Voice of India'**.
*   **Political**
    *   **Moderate leader**: He was a firm believer in **Parliamentary democracy** and advocated **constitutional and peaceful methods** like petitions, prayers, and protests.
    *   **Founded:** The **London Indian Society** in 1865 and the **East India Association** in 1866.
    *   **First Indian MP in British Parliament**: Elected for the Liberal Party in Finsbury Central at the 1892 general election.
    *   **Mentorship**: Naoroji played a crucial role in mentoring future INC leaders such as Bal Gangadhar Tilak, Gopal Krishna Gokhale, and Mahatma Gandhi.
*   **Ethical**
    *   He expounded the need for **purity in thought, speech and action** in his **book 'The Duties of the Zoroastrians'**.
*   **Education:**

- o **Universalization of Elementary Education**: The first effective step in introducing **compulsory Primary Education** was taken by Dadabhai Naoroji.
  - \> He, along with Jyotiba Phule, put forward the **demand for four years of compulsory primary education** before the Indian Education Commission (Hunter Commission) in 1882.

Conclusion

Dadabhai Naoroji was a pioneering nationalist who combined **social reform, economic critique, and political action** to lay the foundations of India's freedom struggle. His **Drain of Wealth theory and advocacy of Swaraj** gave a clear direction to nationalist aspirations. Even today, his vision of **equity, education, and self-governance** continues to inspire India's democratic and developmental journey.

8.2. 100 YEARS OF THE SELF-RESPECT MOVEMENT

Why in the News?

This year marks the **centenary of the Self-Respect Movement** which changed the course of the political discourse in South India.
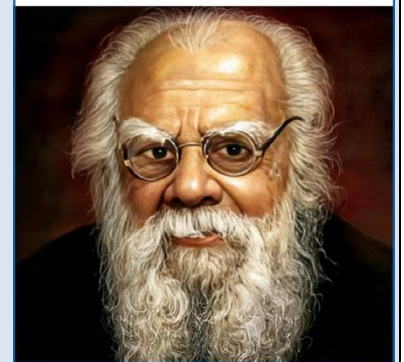
About Self Respect Movement

- **Launched by: E.V. Ramaswamy** (**commonly known as Periyar)** in 1925.
- The **concept of self-respect:** It is a theoretical idea that aims to **establish an egalitarian society** where any type of discrimination, hatred on the basis of caste, religion and gender cease to exist.
- **Described** as: **Arivu Vidutalai Iyakkam**, that is, a movement to liberate the intellect by Periyar.
- **The objectives were outlined in two pamphlets:** Namathu Kurikkol and Tiravitak Kalaka Lateiyam.
- **Features of the Movement:**
  - o **Social Upliftment**: The movement opposed the Devadasi system, caste discrimination, and restrictions on widow remarriage, promoting social equality.
  - o **Self-Respect Marriages:** Legitimized marriages without priests, undermining the monopoly of Brahmin priests and reducing ritual costs.
  - o **Inter caste Marriages**: It opposed child marriage, encouraged love marriage and intercaste marriage.
  - o **Self-Respect Conference**: In 1929, Periyar held the first provincial conference at Chengalpattu, led by W.P.A. Soundara Pandian.

About E. V. Ramaswamy (Periyar) (1879-1973)

E.V. Ramaswamy

- He was a **social reformer, constructive thinker; philosopher** who emphasized that social equality with rational scientific knowledge is the only tool for the formation of egalitarian society.
- He was **affected by Mahatma Gandhi's** constructive political programmes, such as Khadi programmes , temple entry programmes for untouchables.
- He published **Kudi Arasu, a Tamil Weekly** and also took part in Vaikom satyagraha and non-cooperation movement.
- He received the title of **"Vaikom Veeran" and "Periyar"** (which means 'great man') from his followers.
- He advocated **Proportionate distribution of all government rights in accordance with the percentage of population of the community.**
- In 1932, Periyar along with Communist Trade Unionist **Singara Velu Chattiyer**, organized a new political party namely Self-Respect Socialist party.

Significance of the Self-Respect Movement

- **Challenged Brahminical Dominance:** Questioned the social and religious hierarchy that privileged upper castes and laid the foundation for **anti-caste politics in Tamil Nadu.**
- **Women's Rights:** Pioneered reforms in **widow remarriage, right to property, right to divorce, and reproductive choices**, setting early examples for gender justice.
- **Promotion of Rationalism:** Encouraged critical thinking, scientific temper, and rejection of superstition, helping to modernize social attitudes.
- **Language & Cultural Renaissance:** Strengthened the Tamil language, Dravidian culture, and local identity.
- **Educational Access:** Demanded **mass literacy and education** for marginalized sections, challenging the traditional denial of knowledge to non-Brahmins.
- **Economic Justice:** Linked **caste inequality to economic exploitation** and demanded proportionate representation in government jobs and resources.
- **Political Impact:** Provided the ideological foundation for the rise of Dravidian parties (Justice Party, DMK, AIADMK) and shaped Tamil Nadu's distinctive welfare-oriented politics.
- **Global Influence:** Inspired Tamil diaspora movements in Malaysia, Singapore and elsewhere, reinforcing identity and rights consciousness abroad.

Other Social Reform & Anti-Caste Movements

- **Satyashodhak Samaj (1873)**: Founded by **Jyotirao Phule** in Maharashtra to fight Brahminical domination, promote education for lower castes and women, and question religious orthodoxy.
- **(Shree Narayana Dharma Paripalana Movement (1903): By Narayan Guru, and** promoted the slogan "One Caste, One Religion, One God" for humanity; fought caste discrimination among Ezhavas in Kerala.
- **Bahishkrit Hitkarini Sabha (1924):** By Dr. B.R. Ambedkar to promote the education, social, cultural, and economic advancement of the Dalit community.
- **Vaikom Satyagraha (1924–25)**: Social agitation in Travancore (Kerala) demanding temple-road entry for oppressed castes.
- **All India Depressed Classes Association (1930):** By Dr B.R. Ambedkar to fight for the social, economic, and political rights of the Scheduled Castes (Dalits).
- **All India Anti-Untouchability League (1932):** Set up by Gandhi Ji for the eradication of untouchability in society.

Conclusion

The Self-Respect Movement marked a turning point in South India's socio-political history by **challenging caste hierarchy and religious orthodoxy.** It laid the foundation **for rationalism, gender justice, and social equality,** transforming Tamil society and politics. Its legacy continues to inspire movements for **social reform, inclusivity, and empowerment** even today.

8.3. NEWS IN SHORTS

8.3.1. FIDE WORLD CUP

The International Chess Federation (FIDE) announced that the FIDE World Cup 2025 will be hosted in Goa, India.

About FIDE World Cup

- It is a **major chess event** organized by the FIDE, the international governing body for chess.
  - **FIDE** was constituted as **a non-governmental institution** in Paris in 1924, but is now headquartered in **Lausanne, Switzerland.**
- Top three finishers qualify for the 2026 Candidates Tournament.

8.3.2. WORLD BOXING CHAMPIONSHIPS 2025

Jaismine Lamboria and Minakshi Hooda have won gold in the recently held World Boxing Championships, 2025.

 About World Boxing Championships 2025

- Held in **Liverpool, UK.**
- Featured **both men's and women's** events together for the **first time**.
- India won **four medals: Golds by Jaismine Lamboria (57kg) and Minakshi Hooda (48kg) and Nupur Sheoran** earning silver, and **Pooja Rani** adding a bronze.
- **Kazakhstan topped** the medal table.

8.3.3. RAJA PRITHU RAE

He ruled **Kamrupa (Assam)** during the **early 13th century.**

- He belonged to the **Khen Dynasty**, tracing **lineage to Narakasura.**
  - They worshipped **Goddess Kamteswari** (an incarnation of **Goddess Durga**)
  - Khen rulers emerged as local chieftains after the **fall of the Pala Dynasty.**
    - The Khen dynasty marked the **beginning of the Kamata Kingdom**, also known as **Kamru, Kamrud, Kamrupa, Kamata, Koch, or Koch Hajo.**
- **Contribution:**
  - **Raja Prithu Rae defeated Bakhtiyar Khilji** who attacked Kamrupa.
    - The **Kanai Varasi rock inscription** is proof of the destruction of the Turks.
  - He **pardoned prisoners of war** and followed the principles of **Dharma Yuddha.**

8.3.4. MAGSAYSAY AWARD

Educate Girls NGO becomes first Indian organisation to win Ramon Magsaysay Award, in 2025.

About Ramon Magsaysay Award (Established, 1957):

- **First Award:** 1958. It is Asia's highest honor, the **Asian version of the Nobel Prize.**
- **Awarded:** Annually.
- It celebrates the memory and leadership example of the **third Philippine president, Ramon Magsaysay.**
- **Recognises and honours:** individuals and organisations in Asia, regardless of race, creed, gender, or nationality, who have achieved distinction and have helped others generously without aiming for public recognition.

8.3.5. GYAN BHARATAM PORTAL

PM launched the Gyan Bharatam Portal for preserving manuscripts.

It will help in **digitizing India's manuscript heritage**, making them **easier to access and helping preserve cultural knowledge.**

- **In the Union Budget 2025-26, Gyan Bharatam Mission** was announced for the survey, documentation, and conservation of India's manuscript heritage.

About Manuscript

- It is a **handwritten composition** on paper, bark, cloth, metal, palm leaf or any other material dating back **at least seventy-five years** that has **significant scientific, historical or aesthetic value.**
- **Lithographs** (A technique involving drawing on a stone and then transferring the image to paper) and printed volumes are not manuscripts.
- India possesses **'memory of the world'** with an estimated **10 million manuscripts in 80 ancient scripts** like Brahmi, Kushan, Gaudi, Lepcha, and Maithili.
  - Of these, ~75% are in Sanskrit and 25% are in regional languages.

- **Significance**
  o Provide **evidence of human activities.**
  o Show **devotion of ancestors to knowledge, science & learning** despite centuries of destruction.
  o Provides **knowledge on different aspects of society** like cultural, political, economic, etc. Example-
    Kautilya's Arthashastra.

Other Initiatives for Manuscript Conservation

National Manuscripts Mission (NMM): Launched In 2003, by the Ministry of Tourism and Culture to locate and preserve manuscripts.

National Library of India, Kolkata: It has about 3600 rare and historically important manuscripts.

Asiatic Society of Bengal: Founded in 1784, by Sir William Jones, undertakes digitization of ancient manuscripts.

SMART QUIZ

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

Lakshya
PRELIMS & MAINS INTEGRATED MENTORING PROGRAM 2026

Lakshya Prelims & Mains Integrated Mentoring Program 2026

(A 11 Months Strategic Revision, Practice, and Mentoring Program for UPSC Prelims and Mains Examination 2026)

VisionIAS introduces the Lakshya Prelims & Mains Integrated Mentoring Programme 2026, offering unified guidance for UPSC aspirants across both stages, ensuring comprehensive support and strategic preparation for success

Highlights of the Program

- Coverage of the entire UPSC Prelims and Mains Syllabus
- Highly experienced and qualified team of senior mentors
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- Focus on Current Affairs & CSAT preparation through rigorous practice
- Access to Lakshya Prelims Practice Tests (LPPT) and Lakshya Mains Practice Test (LMPT)
- Sandhan Personalised Test Series with an extensive collection of 25000+ questions

- Development of Advanced answer writing skills
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- Special emphasis to Essay & Ethics
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| Date	Duration	Medium	Mode
30 September	11 Months	English & Hindi	Offline & Online

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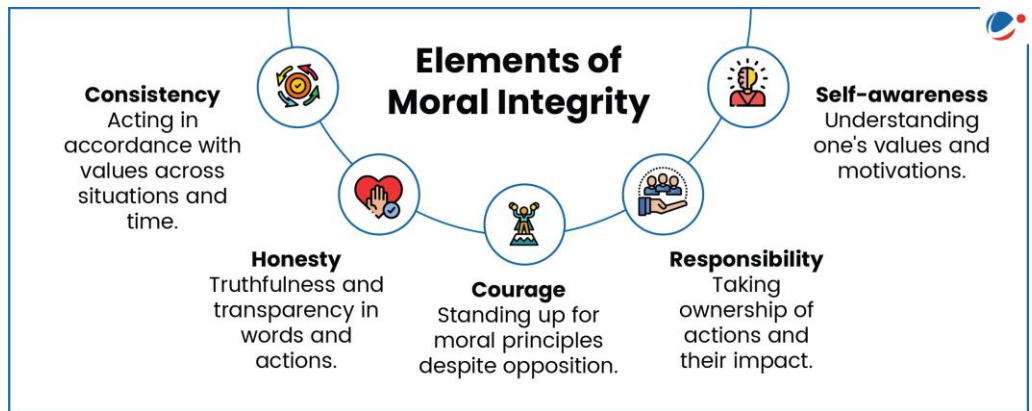enquiry@visionias.in

9. ETHICS

9.1. MORAL INTEGRITY

Introduction

Recently, Supreme Court Judge Justice Surya Kant remarked that moral integrity is a guiding force that does not terminate paths, but rather defines them. This underscores that integrity is not a limiting factor; instead, it shapes ethical direction, enabling decisions grounded in justice, fairness, and accountability.

> Integrity is doing the right thing, even when no one is watching
>
> –C.S. Lewis
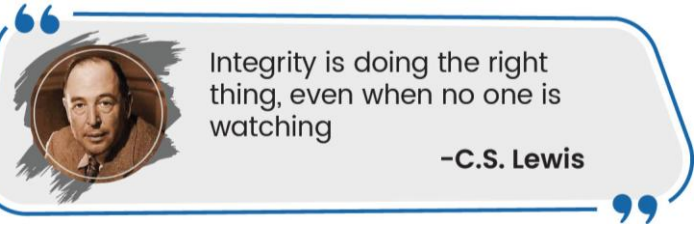
What is Moral Integrity?

- **Definition**: Moral integrity is the **steadfast adherence to ethical principles and values** even in difficult circumstances.
  - It involves **internal consistency between one's beliefs, speech and actions**, ensuring that decisions and behaviors align with a **set of moral standards** regardless of external pressures or temptations.

Elements of Moral Integrity

Consistency — Acting in accordance with values across situations and time.

Honesty — Truthfulness and transparency in words and actions.

Courage — Standing up for moral principles despite opposition.

Responsibility — Taking ownership of actions and their impact.

Self-awareness — Understanding one's values and motivations.

Key Stakeholders and their Interests

Stakeholder	Interests / Concerns
Individuals	• Building personal credibility and trustworthiness. • Developing moral courage to resist corruption in daily life.
Public Servants	• Upholding probity and impartiality in governance. • Preventing misuse of office for private gain. • Delivering citizen-centric governance based on transparency and accountability. • Protecting against political pressure and institutional corruption.
Judiciary	• Acting as guardians of constitutional morality and justice. • Ensuring impartial decisions without political or social influence.
Corporate Leaders	• Maintaining ethical business practices that ensure long-term sustainability. • Building investor and consumer confidence through integrity-driven policies.
Political Leadership	• Serving public interest rather than personal or party gains. • Upholding democratic values of fairness, equality, and inclusivity. • Ensuring policies and decisions are morally sound and people-centric.
Society at Large	• Cultivating a culture of honesty, fairness, and justice. • Protecting against erosion of values due to greed, materialism, or impunity. • Ensuring sustainable governance, ethical leadership, and social cohesion.

Factors Inhibiting Moral Integrity

- **Conflict of Interest: Personal gain versus public duty** can compromise decision-making.
  - **E.g.** In the **2G Spectrum case**, allocation of licenses favored vested interests, undermining public trust.
- **Institutional and Systemic Pressures: Unrealistic targets**, **bureaucratic red tape**, and **political interference** may push individuals to compromise on ethical choices.
  - **E.g.** Cases like the **Vyapam Scam** in Madhya Pradesh show how institutional weakness undermines integrity.

- **Greed and Materialism:** Rising **consumerism** and **desire for wealth & power** drive unethical behavior.
  - **E.g.** Corporate scandals like **Satyam Scam** were rooted in greed, leading to large-scale fraud.
- **Lack of Transparency and Accountability: Opaque systems** and a **slow and inefficient judiciary** create opportunities for manipulation and ethical compromise.
  - **E.g.** Before RTI Act, 2005, lack of access to government information enabled unchecked corruption in welfare schemes.
- **Peer and Social Pressures:** Conformity to **group behavior**, **fear of consequences (like transfer),** or desire for approval often overrides ethical principles.
  - **E.g. Edward Snowden** faced backlash for exposing surveillance practices, showing the cost of going against the group.
- **Unethical Behavior and Culture of Impunity:** When corruption or unethical conduct goes unpunished, it discourages integrity.
  - **E.g.** In **electoral politics**, candidates with **criminal backgrounds** often win, reinforcing the idea that unethical practices are rewarded.

Importance of Moral Integrity in Contemporary Times

- **For Individuals**
  - **Personal Credibility & Trustworthiness**: A leader's moral integrity inspires faith.
    - **E.g. Ratan Tata** exemplified moral integrity through ethical business practices, philanthropy, and humility.
  - **Moral Compass in Complex Situations**: With rising **ethical dilemmas (AI use for surveillance, climate justice),** moral integrity helps make fair choices.
    - **E.g.** Whistleblowers like **Edward Snowden** reflected the role of integrity in balancing security with freedom.
    - **E.g. Satyendra Dubey**, an NHAI engineer, exposed corruption in the Golden Quadrilateral Project.
- **Public Administration & Governance**
  - **Prevention of Corruption**: Integrity curbs misuse of office for personal gain.
    - **E.g. IAS Officer Ashok Khemka** consistently upheld probity despite frequent transfers.
    - **E.g. RTI Act** in India empowers citizens to demand integrity from officials.
  - **Citizen-Centric Governance**: Moral administrators focus on welfare rather than power.
    - **E.g. Metro Man E. Sreedharan** ensured transparent contracts and timely delivery of projects.
    - **E.g. Singapore's public service code** ensures impartiality and probity, making it a global benchmark.
  - **Restoring Public Trust**: **E.g. the Election Commission of India**, through strict enforcement of the Model Code of Conduct, has built confidence in free and fair elections
- **Judiciary Upholding Constitutional Morality**: Judges must act with impartiality, resisting political or social pressures.
  - **E.g.** Supreme Court decriminalized homosexuality in **Navtej Johar Case (2018).**
- **Corporate Sector & Business Ethics**
  - **Ethical Business Practices**: Integrity prevents unethical shortcuts like tax evasion, labor exploitation, or environmental harm.
    - **E.g. Infosys** under Narayana Murthy built a reputation for transparency, corporate governance, and fair employee treatment
  - **ESG (Environmental, Social, Governance) Norms:** Framework for morally responsible corporations to tackle challenges of modern times.
    - **E.g.** The automotive giant **Toyota** has committed to achieving net-zero emissions by 2050.
- **Civil Society Activism & Journalism**: Integrity ensures facts over sensationalism, and countering fake news.
  - **E.g.** Ethical journalism became critical for saving lives **during COVID-19 by checking spread of misinformation.**
  - **E.g., Anna Hazare's anti-corruption movement.**
- **Technology & Digital Age**: Decisions on surveillance, privacy, and algorithmic bias require moral integrity.
  - **E.g. Tim Berners-Lee**, creator of the World Wide Web, advocates for an open, decentralized, and privacy-respecting internet

Conclusion

Moral integrity is the bedrock of a just and trustworthy society. It guides individuals and institutions to act ethically, even under pressure, ensuring fairness, accountability, and compassion in all spheres of life. Upholding integrity is not just a

choice, it is the cornerstone for sustainable governance, ethical leadership, and a resilient democracy. As **Mahatma Gandhi observed**, "Morality is the basis of things and truth is the substance of all morality."

Practice Question (Case Study)

Vijay, an IAS officer, is posted as the District Collector in a region suffering from severe water scarcity. A private multinational company proposes a large-scale groundwater extraction project, promising significant funding for local infrastructure development, including schools, hospitals, and roads. While the project could provide immediate relief and stimulate the local economy, it risks depleting water sources vital for agriculture and rural livelihoods.

Farmers and community leaders oppose the project, fearing loss of irrigation and long-term environmental degradation. At the same time, the state government and political leaders are pressing for approval to attract investment and showcase development. Media outlets and social media campaigns amplify the issue, often framing it in polarized ways. Vijay faces the challenge of balancing development goals, environmental sustainability, public welfare, and political expectations. His decision will have both immediate and long-term consequences for the community, his career, and public trust in governance.

Questions:

a) Identify the ethical dilemmas faced by Vijay in this scenario.
b) What are the options before Vijay? Critically evaluate and examine each of these options.
c) Which of the options, do you think, would be most appropriate for Vijay to adopt and why?

9.2. BIG TECH & ETHICS OF AI: A GROWING REGULATORY CHALLENGE

Introduction

Recently, concerns over Big Tech's dominance in AI have grown, with U.S. courts examining Google's monopoly in search, including the use of AI. At the same time, two authors sued Apple in federal court, accusing it of using their books without permission to train its "OpenELM" AI model by adding them to a pirated dataset without consent, credit, or payment.

These cases reflect a growing trend of legal challenges against AI firms over the use of copyrighted content in training Generative AI LLMs and creating a digital monopoly on the internet.

Key Stakeholders and their Interests

Stakeholder	Interests / Concerns
Big Tech AI Companies	• Market dominance, higher profits, global expansion. • Control over algorithms, datasets, and innovation. • Building public trust while maximizing shareholder value.
Content Creators	• Protection of copyright and intellectual property rights. • Fair compensation and acknowledgment for use of their works.
Consumers	• Affordable, safe, and trustworthy AI services. • Protection of privacy and sensitive information.
Governments	• Ensuring fair competition and preventing digital monopolies. • Safeguarding national security and citizens' rights. • Balancing innovation with regulation for sustainable growth. • Preventing privatization of freely available knowledge.
Society at Large	• Long-term ethical, equitable, and sustainable use of AI. • Fair distribution of technological benefits. • Protection from irreversible harms such as biased AI systems, misinformation, and erosion of democratic values.

What are ethical concerns regarding operations of AI LLMs?

- **Digital monopoly and unfair competition:** Allegations against dominant AI firms (Google, Microsoft, OpenAI) for **anti-competitive practices** such as **control over data, algorithms, and markets**, suppresses smaller players and violate principles of fairness, equal opportunity, and distributive justice.

- o **E.g.** the **dominance of Google as the default search engine** in phones creates a digital monopoly for the company.
- **Copyright and Intellectual Property Rights (IPR) Infringement: Issues like** Breach of respect for authorship, fairness in compensation have emerged.
  - o It also violates the **Kantian duty to treat creators as ends in themselves rather than as mere means** of using their material without consent and fair compensation for training AI.
  - o **E.g.** AI models scrape books, articles, music, art pieces, code, etc. without due permissions, impacting the **revenue streams** of **small content creators.**
- **Privacy and sensitive information:** If sensitive information, such as **unpublished research, patient records, or business documents,** is uploaded, there is a risk of breach of trust, lack of consent and violation of transparency norms.
  - o **E.g. South Korea** suspended new downloads of the **Chinese AI app DeepSeek** after the company admitted it had not fully complied with the country's privacy rules.
- **Privatization of Public Knowledge**: Monopolistic firms turn freely available data into proprietary products.
  - o **E.g.** Wikipedia data being used for AI training without acknowledgment.
- **Corporate Profit vs. Ethics**: Pursuit of **market dominance at the expense of creators' rights and societal fairness** highlights lack of moral integrity in corporate practices.
- **North-South Divide**: Global South creators' works are often used without safeguards, while Global North firms dominate profits. This deepens **digital colonialism** and **economic inequality.**

What is the status of regulation of AI LLMs operations?

India

- **No Specific Law**: India currently lacks clear legal norms for consent, licensing, data ownership in AI training, and sector-specific AI rules, e.g. for healthcare, banking, etc.
- **Other Laws: IT Act of 2000, Digital Personal Data Protection Act, 2023, The Copyright Act, 1957, The Competition Act, 2002**, etc. are indirectly applied to regulate various aspects of AI data regulation.

Global

- **Law: European Union's AI Act**, the **world's first comprehensive AI law,** aims at safe, transparent, and trustworthy AI systems.
- **UNESCO's 2021 Recommendation on the Ethics of AI**: These are **first-ever global standard on AI ethics**. **India** has also adopted them.
- **Other Global Efforts**: India is a party to the **G20 AI Principles**, **2023 Bletchley Declaration of U.K. AI Summit**, and **2025 Paris AI Action Summit's** joint statement on **Inclusive and Sustainable Artificial Intelligence for People and the Planet**.

Way Ahead

- **Strengthening Legal Frameworks**: Enact a **comprehensive AI law,** aligned with **global standards like the EU's AI Act,** addressing consent, licensing, IPR, liability, and accountability in AI training and deployment.
- **Promoting Fair Use and Compensation**: Create a **fair data licensing regime** to ensure creators (writers, musicians, coders) are credited and compensated.
- **Ensuring Competition and Preventing Monopolies**:
  - o Empower the **Competition Commission of India** to monitor AI markets for anti-competitive practices.
  - o Promote **open-source AI models** and **public data commons** to counter big tech monopolies.
- **Safeguarding Privacy and Sensitive Data**: Mandate **data anonymization, consent-based access, and independent audits** for AI firms. Enforce **strong penalties for privacy breaches** and data misuse.
- **Democratizing Knowledge and Access**:
  - o Protect **public digital goods** like open research databases.
  - o Promote **AI literacy programs** to empower citizens.
- **Balancing Corporate Profit with Ethical Responsibility**: Establish **Ethics Review Boards** within AI firms, akin to medical ethics committees.

- **Global Treaty**:
  - Advocate for a **global treaty on AI governance under the UN** for equitable benefit-sharing.
  - Foster **South-South cooperation** on AI research, open datasets, and digital infrastructure.
- **Building Institutional Capacity in India**:
  - Create a **National AI Regulation Authority** to coordinate across sectors.
  - Encourage **public-private partnerships** for ethical indigenous AI development.

Conclusion

Generative AI holds transformative potential but unchecked monopolies, IPR violations, and privacy risks threaten fairness and equity. A **balanced approach** combining strong regulation, ethical innovation, and global cooperation is essential to ensure AI becomes a tool for empowerment, not exploitation.

Question (Case Study)

A large global Artificial Intelligence (AI) company has recently been accused of copying books, news articles, and online content without permission to train its large language models. Several authors and small content creators claim that their intellectual property has been used without consent, credit, or compensation. They argue that this practice not only violates copyright but also endangers their livelihoods by creating unfair competition.

The company, however, argues that AI development requires massive datasets, and restricting data would slow innovation. Their models indirectly benefit society by providing free or low-cost AI tools to millions. Strict copyright restrictions could give monopoly power to a few big publishers, stifling knowledge democratization.

You are a policymaker in India tasked with drafting an ethical and regulatory response to this emerging issue.

a) Identify the ethical issues involved in this case.
b) As a policymaker, what principles of ethical governance will guide your decision?
c) Suggest a balanced course of action that ensures both innovation and protection of creators' rights.
d) What values should AI companies uphold in their functioning to avoid such ethical dilemmas in the future?

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10. SCHEMES IN NEWS

10.1. PM STREET VENDORS ATMANIRBHAR NIDHI (PM SVANIDHI) SCHEME

Why on the News?

Cabinet recently **approved restructuring & extension of lending period** (beyond 2024) of PM Street Vendors AtmaNirbhar Nidhi (PM SVANidhi) Scheme.

Objectives	Salient Features

• Holistic development of street vendors by offering a **reliable source of finance** to support business expansion and opportunities for sustainable growth.
• Provide working **capital loans.**
• Promote f**inancial inclusion, digital payments,** and **identity/recognition** to street vendors**.**
	• **Background:** Initially launched in 2020 to support street vendors who faced unprecedented hardships during the COVID-19 pandemic.
	• **Type**: Central Sector Scheme.
	• **Ministry:** Ministry of Housing and Urban Affairs.
	• **Implementation**: Jointly by **Ministry of Housing & Urban Affairs (MoHUA)** and Department of Financial Services (DFS).
	   ○ DFS responsible for facilitating access to loan/ credit cards through banks/financial institution and their ground level functionaries.
	• **Total outlay:** ₹7,332 crore
	• **Target Beneficiary**: **Street Vendors** engaged in vending **in urban areas on/ before 24 March 2020**.
	   ○ Restructured scheme aims to benefit **1.15 crore beneficiaries** including **50 lakh new beneficiaries**.
	• **Key Benefits:** Working capital with **Interest subsidy** (7%) and Higher loan eligibility **on timely/early repayment.**
	• **New Features:**
	   ○ **Enhanced Working capital Loan Tranches:**
	      > **First tranche:** up to ₹15,000 (up from ₹10,000).
	      > **Second tranche:** up to ₹25,000 (up from ₹20,000).
	      > **Third tranche:** unchanged at ₹50,000.
	   ○ **Digital Access:** Introduction of **UPI-linked RuPay Credit Card** after repayment of **second loan.**
	   ○ **Digital Push:** Up to **₹1,600** cashback incentives for street vendors **for retail & wholesale** transactions.
	   ○ **Coverage Expansion:** From **statutory towns to census towns and peri-urban areas etc.** in graded manner.
	   ○ **Capacity Building:** Training in **entrepreneurship, financial literacy, digital skills, marketing.**
	      > Special training on **hygiene and food safety** for street food vendors **(with FSSAI).**
	   ○ **SVANidhi se Samriddhi:** Strengthened through **monthly Lok Kalyan Melas** for **linking vendors with other welfare schemes.**

WEEKLY FOCUS

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ISSUE	DESCRIPTION	LEARN MORE
Age of War: Charting a path to Sustainable Peace	Indian Prime Minister has often emphasized that "this is not an era of war," a sentiment echoed by billions worldwide. Yet, conflicts like the Russo-Ukrainian and Israel-Hamas wars continue to claim countless lives. This edition examines war's evolution, its human toll, causes, institutional responses, and pathways toward sustainable peace.	
Future of Multilateralism- Emerging Global Order	In a world facing climate change, pandemics, and geopolitical rivalries, multilateralism is under strain yet indispensable. This edition explores its evolution, challenges, and shifting forms, while highlighting India's role and opportunities in shaping inclusive, reformed, and resilient global cooperation for a more just and sustainable international order.	

Places in News
India

Gangotri Glacier
According to a study, **Gangotri glacier has lost 10 percent of its snow** melt flow in four decades.

Siyom River
Recently PM laid the foundation of 2 two hydroelectric projects (Heo and Tato-I) on Siyom River, in Arunachal Pradesh, close to the border with China.

Ranjit Sagar Dam
The Indian Army evacuated stranded CRPF personnel and civilians from flood-hit Madhopur Headworks after heavy discharge from Ranjit Sagar Dam.

Kuno National Park
A cheetah has died after 'clash with leopard' at KNP, a first since cheetahs were brought from Namibia in 2022.

Mhadei Wildlife Sanctuary, Goa
Recently, the Supreme Court stayed projects in Mhadei Wildlife Sanctuary which is a proposed tiger reserve as well.

Bairabi –Sairang Link
Prime Minister inaugurated Bairabi-Sairang broad gauge railway line, which connects Mizoram's capital Aizawl to Indian Railways network for first time.

Nalanda University
Bhutan's PM pays visits to Nalanda University

Barren Island
Barren Island experienced minor volcanic eruptions. It is India's only active volcano.

Simlipal Tiger Reserve (STR)
The Union Ministry of Environment ordered a probe into allegations that the villagers' consent for relocation from the core areas of STR fraudulently obtained

Vembanad Lake, Kerala
Unchecked tourism, luxury houseboats, and decades of encroachment are threatening the Vembanad Lake

Places in News
World

Finland
Finland joins declaration on two-state solution between Israel, Palestinians

Germany
The Prime Minister meets the Foreign Minister of Germany

La Orchila Islands
Recently, Venezuela has begun military exercises on its Caribbean island of La Orchila as tensions soar amid US military activity in the region.

Morocco
India and Morocco signed a MoU on defence cooperation

Estonia
Estonia sought **North Atlantic Treaty Organization (NATO) consultations** after Russian jets violated its airspace

Peru
Magnitude **5.6 earthquake strike** the coast of southern Peru.

Albania
Diella, an AI-generated bot will manage and award all public tenders for government projects, aiming to enhance transparency and minimize corruption

Denmark
India and Denmark reaffirm Green Strategic Partnership, which expand economic relations and green growth, create jobs, and contribute to the implementation of the Paris Agreement

Baltic Sea
Germany deployed fighter jets after a Russian military aircraft entered Baltic Sea airspace.

Russia
A powerful earthquake struck Kamchatka Peninsula (which lies between Bering Sea and Pacific Ocean in East and Sea of Okhotsk in West) in Russia

United Arab Emirates (UAE)
India-UAE High Level Joint Task Force on Investments meeting took place

Qatar
Indian Prime Minister expressed concern at the attacks in Doha and condemned the violation of sovereignty of Qatar

Tirah Valley
More than 20 people were killed in the Tirah Valley of Pakistan's Khyber Pakhtunkhwa province in an explosion.

Scarborough Shoal
The Philippines strongly condemned China's move to set up a nature reserve at Scarborough Shoal.

Mozambique
The First Training Squadron of the Indian Navy reached Mozambique to mark the 50 years of diplomatic relations between the two nations.

Seychelles
The First Training Squadron of the Indian Navy reached **Port Victoria, Seychelles** as part of long-range training deployment in the **South West Indian Ocean Region.**

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2 AIR — **Harshita Goyal**
GS Foundation Classroom **Student**

3 AIR — **Dongre Archit Parag**
GS Foundation Classroom **Student**

4 AIR — **Shah Margi Chirag**

5 AIR — **Aakash Garg**

6 AIR — **Komal Punia**

7 AIR — **Aayushi Bansal**

8 AIR — **Raj Krishna Jha**

9 AIR — **Aditya Vikram Agarwal**

10 AIR — **Mayank Tripathi**

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2 AIR — **Animesh Pradhan**

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