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हिन्दी माध्यम | **DELHI: 25 फरवरी, 8 AM | 25 मार्च, 11 AM**

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Table of Contents

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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1. POLITY AND GOVERNANCE

1.1. FREEBIES

Why in the News?

Recently, Supreme Court questioned whether freebies are fostering a parasitic lifestyle among the poor and discouraging them of the will to find work.

What is meant by Freebies?

Definition: Although, there is no precise definition of freebies **Reserve Bank of India** defines it as **"A public welfare measure that is provided free of charge".** These are in the form of promises made by political parties during elections and have now become an integral part of politics in India.

Welfarism vs. Freebies

- **Welfarism:** Rooted in constitutional duty, it includes sustained efforts like food security (PDS), jobs (MGNREGA), and education/health support—building human capital.
- **Freebies**: Short-term handouts (e.g., free power, water, debt waivers) lack sustainability, distort markets, erode credit culture, and discourage work, as per the Supreme Court.

Multiple approaches to Welfarism

Charity Approach	Needs Approach	Rights-Based Approach
Focuses on input not outcome	Focus on input and outcome to meet needs	Focus on process and outcome for realizing rights
Recognizes moral responsibility of rich towards poor	Recognizes needs as valid claims	Recognizes rights as claims toward legal and moral duty-bearers
Individuals are seen as victims	Individuals are objects of development interventions	Individuals and groups are empowered to claim their rights
Focuses on manifestation of problems	Focuses on immediate causes of problems	Focuses on structural causes and their manifestations

Constitutional and Legal Perspectives

- **Directive Principles of State Policy (DPSP):** Various Articles **38**,**39,41** emphasizes role of state to:-
  - secure a **social order for the promotion of welfare** of the people
  - ensure men and women have **adequate means of livelihood**
  - **prevent concentration of wealth**
  - **Right to work, to education and to public assistance** in certain cases
- **Supreme Court judgement**:
  - **Subramaniyam Balaji Case (2013):** A two-judge bench held that **"state distributing largesse in the form of distribution of colour TVs, laptops, etc. to eligible and deserving persons is directly related to the Directive Principles of State Policy"** and warrants no interference by the court.
  - **Ashwini Kumar Upadhyay v Union of India (case is pending):** The Supreme Court is hearing challenges against the practice of offering and distributing freebies during election campaigns.
- **Election Commission's:** It has called for transparency in electoral promises, urging **political parties to disclose funding mechanisms for freebies.**

Impacts of Freebies

Positive (Welfarism)	Negative (Freebies)
Fulfilment of Basic Needs: Provisioning of food and nutrition, healthcare, housing, education can alleviate burden of poor.	**Financial Burden:** It leads to strained government budgets, increased fiscal deficits and reduced spending on infrastructure development, job creation.
Addresses social and gender disparities: Mid-day meal, free bicycle has led to better enrolment.	**Dependency culture:** It can results in decreased individual motivation and productivity.
Promotes inclusivity and social mobility: Removal of financial barriers through various services can lead to better inclusive growth.	**Undermine Sustainable growth and affect Intergenerational equity: :** E.g. Free electricity, water can led to depletion of ground water leading to wastage of resources, and increased burden on future generations.
Political Participation: Freebies can attract disengaged voters, increase electoral participation and foster a more representative democracy.	**Freebies Politics:** It can be used as populist measure to secure votes rather than address socio-economic disparities.
Mitigate failure of market: Address distributional consequences of economic reforms such as **Under-employment** and low inter-generational mobility.	**Undermine Market:** It can undermine quality and competitiveness of manufacturing sector by diverting resources away from investments.

Many experts observed that in the recent times, the distinction between welfare and freebies seems to have vanished as the two seem to have become synonyms.

Steps to be taken

- **Policy Reforms**
  - **Fiscal Prudence and Debt Management:** Prioritize **sustainable welfare schemes with sunset clauses** maintaining fiscal discipline and public debt sustainability.
  - **Prevent Leakages and Corruption**: Subsidies must reach right people without leakage or corruption.
  - **Expand Insurance Coverage:** It can act as a safeguard mechanism especially for vulnerable sections in case of shocks such as Covid-19.
  - **Build political consensus**: Centre & States together should come together to arrest misuse of welfare schemes in name of freebies.
- **Role of Election Commission:** It can ensure transparency in electoral promises by regulating manifestos and enforcing their accountability.
  - Freebies aren't truly 'free,' and political parties must disclose funding and trade-offs to curb **'competitive populism'.**
- **Skill Development and Self-Reliance:** It helps to empower individuals and reduce dependency on freebies.
- **Voter Awareness:** Educate voters about long-term consequences of freebies to reduce their appeal for irrational freebies.
- **Judicial Oversight and Interventions:** Expert committees comprising members from **NITI Ayog, RBI, and Finance Commission** can be formed to assess impact of freebies.
- **Learning from Global Examples:**
  - **Sri Lanka's** 2019 tax cuts as per election promise led to significant revenue loss snowballing into **financial collapse.**
  - **Venezuela's** populist policies in form of **freebies and loan waivers** led to an economic crisis and prolonged recovery thereafter.

Conclusion

In alignment with the **Amartya Sen's "Capability Approach**," governments must reprioritize long-term empowerment **enhancing human capabilities and freedoms** over short-term freebies. It can help in avoiding the race to the bottom and prevent fiscal disaster, as warned by NK Singh. (Chairman, 15th Finance Commission)

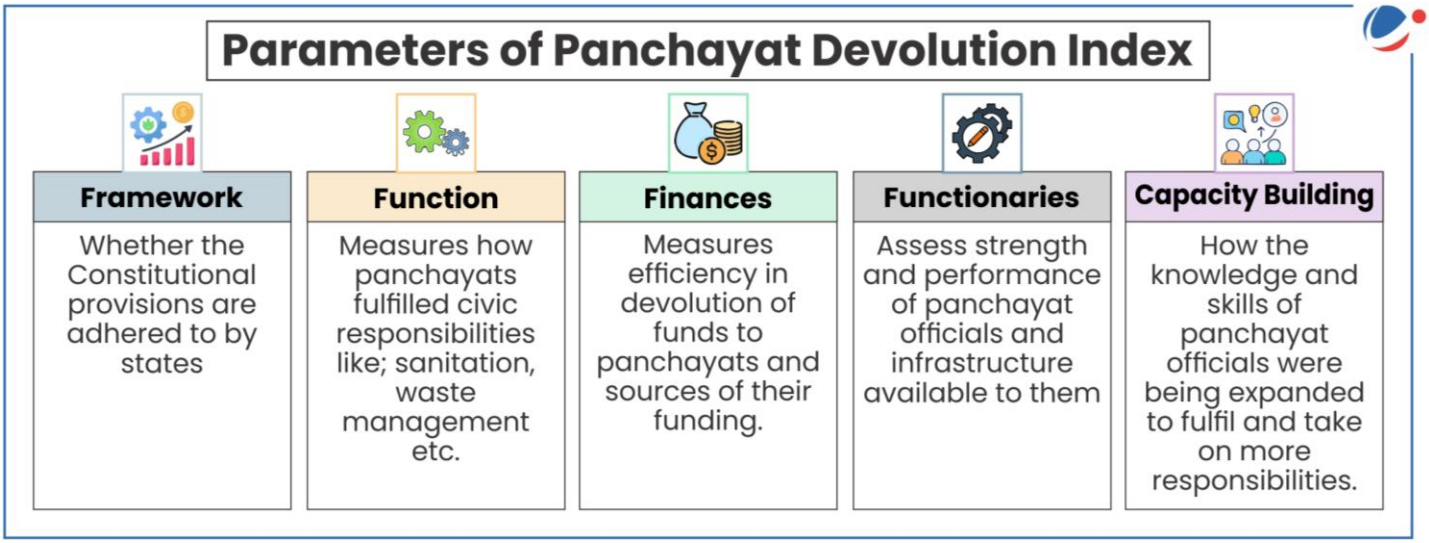
1.2. STATUS OF DEVOLUTION TO PANCHAYATS IN STATES

Why in the news?

Recently, Ministry of Panchayati Raj has released a report titled "Status of Devolution to Panchayats in States – An Indicative Evidence Based Ranking".

Devolution to Panchayats in States report

- Report provides an in-depth analysis at how well Panchayats are equipped to fulfil their Constitutional roles under the 73rd Constitutional Amendment.
  - It was prepared **by Indian Institute of Public Administration (IIPA),** New Delhi.
- **Key Highlights of Report**
  - **Panchayat Devolution Index**: Ranks States/ UTs along **6-dimensions of devolution**. (Refer Image)
    - > The 'function' dimension, which is the base of local self-governments, has the lowest national average among all 6 dimensions.
  - **Top 3 States in devolution** are Karnataka, Kerala, and Tamil Nadu.
  - **Lowest 3 states/UTs** are Dadra & Nagar Haveli and Daman & Diu, Puducherry, and Ladakh.
  - **Devolution has increased** from 39.9% to 43.9% during 2013-14 to 2021-22.
  - **Capacity Enhancement** component of index **increased** from 44% to 54.6% due to initiatives like Rashtriya Gram Swaraj Abhiyan (RGSA).



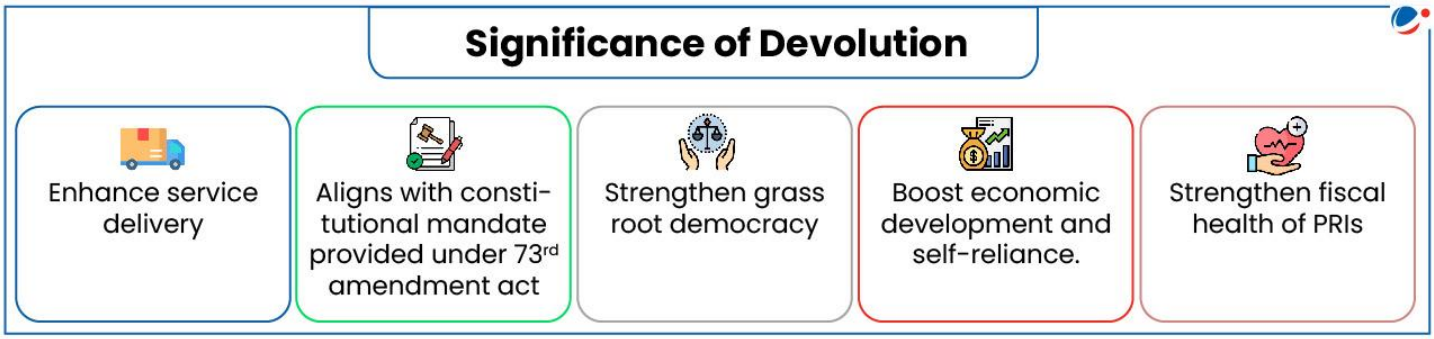
Importance of Devolution Index

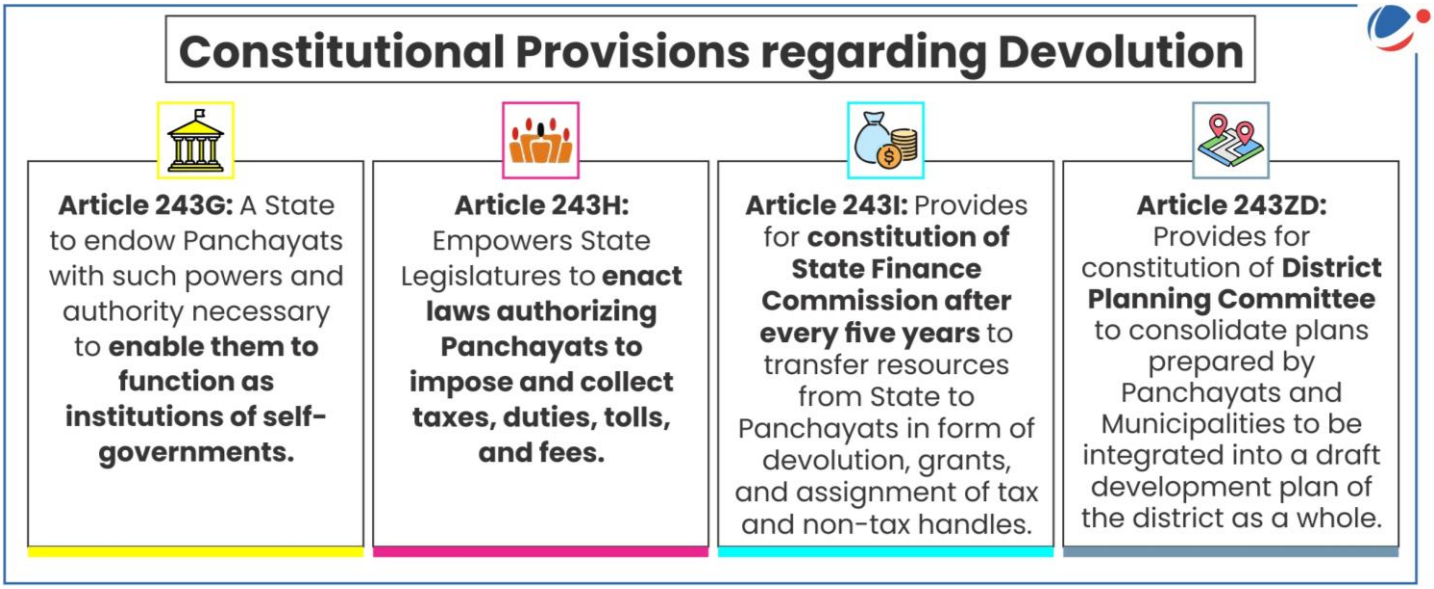
- **For citizens**: It provides transparency in tracking Panchayat functioning and resource allocation.
- **For elected representatives**: It offers data-driven insights for advocacy and reform.
- **For government officials**: It serves as a roadmap for implementing effective decentralization policies.
- **For policymakers**: They can use Devolution Index to assess the overall health of local governance and identify where reforms are most urgently needed.

About Devolution of Panchayat

- Devolution is concerned with **passing on of powers, authority and rights and/or duties and responsibilities** or **funds** from **higher level of jurisdiction to lower level jurisdiction** and making them autonomous in decision making.

- It is a form of **administrative decentralization**.
- Local government, including panchayats, is a **state subject** in the Constitution, and consequently, the **devolution of power and authority to panchayats** has been left to the **discretion of states**.





Challenges regarding Devolution of Panchayat

- **Framework: Irregular elections, delays in delimitation** or formation of ward etc. contradict with constitutional mandate such as holding regular elections (article 243 E).
  - E.g. Delay in conducting elections to over 23,000 local bodies in Madhya Pradesh.
- **Function:** As per report, overall Panchayat Devolution Index is 43.89% (2021-22) due to Panchayats **functions being limited to traditional civic duties,** supervisory nature of intermediate and district Panchayats, parastatal bodies.
  - Parastatal Bodies are set up by specific Acts of Parliament and managed by Boards of Directors appointed by government.
- **Finances:** Inadequate financial resources, **heavy reliance on grants from centre/state government, and irregular constitution of State Finance Commission**, impede the functioning of PRIs.
  - Around 95 % of their revenues come from grants by higher levels of government.
- **Functionaries:** Lack of support staff and personnel such as secretary, **shortage of technical and administrative staff, etc. leads to overburdening**, and hampers efficient governance and service delivery at grassroots level.
  - As per survey, one Panchayat Secretary manages on an average 17 Gram Panchayats in a State.
- **Capacity Building:** Inadequate infrastructure, lack of skills and regular training, digital infrastructure, and inadequate financial and personnel management impacts the functioning of Panchayats.
  - Only seven states and UTs reported that 100% of their panchayat offices were pucca buildings.
  - Over 40,000 GPs in the country still do not have any computers in India.
- **Accountability:** Limited people participation, lack of awareness of accountability measures have led to **increased instances of corruption and misuse of funds by PRIs** officials.
  - E.g. 70% of panchayats in Krishna district (Tamil Nadu) have been misappropriating funds.

Recommendations as per Report

- **Strengthening State Election Commission (SEC):** All election related matters like **fixing election dates, delimitation of constituencies** should be vested with SEC. Further, have a **common electoral role** to be prepared and yearly modified**.**
- **Reserved seats:** Reservations for all categories should be frozen for at least two/three terms. Extending tenures on same seat for general candidates, women, as well as SC/ST candidates in general, to promote efficiency and effectively empower local leaders.
- **Autonomy:** Central Sector Schemes (CSSs) need to provide active roles to Panchayats in all State, and **subjects listed in Eleventh Schedule be transferred to Panchayats and not to parallel bodies.**
- **Funding:** State Finance Commission should be constituted timely every 5 years, reports should be tabled in state legislatures regularly, and steps should be taken to diverse funding sources of the PRIs.
- **Accountability:** Enforce strict financial accountability measures, regular and **independent audits, and Public Financial Management System should be mandatory** for all utilization certificates, releases, and transactions of expenditure, to prevent misuse of funds and corruption.
- **Manpower:** Panchayats should have **authority to manage ad hoc staff, engage external experts, and receive adequate resources** for staffing and infrastructure. Staff distribution must be based on workload and local needs for equitable allocation.
  - A **separate body (Local Government Service Commission)** may be established to **recruit employees.**
- **Capacity Building:** Training PRI members through **comprehensive curriculum** in Local Public Service Management consisting of public systems, financial and personnel management, e-Governance etc. on the lines of MBA for Panchayat functionaries.

1.2.1. PROXY REPRESENTATION IN PRIS

Why in the News?

Panel by Ministry of Panchayati Raj (MoPR) recommended ways for eliminating proxy participation in **Panchayati Raj Insititutions (PRIs).**

More on the News

- Report of the committee is titled as"**Transforming Women's Representation and Roles in Panchayati Raj Systems and Institutions: Eliminating Efforts for Proxy Participation**".
- In **Mundona Rural Development Foundation vs UoI (2023)** Supreme Court directed forming committee t**o examine proxy participation in Panchayati Raj Institutions (PRIs).**

Women's Reservation in PRIs

- **Constitutional Mandated: 73rd Constitutional Amendment Act (1992)** established a three-tiered panchayat system and also **mandated 1/3rd reservation of seats for women in PRIs.**
  - This quota was **further expanded to nearly 50% by 21 States** (Bihar was the first such states).
- **Current Representation: 46.6%** of elected panchayat representatives **are women.**
- **Issue of Proxy Representation:** Many elected **women serve as mere figureheads,** with male relatives (like sarpanch pati) taking control.

- Such practices give the impression that **'women are not effective leaders',** defeating the purpose of reservation.

Key Reforms Proposed by the Committee

- **Strict Penalties**: Punishment for proven cases of male interference, though specifics remain undefined.
- **Stronger Policies**: Kerala-style **gender-exclusive quotas**, **public swearing-in ceremonies**, and **women panchayat federations**.
- **Technological solutions:** Virtual reality simulation training, integrating AI-powered query-driven replies to provide real-time legal guidance to **WERs** [Women Elected Representatives] in **vernacular languages** etc.
- **Accountability Mechanisms**: **Helplines, watchdog committees, and whistleblower rewards** for reporting proxy leadership.
  - **Use of Panchayat Nirnay Portal t**o allow citizens **to track elected pradhans' participation** in meetings and decisions.

1.3. NEWS IN SHORTS

1.3.1. GOVT TO SET UP DEREGULATION COMMISSION

Prime Minister announced that Government will set up Deregulation Commission to Reduce State's role in governance

- PM also emphasized government efforts **through the Jan Vishwas Bill 2.0** to cut bureaucratic hurdles by reducing **regulatory burdens.**
- **Jan Vishwas Bill 2.0:** Announced in the **Union Budget 2025-26**. It aims to **decriminalize over 100 outdated legal provisions** to enhance **ease of doing business.**

About Deregulation

- **Definition:** Deregulation is reduction or elimination of government oversight of an industry.
- **Global Deregulation Initiatives: - US:** Department of Government Efficiency (DoGE); **UK**: Better Regulation Framework; **New Zealand**: Ministry of Regulation.

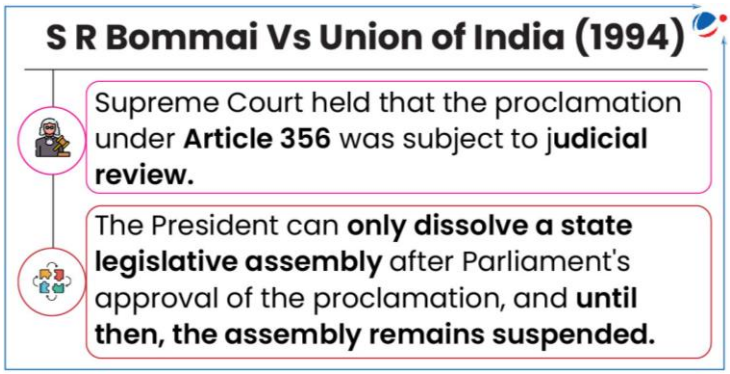
Significance of Deregulations in Fueling Economic Activity

- **Boosts Growth**: India needs to increase investment from **31%** to **35%** of GDP for **8% growth**. Deregulation attracts investments.
  - **E.g., Japan** and **China** achieved high growth through deregulation.
- **Enhance Economic Freedom**: Deregulation removes bureaucratic hurdles, fostering competition.
  - **E.g., Jan Vishwas Act 2023** decriminalized **183 provisions** across **42 central Acts**, easing business compliances.
- **Reduces MSME Compliance Costs**: MSMEs, lacks resources to navigate regulations, benefit from deregulation.
  - **E.g., Haryana** & **Tamil Nadu** amended building regulations to ease compliance for small businesses.
- **Enhances Competitive Federalism:** States learn from each other's deregulation efforts to improve industrial activity.
  - **E.g., Andhra Pradesh, Karnataka** & **Haryana** relaxed prohibitions on women working night shifts, boosting employment opportunities.

1.3.2. PRESIDENT'S RULE IN MANIPUR

President of India issued Proclamation imposing President's rule in Manipur.

- This is the 11th (last being in 2001-02) such imposition in the state placing the state assembly under **suspended animation.**



About President's Rule

- **Constitution: Article 356,** provides for the imposition of **President's Rule in the State** if the President, based on the **report from the State Governor,** is satisfied that the government of the State cannot be carried in accordance with the **Constitutional provisions.**
  - Additionally, **Article 365 provides that if a State fails** to comply with any Union directions under constitutional provisions, the President may declare a "Constitutional Emergency.
- **Duration and Approval:** As per **Article 356 (3),** it shall cease to operate at the expiration of **two months** unless approved by both the Houses of Parliament by **simple majority.**
  - If approved, can be extended to **six months** with the maximum extensions of **3 years** (parliamentary approval every 6 months).
- **Revocation:** By the President by a subsequent proclamation.
- **Consequences:**
  - The **President acquires extraordinary powers, with the Governor**, on her behalf, administering the State with assistance from the Chief Secretary or advisers appointed by the President.
  - President can **transfer State Legislature's powers to Parliament.**
  - It **does not impact** the functioning of the **High Court.**

1.3.3. UNION CABINET APPROVES THE REVISED WAQF (AMENDMENT) BILL, 2024

In revised bill suggestions of **Joint Parliamentary Committee (JPC)** have been incorporated as per reports.

- Earlier, amendments were made in **2013** based on the recommendations of the High-Level Committee under the chairmanship of Justice (Retired) **Rajinder Sachar** and the Report of the JPC.

About Waqf (Amendment) Bill, 2024

- **Objective**: To amend the **Waqf Act, 1995**, to improve regulation of **Waqf properties**.
- **Key Provisions:**
  - **Inclusive composition of Waqf Management:** Involvement of **Muslim women** and **Muslim OBC** in Management (Central Waqf Council and State Waqf Boards).
    - > **Central Waqf Council**: **Statutory body** established in **1964**, to **oversee and advise state-level Waqf Boards** across India. It does **not exercise direct control** over waqf property itself.
    - > **State Waqf Board**: It has **superintendence** over maintenance and administration of Waqf **properties.**
  - **Appeal on orders of Tribunals**: Tribunal's orders may be **appealed** in the **High Court** within 90 days.
  - **Others**: Using technology to improve **registration,** Separate Waqf Boards for the **Aghakhani and Bohra** communities, etc.

What is 'Waqf'?

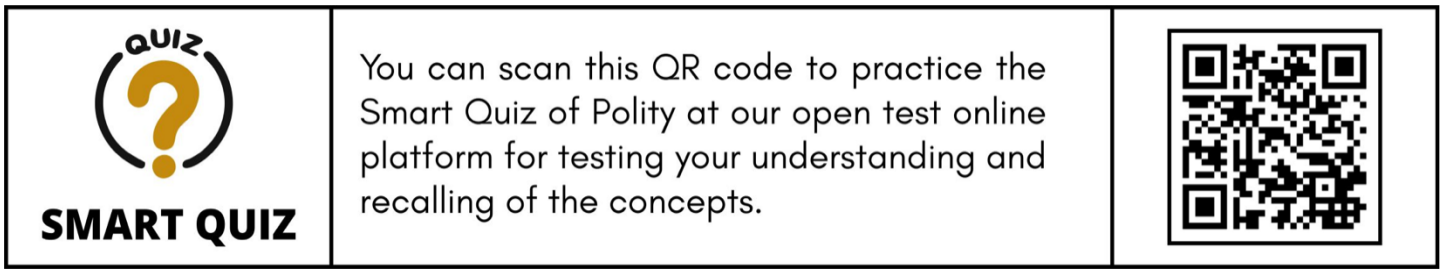
- Refers to **properties dedicated exclusively for religious or charitable purposes** under **Islamic law**, and any **other use or sale** of the property is **prohibited**.
- Waqf properties are **bestowed upon Allah** and are **managed and administered by an appointed 'mutawalli'.**
- **Waqf Boards** currently control **8.7 lakh properties** spanning **9.4 lakh acres** across India. India has the **largest waqf holding in the World.**

1.3.4. DIGITAL BRAND IDENTITY MANUAL (DBIM)

Ministry of Electronics and Information Technology (MeitY) introduced DBIM to harmonize the government's Digital presence.

About DBIM

- The initiative **focuses on simplifying and standardizing government websites.**
- **Aim:** To ensure that citizens from **diverse backgrounds** can easily **navigate** and **access essential government services**.
- **Objective:** To Enhance service delivery, and ensure consistent messaging across ministries, making government priorities more transparent.
- **Significance:** Will enhance the government's **"Minimum Government, Maximum Governance" approach by introducing "Uniform Governance".**



2. INTERNATIONAL RELATIONS

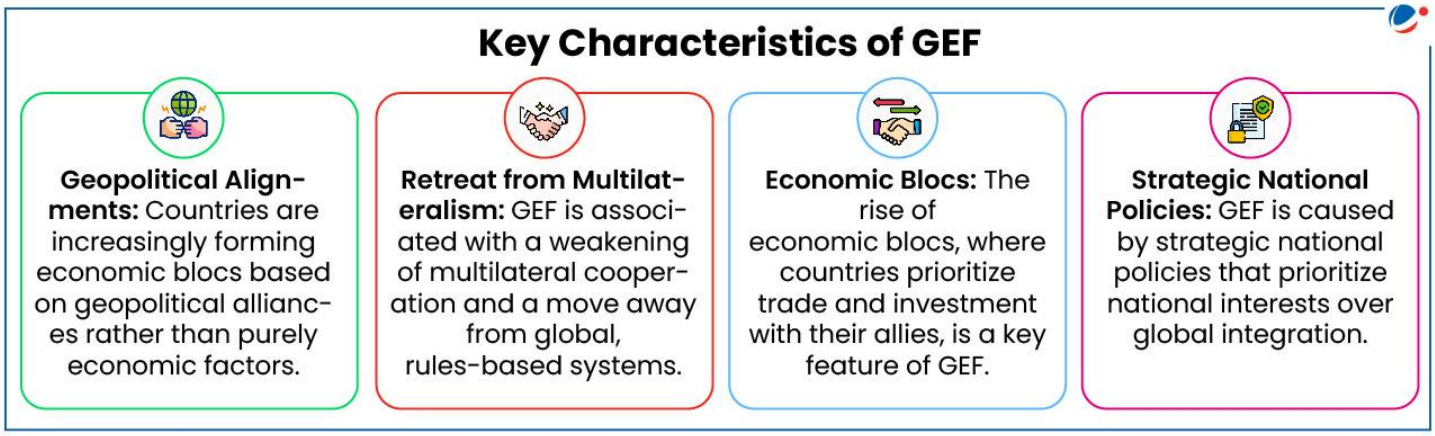
2.1. GEO-ECONOMIC FRAGMENTATION

Why in the News?

The Economic Survey 2024-25 highlights a global shift from **economic integration** to **geo-economic fragmentation (GEF)**, signalling the **replacement of globalization**.

About Geo-Economic Fragmentation (GEF): The New Global Reality

- **Geo-Economic Fragmentation (GEF):** Is defined as a policy-driven **reversal of global economic integration** often guided by **strategic considerations**. **Examples:**
  - **'Friendshoring'**: Growing trade practice where supply chain networks are focused on countries regarded as political and economic allies.
    - > **E.g., Apple** is shifting some of its **iPhone production to India** from China.
  - **'Nearshoring'**: When a company chooses to work with a supplier that's located in a nearby country.
    - > E.g., a German company outsourcing customer service to a team in Poland
- **Channels of GEF:** GEF manifests through various channels, including **trade restrictions, reduced capital movements**, **disruptions** in **technology diffusion**, **Tech Decoupling** etc.
  - **Technological decoupling** involves reducing or ending international trade and investment in high-tech industries due to national security, intellectual property, and data privacy concerns.
  - E.g. **USA's** Creating Helpful Incentives to Produce Semiconductors (**CHIPS) and Science Act (2022**) aims to boost domestic manufacturing of semiconductor whereas China's **'Made in China 2025'initiative** focuses on achieving global leadership in high-tech industries.



Impact of Geo-Economic Fragmentation (GEF)

- **Economic Output Losses**: Reduced trade due to increased barriers (e.g., tariffs, non-tariff barriers) can lower global domestic growth**.**
  - India's goal to become **a USD 5 trillion economy by FY28** and **USD 6.3 trillion by FY30** can be threatened.
- **Relocation of Foreign investment**: Foreign investment moving towards geopolitically aligned countries isolates emerging markets, especially in developing economies.
  - E.g., Foreign direct equity investments into India fell to a five-year low in FY24.
- **Labor Market Effects**: Limits on cross-border migration can deprive host economies of skills and reduce remittances to migrant-sending countries.
- **Hinders multilateralism:** GEF hinders multilateral efforts on climate change, pandemics, and other global challenges.
- **Decline in globalization:** Overall decline in globalization limits access to new markets, spread of technological innovation, access to capital, competition and cultural exchange.

From Globalization to GEF

Rise of Globalisation (1980s-2000s)	Peak Globalisation (2000s-2010s)	Slowbalization (2010s)	Fall of Globalisation (2020s)
Trade liberalisation & cross-border investments integrated economies, boosted growth and reduced poverty. E.g., Global trade rose from 39% (1980) to 60% (2012) of world GDP.	Hyper-globalisation saw unprecedented trade, FDI, etc.	Rising inequality, geopolitical tensions, and outsourcing backlash fueled discontent with globalisation's uneven benefits.	**Geo-Economic Fragmentation (GEF)** intensified via trade wars, tech decoupling, etc.

Way Forward

- **Strengthening Domestic Supply Chains:** So as to ensure self-reliance in critical sectors like manufacturing, energy, and technology.
  - **E.g., Khanij Bidesh India Limited (KABIL)** to secure mineral supplies, particularly lithium and cobalt, through overseas exploration and acquisition, with projects in Argentina, Australia, and Chile.
- **Leveraging Regional Partnerships:** Within the Indo-Pacific and build stronger trade and diplomatic relations with countries that share similar interests, ensuring better access to markets and resources.
  - **Groupings like** BIMSTEC, Indo-Pacific Economic Framework for Prosperity (IPEF) can be utilized by India.
- **Innovation and Technology:** Particularly in sectors such as renewable energy, digital transformation, and AI.

Conclusion

Geo-economic fragmentation marks a shift from the post-Cold War free trade model that fuelled globalisation and hyper-globalisation. However, it would be too early to say that world is heading toward de-globalization where there is a fall in trade volumes or overall ratio of trade to GDP.

India's success in achieving its 2047 goals hinges on adapting to geo-economic fragmentation, focusing on domestic reforms, innovation, and strategic partnerships to drive sustainable growth and secure its global position.

2.2. INDIA'S NEIGHBOURHOOD FIRST POLICY

Why in the News?

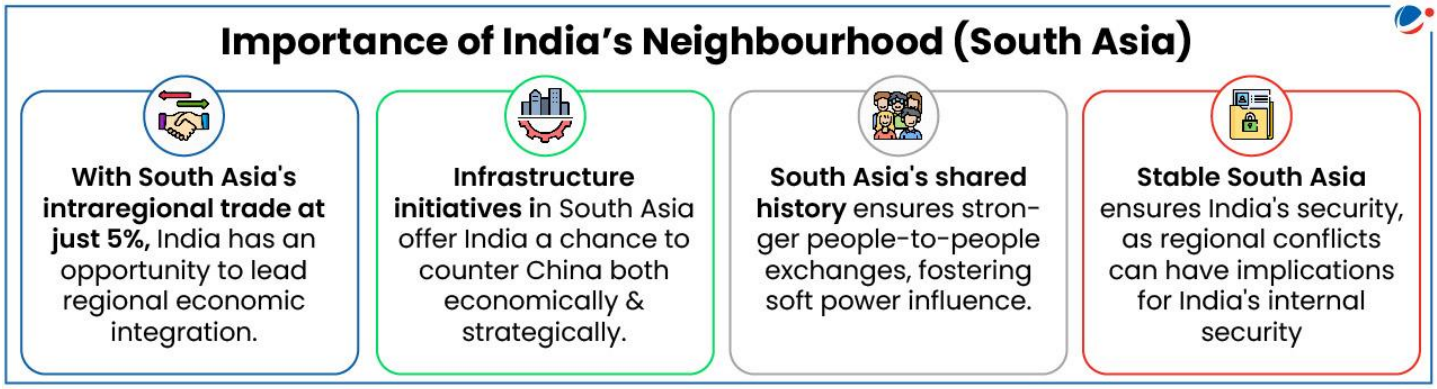
India's Neighbourhood First policy has completed a decade.

> "A **polity** like **India** should display **the wisdom** of treating its **prosperity as a lifting tide for the entire region.**
> That means assigning a **higher degree** of **attention** and **greater resources,** a policy captured by **Neighbourhood First."**
>
> **— S. Jaishankar in his book, 'The India Way'.**

About India's Neighbourhood First Policy (NFP)

- **Genesis:** The **NFP** was conceived in **2008,** with its focus intensifying **post-2014.**

- **Concept:** India's 'NFP guides its approach towards the **management** of relations with countries in its **immediate neighbourhood**.
- **Countries part of NFP:** Afghanistan, Bangladesh, Bhutan, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka.
- **Aim:** To enhance **physical, digital** and **people to people connectivity** across the region, as well as augmenting **trade** and **commerce.**
- **Key principles of engagement**: 5S- Samman (respect), Samvad (dialogue), Shanti (peace), Samriddhi (prosperity) and Sanskriti (culture) guided by **Consultative and Non-Reciprocal,** Outcome-Oriented and Holistic Approach.



Key aspects of India's NFP

- **Enhanced Economic Cooperation through Connectivity**: Aims to create interdependencies that strengthen India's influence and counter external powers.
  - **E.g., Bangladesh:** Mongla seaport rights and rail transit in July 2024 reduce costs for northeastern India.
- **Increased High-Level Political Engagements**: Build trust and strengthen diplomatic ties, ensuring a stable regional environment.
  - **E.g., Nepal:** Prime Minister of India's 2014 visit, first in 17 years.
  - **E**.g., **Afghanistan:** Zaranj-Delaram Road, Pul-e-Khumri to Kabul Transmission Line, Salma Dam Power Project, Afghan Parliament Construction.
- **Development Assistance and Infrastructure Projects**: Aid is critical during crises and for long-term development, consequently, positioning India as a reliable partner.
  - **E.g., Maldives**: Greater Malé Connectivity Project bridge, Hanimadhoo Airport, etc.
- **Energy Cooperation and Regional Power Markets**: Develop regional energy markets and enhance energy security through hydropower and power trade agreements.
  - **E.g., Bangladesh:** Tripartite Power Trade in 2024 enables importing 40 MW from Nepal via India.
- **Geopolitical Balancing and Countering External Influence:** The policy provides opportunities to counter China's influence and maintain South Asia as India's sphere of influence.
  - **E**.g., **Maldives**: Steady financial support to Maldives, particularly currency swaps, is a direct counter to China's influence.
- **Humanitarian and Disaster Relief Engagement**: India has consistently responded as the first responder.
  - **E.g., Vaccine Maitri: Maldives** and **Bhutan** becoming the first recipients, in line with "**Neighbourhood First" policy.**
  - **E.g., Sri Lanka**: India's US$4 billion financing during the 2022 economic crisis.

Challenges Faced by India in its Neighbourhood

- **Internal instability:** Recent political upheavals and instability in neighbouring countries have significant implications for regional stability and India's strategic interests in the neighbourhood. (see infographic)

Instability in India's neighbourhood

	Country	Concerns for India
	**Afghanistan:** Taliban takeover in 2021 led to collapse of democratic government.	• Safety of its investments in Afghanistan • Security implications of a Taliban-ruled state
	**Myanmar:** Military coup in 2021 has destabilized democracy, sparking widespread protests and violence.	• Increased insurgency and refugee flows.
	**Sri Lanka:** In 2022, Economic crisis triggered political instability and public unrest.	• **Potential refugee influx** • **Economic spillover effects** • **Strategic concerns** over Chinese influence.
	**Maldives:** Political turbulence since 2012. • In 2023, a new government, which campaigned on an anti-India platform was elected.	• **Maintaining influence against Chinese inroads** • **Protecting Indian Ocean security** • **Balancing diplomatic ties**
	**Nepal:** Political instability persists due to frequent government changes.	• Growing Chinese influence.
	**Bangladesh:** Political instability since 2024 to resignation of Bangladesh's Prime Minister.	• **Illegal migration and forced displacement:** • Threat to key projects like **Akhaura-Agartala rail link**

- **Perceived Interventionism:** Negative perceptions of India as an interventionist power (**perceived 'Big-Brother' attitude)**, consequently, worsening relations.
  - **E.g.,** India's 2015 economic blockade in Nepal, seen as protecting Madhesi interests, heightened anti-India sentiment.
- **Slow Project Implementation**: Delays in infrastructure projects erode confidence and fuel anti-India sentiment.
  - **E.g., The Greater Malé Connectivity Project** in Maldives faced protracted timelines, becoming a political issue.
- **Unresolved Disputes and Irritants:** Failure to resolve key issues like water sharing, taxes, and fishing, causing ongoing friction.
  - **E.g., Teesta River water** sharing with **Bangladesh, illegal fishing** in **Sri Lankan** waters, and **the Kalapani** dispute with **Nepal** remain unresolved.
- **Lack of Coordination Within India**: Internal policy inconsistencies affect trade and transit, exacerbating tensions.
  - **E.g.,** The Suvidha fee implemented by West Bengal increased costs for boulder exports from Bhutan to Bangladesh via India.
- **China's Growing Influence**: Despite India's efforts, China's increasing presence in South Asia, notably in Sri Lanka (**e.g.,** Hambantota Port), **Nepal & Bangladesh** (part **of BRI**), and **Maldives**, continues to challenge India's regional dominance.

To know more about India's approach to tackle instability in its neighbourhood, refer to Article 2.1. Instability in India's Neighbourhood in July 2024 Monthly Current Affairs Magazine.

Way forward

- **Diplomatic Engagement and Sensitivity**: India needs to engage diplomatically with its neighbors while being sensitive to their political realities and domestic issues.
  - Given that most of these nations are democratic, the pressures of **electoral cycles and competitive politics also have to be managed.**

- **Addressing Critical Irritants**: India must resolve long-standing issues, such as water-sharing disputes (e.g., the Teesta River issue) and territorial disputes (**e.g.,** Kalapani and Kachatheevu).
- **Balancing Economic Assistance**: While offering economic support, India should avoid fostering over-dependence. Projects should be implemented efficiently to enhance India's image as a reliable partner.
- **Geopolitical Prudence**: By managing China's growing influence in the region while ensuring that neighboring countries do not feel pressured into choosing sides.
- **Encouraging Democratic Values**: India must support democratic processes while addressing concerns regarding political instability, as seen in **Bangladesh, the Maldives, Afghanistan & Myanmar.**
- **Adapting to Domestic Political Shifts**: India should remain flexible in its approach to diplomatic relationships, especially in countries like the Maldives and Sri Lanka, where domestic politics often shift.

Conclusion

India's Neighbourhood First policy, guided **by Samman (respect), Samvad (dialogue), Shanti (peace), and Samriddhi (prosperity)**, contrasts with China's neo-imperialistic, debt-trap diplomacy, fostering cooperative, sustainable, and mutually beneficial regional relations.

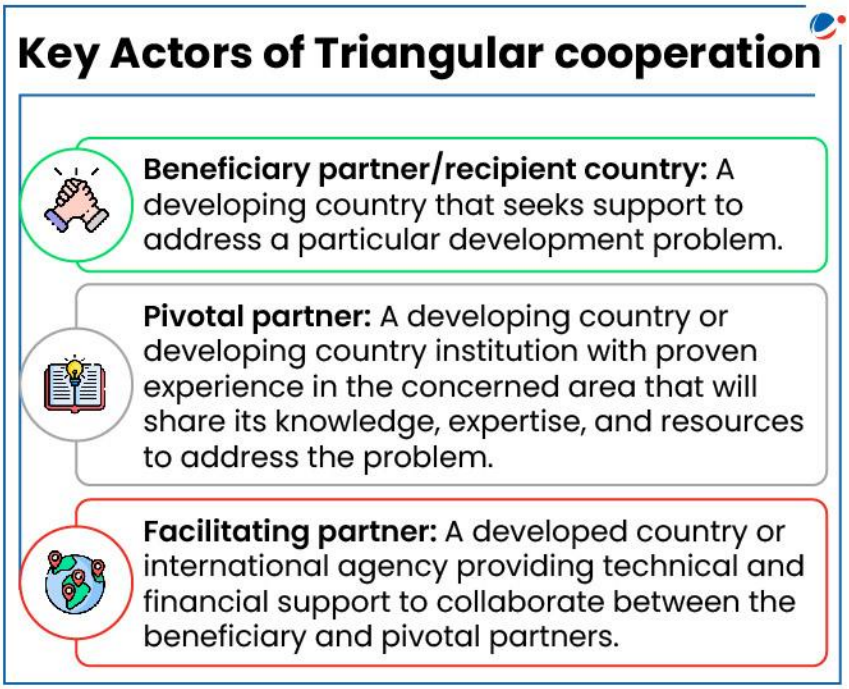
Scan the QR code to know more about **India's Neighbourhood Policy**

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

2.3. TRIANGULAR PARTNERSHIP

Why in the News?

A recent report by the OECD and the Islamic Development Bank stresses **that triangular partnerships can effectively win influence in a divided and conflicted world.**



About Triangular Partnership or Triangular Cooperation

- **Definition:** Triangular cooperation refers to **projects and initiatives combining** the comparative **advantages of traditional donors** and **southern countries to share knowledge** and address **development concerns** in developing countries.
- **Key Advantages**
  - Enables more efficient development delivery through **resource pooling, co-creation, and the best available technology**
  - **Builds the capacity of developing countries as providers of development cooperation**
  - **Contributes to the SDGs**
- **Global Trends**
  - Between 2000 and 2022, **199 countries and 85 organizations** engaged in over **1,000 triangular projects** (OECD estimate).
  - **68% of these projects** had budgets under **$1 million**, providing low-cost, flexible development solutions ensuring cost-effective, flexible solutions.
- **India's Participation in Triangular Cooperation**
  - **Ranks 8th among top 10** countries in triangular partnerships.

- **Key India-led Triangular Partnerships**
  - India and Japan signed a memorandum of cooperation with Sri Lanka to develop the **East Container Terminal (ECT)** in 2019.
  - **India and the US** signed the 'Statement of Guiding Principles on Triangular Cooperation for Global Development' (SGP) and its validity extended up-to 2026.

Reasons for Resurgence of Triangular Partnerships

- **Failure of Western Aid Model**: By the early 2000s, the traditional charity-based development aid system with strict donor-recipient hierarchies lost credibility, prompting calls for reform.
- **Rise of Emerging Donors**: Countries like China, India, and Brazil introduced development programs based on equal partnerships and mutual benefit, gaining support from recipient nations.
- **China's Influence:** China's growing footprint, particularly in the infrastructure sector in Africa, the Association of Southeast Asian Nations (ASEAN), and the South Pacific, has made it imperative for the G7 countries to engage with India, a democratic country with shared values.
- **Geopolitical rivalries:** Conflicts within and between nations are exacerbating economic instability demanding new model of development

Challenges of Triangular Partnerships

- **Power Imbalance and Trust Issues:** Donor countries' priorities and agendas may often overshadow recipient countries' interests.
  - **For e.g.,** some developed countries prefer to work with only investment-grade countries in Africa, not the Heavily Indebted Poor Countries (HIPCs).
- **Hesitance of recipient countries:** Developing countries find it cumbersome to adhere to all the norms and standards required by developed country partners.
  - **For e.g.,** most recipient countries, particularly in Africa, find it cumbersome to abide by the European notions of sustainability, and their required norms and standards.
- **Implementation Challenges:** Partner countries often differ over procurement rules, financial structure, and legal framework.
  - **For e.g.,** Under the Indian lines of credit programme, **75 %** of the inputs are procured from India, and Indian companies implement the projects. This often leads to disagreements with partner countries, which prefer prioritizing their own companies.
- **Limited scale and scope:** Most of these trilateral partnership initiatives adopt a **project-based approach,** which the **Paris Declaration on Aid Effectiveness** warns may result in a **disconnect** with broader development goals.

Way Ahead for Strengthening Triangular Partnerships

- **Promoting Inclusive Partnerships:** Ensure recipient nations have a say in decision-making to build trust. Encourage mutual learning to create practical and feasible guidelines.
- **Simplifying Standards for Recipient Countries**: Adapt sustainability and regulatory norms to local contexts rather than imposing one-size-fits-all European standards.
- **Enhancing Flexibility in Implementation**: Align procurement policies to balance donor interests with local economic priorities.
- **Scaling Up and Aligning with Long-Term Development Goals**: Move beyond project-based approaches to integrate triangular cooperation with national and regional development strategies.
  - Leverage international frameworks like the **Paris Declaration on Aid Effectiveness** to ensure sustainable impact.

Conclusion

By fostering **equity, adaptability, and long-term vision**, triangular cooperation can become a more effective and mutually beneficial development model.

2.4. INDIA - U.S.A RELATIONS

Why in the News?

The Indian Prime Minister paid an Official Working Visit to the USA.

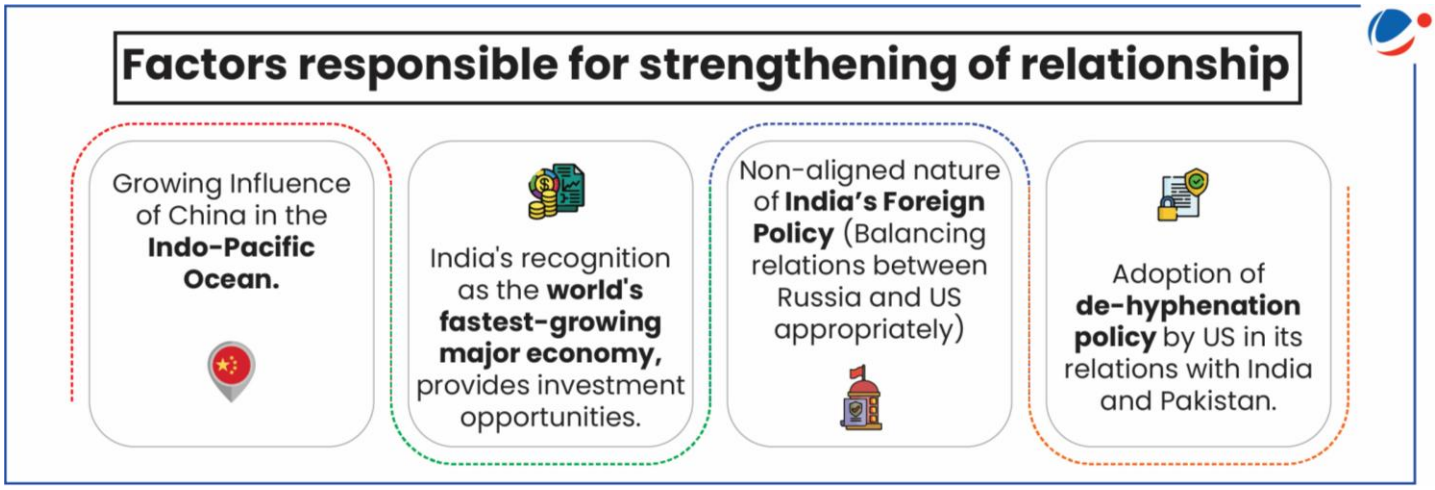
Key Outcome of the Visit

Area/Sphere	Development
Defense & Security	• **Proposed Ten-year Framework for the U.S.-India Major Defense Partnership:** Announced plans to sign Partnership to advance defense ties further. • **Autonomous Systems Industry Alliance (ASIA):** To scale industry partnerships and production in the Indo-Pacific. • **Other:** Announced new co-production arrangements of **Javelin (Anti-Tank Guided Missiles)** and **Stryker (Infantry Combat Vehicles)** in India.
Technology and Innovation	• **U.S.-India TRUST (Transforming the Relationship Utilizing Strategic Technology) Initiative**: It will catalyze government-to-government, academia and private sector collaboration to promote the application of critical and emerging technologies in areas like defense, etc. • **INDUS Innovation**: It will advance U.S.-India industry and academic partnerships and foster investments in space, energy, and other emerging technologies. ○ It is modeled after the **INDUS-X initiative**, which facilitates partnerships between U.S. and **India** to enhance military capabilities. • **Strategic Mineral Recovery Initiative**: A new **U.S.-India program** to recover and process **critical minerals (including lithium, cobalt, and rare earths)** from heavy industries like aluminum, coal mining and oil and gas.
Others	• **U.S.-India COMPACT (Catalyzing Opportunities for Military Partnership, Accelerated Commerce & Technology) for the 21st Century**: Promote a **results-driven agenda** to demonstrate the level of trust for a mutually beneficial partnership. • **Indian Ocean Strategic Venture**: A new bilateral, whole-of-government forum to advance coordinated investments in economic connectivity and commerce. • **Launched Mission 500,** aiming to more than double total bilateral trade to $500 billion by 2030.

Significance of a Robust India-US Relationship

- **Advancing Economic Opportunities: USA** is **the top-most merchandise export destination** for India.
  - India has joined three pillars of USA led **Indo-Pacific Economic Framework [IPEF].**
- **Strengthening Global Strategic Influence:** E.g. **Quad**, a diplomatic partnership between **Australia**, **India**, **Japan**, and the **United States** committed to supporting an open, stable and prosperous Indo-Pacific.
  - Such initiatives will help in countering the influence of China.
- **Defense Modernization and Capacity Development:** India has signed foundational defense agreements with US which include a **General Security Of Military Information Agreement (GSOMIA), Logistics Exchange Memorandum of Agreement** (**LEMOA), Communications Compatibility and Security Agreement (COMCASA)** and **Basic Exchange and Cooperation Agreement (BECA).**
  - US recognized India as a **Major Defense Partner** with **Strategic Trade Authorization-1 (STA-1)** authorization.
- **Expanding Frontiers in Emerging Technologies:** Launched US-India **Initiative on Critical & Emerging Technologies** (iCET, 2023).

- **Expanding Space Outreach:** E.g. **NISAR (NASA-ISRO Synthetic Aperture Radar) mission**.
  - Also, India has joined the US led **Artemis Accord**, provides a common set of principles to enhance the governance of the civil exploration and use of outer space.
- **Ensuring Energy Security**: **U.S.-designed nuclear reactors** will be built **in India** to fully realize the U**.S.-India 123 Civil Nuclear Agreement**, 2008.
  - In recent years, the U.S. has emerged as one of the largest suppliers of **Liquefied natural gas (LNG)** to India.
- **Countering Terrorism:** U.S. recently approved the extradition to India of Tahawwur Rana, accused in the 26/11 attacks.
- **Support at Multilateral Forums: E.g.** US support for India's permanent UN Security Council membership and **Nuclear Suppliers Group**.
  - Supports India's bid to join the **International Energy Agency** as a full member.
- **Fighting Climate Change & Renewable Energy:** US joined the India led **International Solar Alliance.**
  - Also, launched **US-India Renewable Energy Technology Action Platform (RETAP)**.
  - Both are part of **Global Biofuels Alliance (GBA)**



Issues Straining India-US Partnership in recent times

- **Trade & Economic Challenges**
  - Imposition of **reciprocal tariffs** along with other protectionist measure will **make** Indian products **less competitive**.
  - India remained on the **Priority Watch List** of the U.S. 2024 "**Special 301" report**, an annual review of the global state of **intellectual property rights (IPR)** protection and enforcement.
  - US revoked India's **GSP (Generalized System of Preferences)** in 2019, impacting duty-free Indian exports.
- **Geopolitical Divergences:** India follows **strategic autonomy** and **independent foreign policy**.
  - **E.g.** India is part of QUAD but avoids turning **it into a military alliance** and India's stance on Russia-Ukraine War
- **Visa & Immigration Challenges:** Recently, US is tightening visa regulations (E.g. H-1B Visa), which will affect Indian IT professionals and others.
  - Also, illegal Indian Immigrants have been deported.
- **Concerns over Human & Religious Rights:** Concerns raised by the **United States Commission on International Religious Freedom (USCIRF)** against the **Citizenship (Amendment) Act (CAA), 2019** have been seen as internal interference in India.
- **Imposition of Sanctions:** US has raised concerns over the acquisition of advanced weaponry, such as the S-400 air defense system from Russia by India, citing potential implications under the **Countering America's Adversaries through Sanctions Act (CAATSA)**.

Ways to further Strengthen India-US Partnership

- **Finalizing Bilateral Trade Agreement (BTA):** The recently announced plan to negotiate a BTA would enhance market access, reduce tariffs, boost investment, strengthen supply chains, etc.
  - Also, it will help in resolving issue related with reciprocal tariff, IPR, etc.

- **Finalisation of defence framework:** Both countries can work for early finalization of new 10-year defence framework that will run from 2025 to 2035
  - **Reciprocal Defense Procurement (RDP)** agreement can also be finalised.
- **Easing H-1B Visa Restrictions:** The US can streamline visa processes for Indian IT professionals, researchers, etc.
- **Waiver under CAATSA**: Influence of Indian-American can be used to get long-term exemptions for India under CAATSA to strengthen defense ties and counter regional threats.
- **Managing Concerns over Human & Religious Rights:** The US should avoid interference in India's internal affairs, recognizing the diversity of its democratic system.
- **Enhance cooperation in emerging technologies** and **artificial intelligence (AI)**: It is essential as data regulation, information sharing, and privacy protection is crucial to national security.
  - **E.g. U.S.-India Roadmap on Accelerating AI Infrastructure** will be prepared under **U.S.-India TRUST Initiative.**

To know more about USA's protectionist measures and their impacts, refer to Article 2.1. USA's Protectionist Measures in January 2025 Monthly Current Affairs Magazine.

2.4.1. INDIA-U.S. CIVIL NUCLEAR AGREEMENT

Why in the News?

The budget's focus on developing **100 GW of nuclear energy by 2047,** alongside amendments to **the Atomic Energy Act** and **Civil Liability for Nuclear Damage Act,** can revitalize the dormant India-U.S. Civil Nuclear Agreement.

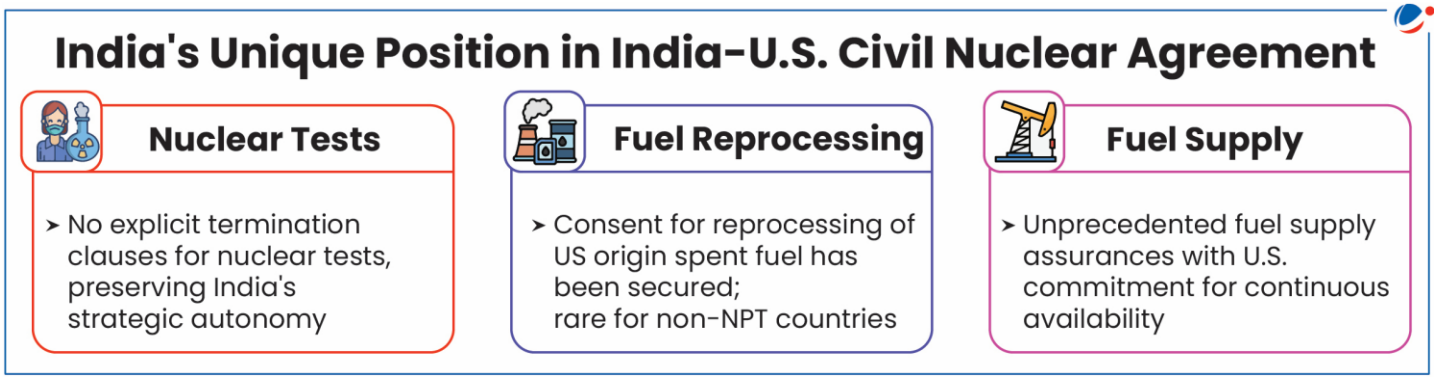
More on the News

- Also, recently, the United States (U.S.) has removed **three Indian nuclear entities from its Entity List**.
  - **The U.S. Entity List restricts** trade with **foreign entities** deemed a national security risk.
- **The three entities are:** Bhabha Atomic Research Centre (BARC), Indira Gandhi Atomic Research Centre (IGCAR) and the Indian Rare Earths (IRE).
- **Significance of the Removal:** Paves the way for implementing the **long-pending "The U.S.-India Agreement Concerning Peaceful Uses of Nuclear Energy"**, also known as the **123 Agreement.**

The Nuclear Energy Mission, that proposes to amend Atomic Energy Act, 1962, and the Civil Liability for Nuclear Damage Act, 2010 has been discussed in Article 7.1. Nuclear Energy Mission.

About India-U.S. Civil Nuclear Agreement or 123 Agreement

- **Background**
  - **1978:** U.S. imposed sanctions on India after **India's 1974 nuclear test**.
  - **2005:** U.S. and India agreed on civilian nuclear cooperation.
  - **2008:** U.S.-India Civil Nuclear Agreement, or "123 Agreement" **(**under **Section 123** of **the U.S. Atomic Energy Act),** was finalized
- **Overview of India-U.S. Nuclear Agreement**
  - **International Atomic Energy Agency (IAEA) Safeguards**: India permanently placed its civilian nuclear reactors under IAEA safeguards.
    - Further, India signed an **Additional Protocol**, enabling more intrusive IAEA inspections of civilian nuclear facilities.
  - **Nuclear Testing & Security**: India put **a voluntary moratorium on nuclear weapons testing** and **strengthened** the **security** of its **nuclear arsenals.**
  - **U.S. Collaboration**: U.S. companies were allowed to **build nuclear reactors** in India and **supply nuclear fuel** for its **civilian energy program**.
  - **Nuclear Suppliers Group (NSG) Waiver:** Despite being **a non-signatory to the Non-Proliferation Treaty (NPT**), the NSG lifted its ban, enabling other countries to sell nuclear fuel and technology to India.
    - **NSG:** Formed in **1974** post-India's Pokhran-I test; regulates nuclear trade.
    - **NPT**: Effective in **1970** under the UN, aims to prevent proliferation, promote disarmament, and enable peaceful nuclear use.



Significance of India-U.S. Civil Nuclear Agreement

- **Ended India's Nuclear Isolation:** The Agreement marked a historic shift by **lifting a three-decade U.S**. ban on nuclear trade with India.
- **Legitimized India's Nuclear Status**: It granted India de facto recognition as a **nuclear weapons state** (despite its **refusal to sign the NPT)**, allowing access to international nuclear technology and fuel at the same time permitting it to maintain its nuclear weapons program.
  - **E.g.,** Cooperation agreements with **France, Russia, UK, Japan**, and **Canada** enabled peaceful nuclear projects like Jaitapur and Kudankulam plants.
- **Strengthened India-US Strategic Partnership**: The agreement laid the foundation for deeper U.S.-India ties, transforming a once-strained relationship into a **comprehensive global strategic partnership.**
- **Enhanced Domestic Energy Security:** Nuclear fuel access improved reactor efficiency from 50-55% (2006-2007) to 80%, supported by long-term uranium **import agreements** with **France, Kazakhstan, Australia, Canada,** and **Russia.**
- **Enabled participation in other regimes:** Post 2008, India joined 3 major export control regimes- Missile Technology Control Regime (MTCR) (Joined in 2016); Wassenaar Arrangement (2017); Australia Group (2018).

Challenges in India-U.S. Civil Nuclear Agreement

- **Civil Liability Law Conflicts:** India's Civil Liability for Nuclear Damage Act (CLND) 2010 created tension with international norms.
  - **Section 17B of CLND Act:** It allowed **operators** (**Nuclear Power Corporation of India Limited (NPCIL)**, which operates India's nuclear power plants) to seek compensation from **suppliers** (e.g., US companies) in case of accidents.
- **Supreme Court Judgement**: **In 2010** SC, influenced **by Bhopal Gas Tragedy lessons**, upheld **supplier liability** under **India's nuclear law**, deterring private investments.
- **Commercial Viability Challenges**: Westinghouse, a major nuclear power plant manufacturer, filed for bankruptcy in **2017** jeopardized the implementation of **India-U.S. nuclear deal.**
  - It affected plans to set **up six AP1000** nuclear reactors in **Kovvada, Andhra Pradesh**.
- **High Capital Costs of Nuclear Energy:** India had gradually shifted its focus toward **solar and wind energy**, which are **more cost-effective than nuclear power**.

Key Features of India's Civil Liability for Nuclear Damage (CLND) Act, 2010

- **Operator Liability**: The CLND Act channels **strict liability** exclusively to the nuclear plant ***operator.***
- **Supplier's Right of Recourse: Section 17** allows operators to seek recourse from suppliers for **defects/intentional damage (**via contracts).
- **Compatibility with Convention on Supplementary Compensation for Nuclear Damage (CSC):** India's CLND Act complies with CSC requirements, enabling India to join the CSC.
- **Insurance Pool Mechanism**: The **India Nuclear Insurance Pool** (₹1,500 crore) covers operator/supplier liabilities, reducing litigation risks and enabling market-based risk-sharing.
- **No Retrospective Application**: Future amendments to liability limits cannot retroactively alter existing contracts, protecting suppliers under the law at the time of agreement.

Way forward to operationalize India-U.S. Civil Nuclear Agreement

- **Amend India's Civil Liability for Nuclear Damage (CLND) Act:** Align the CLND Act with the **international Convention on Supplementary Compensation (CSC)** by channelling **all liability** solely to **the operator** of a nuclear plant.
- **Establish an Intergovernmental Understanding on Liability:** Formalize an agreement between the U.S. and Indian governments to confirm the **limited liability of foreign private companies** involved in nuclear trade.
- **Expedite the Implementation of the Insurance Pool:** Fully fund and operationalize the insurance pool created under the CLNDA to provide financial safety for operators and suppliers.

Conclusion

The **India-US Civil Nuclear Agreement** holds transformative potential for energy collaboration, but resolving liability challenges is essential to unlock technological partnerships and attract critical foreign investments.

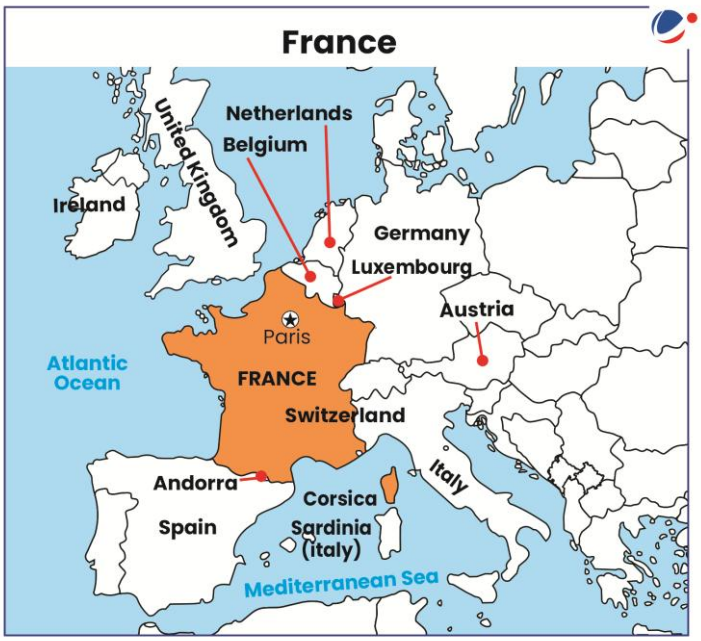
2.5. INDIA-FRANCE RELATIONSHIP

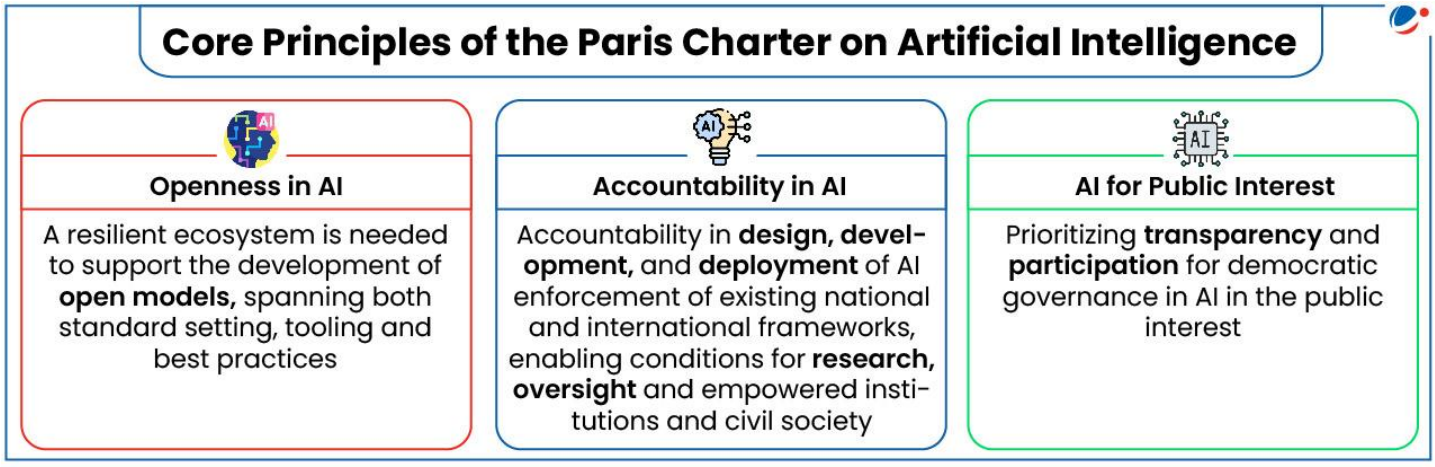
Why in the News?

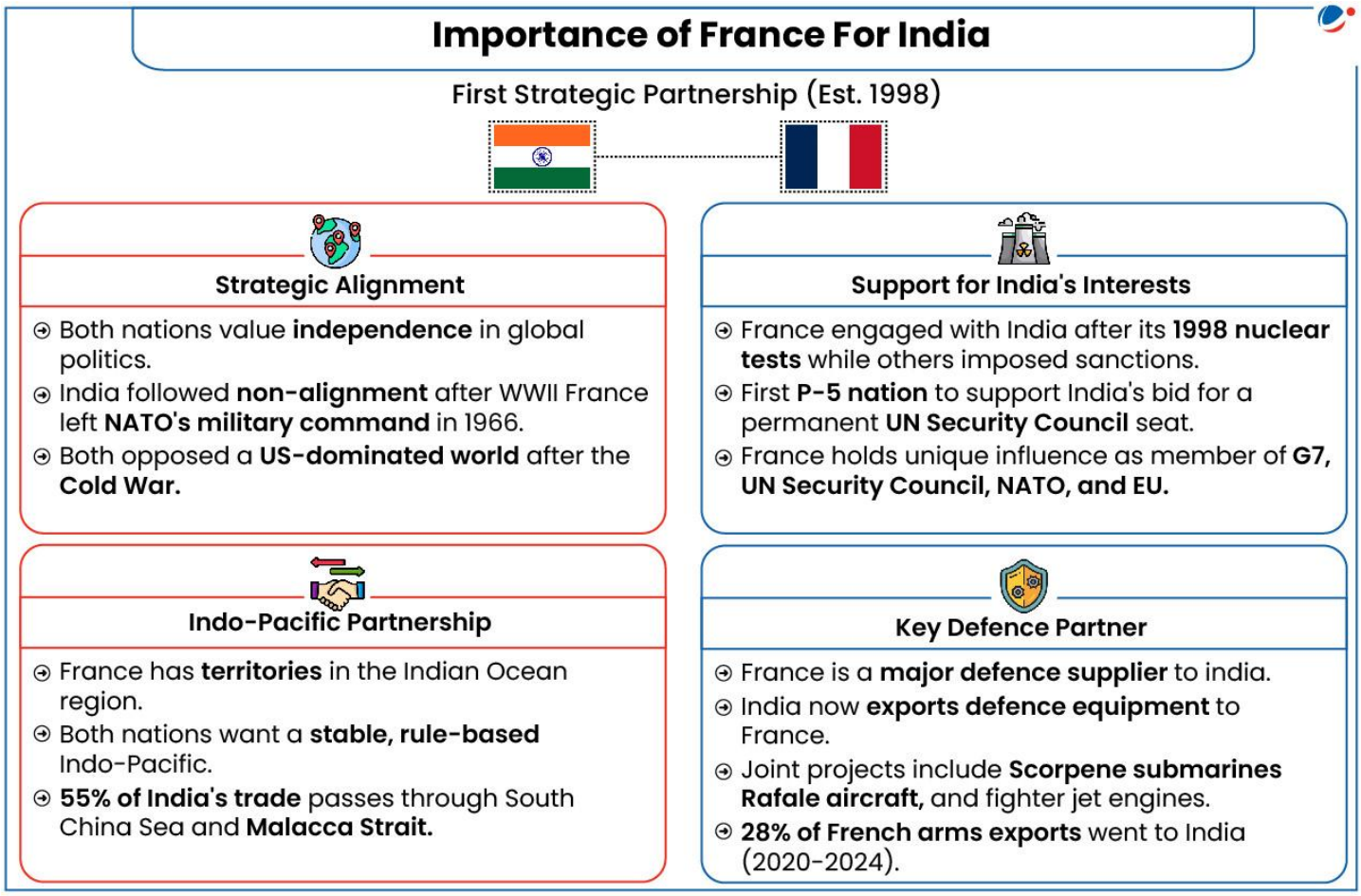
India and France co-chaired **Artificial Intelligence (AI) Action Summit** held in France.

More on the news

- The AI Action Summit, organized **by France in Paris, with UNESCO as a key participant,** aimed to ensure that the development and deployment of **AI benefits societies, economies, and the environment**, in the interest of the common good.
- The Summit witnessed participation from **Heads of State/Government, Heads of International Organizations, and business leaders** from the field.
- **France supported India** as the host of the **next AI Action Summit.**







Key Dimensions of India-France Partnership

France was the first country with which India launched its first-ever **Strategic Partnership** on **26 January 1998** to deepen bilateral relations. **Key Areas of Cooperation are:**

Cooperation Area	Description
Economic	• The total trade for **FY 2022-23** breached the **USD 13 billion** trade mark for the first time, with exports from India crossing USD 7 billion.

Defence	• **Important exercises:** SHAKTI (Army Exercise), Exercise GARUDA (Bilateral Air Exercise), TARANG SHAKTI (Multinational Air Exercise), Exercise VARUNA (Naval Exercise).
	• **FRIND-X (France-India Defence Startup Excellence)** launched in line with the vision enshrined in Horizon **2047** and the **India-France Defence Industrial Roadmap**.
	  ○ This collaborative platform brings **together key stakeholders across both defence ecosystems,** including defence startups, investors, incubators, accelerators, and academia
	• **Horizon 2047:** roadmap **was launched on the** 25th Anniversary of the India-France Strategic Partnership to set the course for the bilateral relationship up to 2047.
	  ○ **2047** will celebrate the **centenary of India's independence,** the **centenary of the diplomatic relations** between the two countries and **50 years of the strategic partnership.**
	• **India-France Defence Industrial Roadmap:** Launched for co-design and co-development of military hardware and space cooperation.

Science	• **India-France Roadmap on AI:** Rooted in the philosophical convergence in their approaches focusing on the development of safe, open, secure and trustworthy artificial intelligence. • Creation of the **Indo-French Life Sciences Sister Innovation Hub.** • NPCI International Payments Limited (NIPL) and France's Lyra Collect executed an agreement to implement **Unified Payment Interface (UPI)** in France and Europe.

Space	• France is a key supplier of **components and equipment** for India's space program. Both nations signed an agreement for **India's first human space mission, Gaganyaan**. • Ongoing projects include **joint satellite TRISHNA, maritime domain awareness, payloads, ground station support, human spaceflight, and professional exchanges**.
Civil Nuclear	• India and France signed a **civil nuclear agreement in 2008** and continue to collaborate on **peaceful nuclear energy**, including the **Jaitapur Nuclear Power Plant**. • India is also a member of the **International Thermonuclear Experimental Reactor (ITER)**, a global fusion project based in **Cadarache, France**. • Both nations are now working on a **partnership for Small Modular Reactors (SMR) and Advanced Modular Reactors (AMR)**

Other Areas	• **Climate Change:** Both nations actively drive the implementation of the **2015 Paris Climate Agreement and in 2018** Co-launched the **International Solar Alliance**.
	• **Culture:** To mark **60 years** of the **India-France cultural agreement (1966)**, both countries will hold **cultural exchanges** as part of the **Year of Innovation 2026.**
	  ○ **Year of Innovation 2026** is a cross-sectoral initiative that includes culture. Recently a logo for this was launched.
	• **Trilateral Cooperation**
	  ○ The **India-France-Austral:** Promotes a **free, open, and rules-based Indo-Pacific**.
	  ○ The **India-France-UAE:** focuses on **solar and nuclear energy, climate action, and biodiversity protection**.

Key Challenges in India-France relations

- Roadblocks in Nuclear Energy Cooperation: France has offered to build nuclear power reactors in Jaitapur, but challenges remain, including **high costs, delays**, and concerns over **India's Civil Liability for Nuclear Damage Act (2010).**
  - The CLNDA that ensures compensation for nuclear disaster victims created tensions with foreign (including France) suppliers.
- **Divergent Geopolitical Stances:** France actively supports Ukraine against Russia, whereas India maintains a neutral stance, abstaining from UNGA resolutions. This difference in approach could affects diplomatic alignment,
- **Intellectual Property Rights (IPRs) Concerns**: French businesses cite weak enforcement of intellectual property rights in India, particularly in pharmaceuticals, fashion, and technology.
  - Issues like **counterfeiting, prolonged patent approval processes, and inadequate legal protection discourage French investment** and innovation collaborations.
- **Trade Barriers and Protectionist Policies**: Indian exports face resistance in France, especially in agriculture. The French rice association's opposition to recognizing Basmati rice as a Geographical Indication (GI) product is a notable example. Additionally, stringent EU sanitary and phytosanitary measures create non-tariff barriers for Indian goods.
- **Stalled India-EU Free Trade Agreement (FTA)**: The India-EU Broad-based Trade and Investment Agreement (BTIA) has been in negotiation since 2007 with no resolution.
  - **Because of this both countries have not been ab**le to harness their trade potential.
- **Limited Private Sector and People-to-People (P2P) Engagement**: India-France cooperation is largely government-driven (G2G), focusing on defense, space, and energy.
  - However, business-to-business (B2B) and people-to-people (P2P) engagement remain suboptimal.

Conclusion

Strategic Partnership does not mean agreeing on everything, but handling disagreements privately. India and France have built this kind of relationship over many years. Both countries need to solve nuclear energy problems, speed up trade agreements with the EU, and improve intellectual property protections to strengthen economic connections. They also need to find shared positions on global conflicts like Ukraine to work better together diplomatically.

2.6. NEWS IN SHORTS

2.6.1. INDIA AND QATAR ELEVATE BILATERAL TIES TO STRATEGIC PARTNERSHIP

Elevation was done during state visit to India by Amir of Qatar with a **focus on strengthening cooperation in trade, energy, investments**, technology, food security, and people-to-people ties.

- Both sides also aimed to double bilateral trade to $28 billion in five years.

Other Key outcomes of Visit:

- Two MoUs signed to strengthen the **strategic partnership**, covering **double taxation avoidance** and **fiscal evasion prevention**.
- Additional MoUs signed between Qatari Businessmen Association and CII, and between Invest Qatar and Invest India **to boost business and investment collaboration.**

India Qatar Ties

- **Economic Ties:** Bilateral trade is **USD 14.08 billion** (2023-24)**.** (With an **effective trade deficit for India**).
  - India was among Qatar's **top three export destinations** and is also among **top three sources of Qatar's imports (2022-23).**
- **Energy Ties:** Qatar is India's largest LNG supplier, providing over **40% of imports.**
- **Defense Ties:** India-Qatar Defense Cooperation Agreement was extended for five years in 2018.
  - **Bilateral Exercises:** Za'ir Al Bahr (Naval).
  - India also regularly participates in the biennial Doha International Maritime Defense Exhibition and Conference **(DIMDEX) in Qatar.**
- **Cultural Relations:** Regular exchanges and activities under the **2012 Agreement on Cultural Cooperation**, with the **Indian Cultural Centre** active in Qatar.
  - **People-to-People Ties:** A vibrant **Indian community of over 830,000** in Qatar strengthens cultural bonds.

2.6.2. BIMSTEC

Ministry of Youth Affairs and Sports has hosted the **first-ever Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) Youth Summit** in **Gandhinagar**, Gujarat.

- Its goal is to strengthen youth collaboration across region and facilitating exchange of youth-led initiatives among BIMSTEC Member Countries.

About BIMSTEC (Secretariat: Dhaka, Bangladesh)

- **Genesis:** Established in 1997 with the signing of **Bangkok Declaration.**
- **Members**: Bangladesh, **India**, Sri Lanka, Thailand, Myanmar, Nepal, Bhutan.
- **Objective**: Promote rapid economic development, social progress, and ensure peace and stability across Bay of Bengal region.
- **7 focus area**: Trade; Environment and Climate Change; Security; Agriculture and Food Security; People-to-People Contact; Science, Technology, and Innovation; Connectivity.'

2.6.3. INTERNATIONAL CRIMINAL COURT

USA President signed an executive order **sanctioning International Criminal Court (ICC).**

- The order imposes **financial and visa restrictions** on individuals and their families who assist in ICC investigations of American citizens or allies such as Israel.

International Criminal Court (Headquarter: Hague, Netherlands)

- It is the world's first permanent **international criminal court.**
- Founding Treaty: **Rome Statute** (adopted in 1998 entered into force in 2002).
- Type of Crimes dealt: **Genocide, War Crimes, Crimes against Humanity & Crime of Aggression.**
- **Membership**: 125 countries
  - **India, Israel, the US, Russia and China** are **not parties** to the Rome Statute.
  - **Recent Members: Malaysia (2019) Ukraine (2025).**
- **Management: The Assembly of States Parties** is the Court's management oversight and legislative body.
  - It is composed of representatives of the States which have ratified or acceded to Rome Statute.
- **Official languages**: English, French, Arabic, Chinese, Russian and Spanish.

Structural Issues in functioning of ICC

- **High dependence on state cooperation** as it lacks executive power for arrests and evidence collection.
- **Political Pressure**: It often gets caught between **power politics and human rights** and is often used by some States for **targeting opponents.**

To know more about ICC, refer to Article 2.4. International Criminal Court (ICC) in May 2024 Monthly Current Affairs Magazine.

2.6.4. ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS)

Three countries **(Mali, Burkina Faso and Niger)** under military rule have officially left **West African regional bloc, ECOWAS,** following diplomatic tensions.

About ECOWAS (Hq: Abuja, Nigeria)

- **Genesis:** 1975
- **Aim:** Promote **economic cooperation** among member states in order to raise living standards and promote economic development.
  - Citizens of ECOWAS countries have the **right to live and work in all member states,** along with free circulation of goods.
- **Members:** 12 (after the current withdrawal)
  - Benin, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, and Togo.

2.6.5. ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES (OPEC)

Recently, Brazil approved entry into **OPEC+.**

About OPEC

- It is a **permanent intergovernmental organization** of **12 oil-exporting developing nations**.
  - **India** is **not** a **member**.
- **Genesis:** It was created at the **Baghdad Conference** in **1960**, by **Iran, Iraq, Kuwait, Saudi Arabia** and **Venezuela**.

- **Objective:** To co-ordinate and **unify petroleum policies** among Member Countries, in order to secure **fair and stable prices** for petroleum producers.
- **HQ:** Vienna (Austria)
- **OPEC+**
  - In response to falling oil prices driven by significant increase in U.S. shale oil output, **OPEC signed an agreement** with 10 other oil-producing countries in 2016 to create **OPEC+.**

2.6.6. INTERNATIONAL ORGANIZATION OF AIDS TO MARINE NAVIGATION (IALA)

India is elected to the **Vice Presidency** of IALA in Singapore, strengthening its commitment to maritime safety, navigation, and international cooperation.

About IALA (Hq: Saint-Germain-en-Laye, France)

- **Establishment: 1957** as a Non-Governmental Organization (NGO).
- **Transition to IGO**: In 2024, IALA transitioned from a NGO to an **Intergovernmental Organization (IGO).**
- **Aim**: Urges members to cooperate to standardize Marine **Aids to Navigation globally, ensuring safe, efficient, and environmentally friendly vessel movement.**
- **Member Categories:** Three types of IALA Members- **National Member, Associate Member** and **Industrial Member.**

3. ECONOMY

3.1. MUTUAL CREDIT GUARANTEE SCHEME FOR MSMES

Why in the News?

Government approved Mutual Credit Guarantee Scheme to **Strengthen MSME Manufacturing Sector**, fulfilling the budget announcement of 2024-25.

Key Features of Mutual Credit Guarantee scheme for MSMEs

- **Guarantee Coverage:** Offers **60% guarantee coverage** by National Credit Guarantee Trustee Company Limited (NCGTC) (a wholly owned company of Department of Financial Services) to MLIs for loans sanctioned under MCGS-MSME.
  - **Member Lending Institutions (MLIs)** are Financial Institutions such as Commercial Banks, NBFCs registered with NCGTC under the Scheme.
- **Eligible Borrower:** MSME with **valid Udyam Registration**; **Not a Non-Performing Asset** with any lender; **Minimum 75% of project cost for equipment/machinery**.
- **Duration of the Scheme:** Available for **4 years or until Rs 7 lakh crore** in guarantees are issued, whichever is earlier.
- **Repayment Terms:**
  - **Loans up to ₹50 crore**: Repayment period of up to 8 years, with a moratorium of up to 2 years on principal installments.
  - **Loans above ₹50 crore:** Longer repayment schedules & moratorium periods can be considered.

Other Key Measures Announced for MSMEs in Union Budget 2025-26

- **Revised the classification for MSMEs:** The new thresholds set at 2.5 times the current investment and twice the turnover limits (refer infographic).

Revised Classification of MSMEs

Rs. in Crore	Investment		Turnover	
	Current	Revised	Current	Revised
Micro Enterprises	1	2.5	5	10
Small Enterprises	10	25	50	100
Medium Enterprises	50	125	250	500

- **Enhanced Credit Availability:** The credit guarantee cover will be enhanced -
  - **For Micro and Small Enterprises**, from 5 crore to 10 crore, leading to additional credit of 1.5 lakh crore in the next 5 years.
  - **For Startups**, from 10 crore to 20 crore, with the guarantee fee being moderated to 1 per cent for loans in 27 focus sectors important for Atmanirbhar Bharat.
  - **For well-run exporter MSMEs**, for term loans up to 20 crores.
- **Customised Credit Card Scheme:** It will provide **₹5 lakh in credit to micro enterprises** registered on Udyam portal, with 10 lakh cards set to be issued in first year.
- **A new Fund of Funds** with ₹10,000 crore will be established to expand support for startups.
- A scheme for 5 lakh **first-time women, Scheduled Caste, and Scheduled Tribe entrepreneurs** will provide term loans up to ₹2 crore over five years.

Significance of MSMEs for India

- **Contribution to GDP:** MSMEs contributes approximately **30 % of the country's GDP**, **36 % to the country's manufacturing output**.
- **Employment:** India has over 1 crore registered MSMEs, employing nearly **7.5 crore people**.
- **Foreign Currency:** MSMEs contribute **~45% of India's total exports.**

- **Reduces Disguised Unemployment: Absorbing the surplus agricultural labour**, they help to reduce the problem of disguised unemployment in rural areas.
    - **Disguised unemployment** is a situation where more people are employed than are required for a job or role. It's also known as hidden unemployment or labor hoarding.
- **Rural Development:** Around **50% of the total MSMEs operate in rural areas** and provide 45 % of total employment.

Challenges Faced by MSMEs

- **Finance issues**: **Informal** nature of MSMEs, credit assessment difficulties due to **information gaps, absence of collateral** etc. make it difficult for MSMEs to secure loans.
- **Infrastructure Bottlenecks:** Poor roads, **unreliable power supply**, **and inadequate digital infrastructure** hinder business operations.
- **Delayed Payments:** A large number of MSMEs are cater to the needs of large industries, both in public and private sector. But they face delayed payments, impacting **cash flow and working capital**.
- **Regulatory & Compliance Burden**: Complex taxation, labor laws, and frequent policy changes increase operational difficulties.
- **Limited Integration of Technology**: **Affects productivity** and **competitiveness**.
- **Export issues**: Inadequate infrastructure, **Lack of Environmental, social and governance (ESG) reports** by Indian MSMEs impacts exports competitiveness.

Initiatives Undertaken for MSMEs

- **Trade Enablement & Marketing (TEAM) Initiative:** To enable and assist micro and small enterprises to **onboard e-commerce platforms** by assisting in catalogue preparation, account management, logistics and packaging.
- **PM VISHWAKARMA**: Provide end-to-end support to artisans and craftspeople of **18 trades** who work with their hands and tools.
- **Self-Reliant India Fund Scheme**: Launched by Ministry of MSME, provides **equity funding** to those MSMEs which have the potential and viability to grow and become large units.
- **Public Procurement Policy:** It mandates **25% of annual procurement by Central Ministries from Micro and Small Enterprises.**
- **RAMP Scheme:** It is a **World Bank supported Central Sector Scheme** aimed at improving access of MSMEs to market, finance and **technology upgradation**.
- **Udyam Assist Platform (2023):** Launched to bring the Informal Micro Enterprises under the formal ambit for availing the benefit under **Priority Sector Lending**.
- **National Institute for Micro, Small and Medium Enterprises (Ni-MSME): For** enterprise promotion and entrepreneurship development.

Way Forward

- **Policy Support:** Consistent and **supportive government policies** that address the specific needs of MSMEs, including **tax incentives** and infrastructure development.
    - Assist MSMEs embrace best business practices in line with the fast-changing business environment.
- **Addressing Credit Gaps:** Assess credit worthiness of MSMEs by utilising **unexplored data sources** like digital transaction trails & **data generated through e-commerce sites** to expedite lending.
- **Technological Adoption and Digitalization:** Providing training and resources for digital literacy, promoting e-commerce platforms, and encouraging the **adoption of Industry 4.0 technologies**.
- **Market Access and Expansion:** Facilitating participation in **trade fairs and exhibitions**, promoting exports, and creating platforms for **B2B networking**.
- **Simplification of Regulatory Framework:** Reducing bureaucratic hurdles, **streamlining compliance** procedures, and creating a **business-friendly environment**.
- **Integration with Global Value Chains (GVC):** Being part of GVC would enable MSMEs to produce quality goods and services which will have greater acceptability in the global market.
- **Promoting the formation of MSME clusters**: To enhance collaboration, resource sharing, and collective bargaining power.

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

Weekly Focus #72- Micro, Small, and Medium Enterprises (MSMEs): Backbone of the Indian Economy

3.2. NATIONAL CRITICAL MINERAL MISSION (NCMM)

Why in the News?

The Union Cabinet has approved the launch of the **National Critical Mineral Mission (NCMM)**.

About NCMM

- **Genesis:** In Budget for 2024-25, establishment of Critical Mineral Mission was announced.
- **Key Objective:** To secure India's critical mineral supply chain by ensuring mineral availability from domestic and foreign sources.
- **Coverage**: It will encompass all stages of the **value chain**, including **mineral exploration**, **mining**, **beneficiation**, **processing**, and **recovery** from end-of-life products.
- **Key Features**:
  - It will offer **financial incentives** for **critical mineral exploration** and promote the **recovery of these minerals** from **overburden** and **tailings**.
  - It aims to create a **fast track regulatory approval process** for critical mineral mining projects.
  - It will encourage **Indian PSUs** and **private sector companies** to acquire **critical mineral assets abroad** and enhance trade with **resource-rich countries**.
  - It proposes development of **stockpile of critical minerals** within the country.
  - It includes provisions for **setting up of mineral processing parks**.
  - **Mining in offshore areas** (Polymetallic nodules contain minerals like Cobalt, REE, etc.)
- **Governance Framework:**
  - Activities will be coordinated by the **Empowered Committee on Critical Minerals.**
  - **Ministry of Mines** will be the administrative Ministry.

Note: The Mission will follow a **whole-of-government approach** which means it will work closely with relevant ministries, PSUs, private companies, and research institutions to achieve its objectives.

About Critical Minerals

- **Definition:** Critical minerals are minerals which are essential for **economic development** and **national security of any country.** The lack of availability or concentration of existence, extraction or processing of these minerals in few geographical locations may lead to **supply chain vulnerability** and **disruption**.

Economic Importance+Supply Risk= Criticality of Minerals

- India has released a list of **30 critical minerals** for India including Bismuth, Cobalt, Copper, Phosphorous, Potash, Rare Earth Elements (REE), Silicon, Tin, Titanium, etc.
- Currently, India has **heavy reliance on imports of critical minerals**.

Information about important critical mineral such as their reserve in India, largest producer in world, etc. is given in the Appendix-1.

Significance of Critical Minerals		
Environment • Crucial for **renewable energy technologies** such as solar panels, wind turbines, and semiconductors. • Also, crucial for **Battery Energy Storage Systems (BESS).**	**National Security** • Essential for **India's defense sector**, including missile systems, aerospace, and communication technologies.	**Economic & Electronic** • Shift to **electric vehicles (EVs)** requires lithium-ion batteries. • Essential for **semiconductor chips** in smartphones, computers, and communication devices.

Roadblocks to India's Critical Mineral Security

- **Limited Domestic Reserves:** India does not have many critical mineral reserves, or its requirements may be higher than the availability.
  - **E.**g., currently, there are no working mining leases for **cobalt, nickel, lithium, and neodymium** for production purposes.
- **Challenges in Exploration:** Many critical minerals are deep-seated, **requiring high-risk investments** in exploration and advanced **mining technologies.**
  - E.g. Presence of 5.9 million tonnes lithium deposits in Jammu and Kashmir.
- **Supply chain Disruptions:** Production and processing of many critical minerals are geographically concentrated, making global supply vulnerable to several risks.
  - China controls **60% of rare earth production, 60% of critical minerals production and 80% of the processing worldwide.**
    - In 2024, China banned exports of **gallium, germanium, antimony, and other key materials** to US (weaponising critical mineral exports).
  - Democratic Republic of Congo supplies ~**70% of the world's cobalt**, but political instability has led to **supply disruptions**.
- **Environmental Concerns:** Mining and processing of critical minerals often have significant environmental footprint resulting in protests from local population and environmental groups.
  - E.g., An estimated **54% of critical materials lie near indigenous people's land. (**International Renewable Energy Agency (IRENA)**)**
- **Inadequate recycling infrastructure:** Recycling of critical minerals from e-waste is underdeveloped, with the sector remaining largely unorganized and inefficient.

Other Initiatives taken for critical Minerals

Policy and Regulatory Framework

- **Mines and Minerals (Development and Regulation) Amendment Act, 2023:** It enables exploration and mining of critical minerals.
- **National Mineral Policy, 2019:** It promotes sustainable mining and exploration of critical minerals.
- **Elimination of customs duties** on majority of the critical minerals in Union budget 2024-25

Exploration and Domestic Production

- **Geological Survey of India (GSI):** Conducting extensive exploration for lithium, rare earths, and other critical minerals.
- **Lithium Reserves Discovery (2023):** Significant lithium deposits found in Reasi, Jammu & Kashmir.
- **Strategic Mineral Reserves:** Plans to establish reserves for critical minerals like lithium and cobalt.

International Collaborations & Trade Agreements

- **Khanij Bidesh India Limited (KABIL), 2019:** A joint venture company of Ministry of Mines to acquire critical minerals globally.
  - KABIL has engagements with countries like Argentina, Australia etc.
- **Minerals Security Partnership (MSP):** India joined the US-led initiative to ensure a stable critical minerals supply chain in 2023.

What strategies can India adopt for long-term critical mineral security?

- **Strengthening Domestic Critical Mineral Production:**
  - Exploring alternative **allocation mechanisms to attract more private investment**, such as granting exploration companies the right to mine the minerals they discover.
  - **Increase public and private investment** in geological surveys, exploration technologies, etc.
- **Developing Domestic Processing Capabilities:** Provide financial incentives, tax breaks, and other policy support to encourage private and public sector companies to invest in processing facilities.
  - **Special Economic Zones (SEZs) focused on critical mineral processing** can be established.
- **Need for Robust Global Cooperation:** Strengthening bilateral and multilateral partnerships with mineral-rich countries and other key stakeholders to secure access to critical mineral supplies.
- **Develop a Comprehensive Critical Minerals Strategy (CMS):** It can help focus on priority concerns in supply risks, domestic policy regimes, and sustainability.
  - **Conduct periodic detailed assessments** of India's critical mineral needs across various sectors.
  - **Setting up state-of-the-art e-waste recycling facility**, introducing a nationwide "Recycle for Resources" campaign to increase public awareness and participation in e-waste recycling, etc.
  - **Diversifying import sources** from various countries.
- **Role of State Government:** Infrastructure Development- Develop transportation, power, and storage infrastructure near Critical Mineral mining areas, etc.

Conclusion

Securing critical minerals is crucial for India's economic growth, energy transition, and national security. Strengthening domestic mining, refining, and recycling, along with a robust National Critical Minerals Strategy, will help reduce import dependence and ensure long-term supply stability.

To know more about Minerals Security Partnership, refer to Article 3.8. Minerals Security Partnership Finance Network in September 2024 Monthly Current Affairs Magazine.

3.2.1. MAJOR AND MINOR MINERALS

Why in the news?

The Ministry of Mines has reclassified **Barytes, Felspar, Mica, and Quartz** from **minor minerals** to **major minerals**.

More on the news

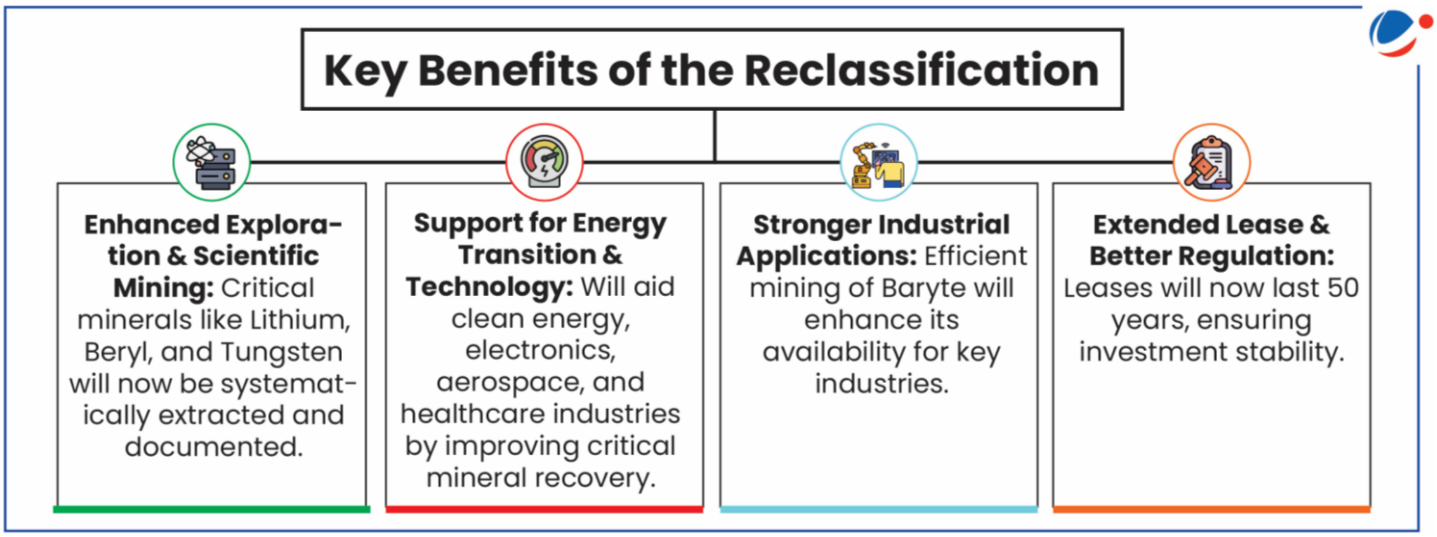
- This move follows the recent approval of the **National Critical Mineral Mission** by the Union Cabinet.
- Reclassification is based on recommendations from an **Inter-Ministerial Committee led by Dr. V. K. Saraswat.**

Reason for Reclassification

- The decision to shift these minerals to the **major minerals category** is based on their **association with critical minerals** and their importance in **various high-tech industries**.

- Critical minerals are those minerals that are essential for **economic development** and **national security** (Ministry of Mines).

- **Quartz, Felspar, and Mica in Pegmatite Rocks**
  - These minerals are found in **pegmatite rocks**, which also contain **essential critical minerals** like **Beryl, Lithium, Niobium, Tantalum, Molybdenum, Tin, Titanium, and Tungsten**.
  - Earlier, when these minerals were leased as **minor minerals**, leaseholders **did not report or extract** the critical minerals present.
- **Baryte and its Industrial Significance**
  - Baryte often occurs in **concretions and vein fillings** in **limestone and dolostone**, alongside ores of **Antimony, Cobalt, Copper, Lead, Manganese, and Silver**.
  - It has extensive **industrial applications** in **oil and gas drilling, electronics, TV screens, rubber, glass, ceramics, paint, radiation shielding, and medical applications**.



About Major and Minor Minerals

- A **mineral** is a natural substance of organic or inorganic origin with **definite chemical and physical properties**, forming the building blocks of rocks and ores.
- Under the **Mines and Minerals (Development and Regulation) (MMDR) Act, 1957,** minerals are broadly classified in two categories, i.e. **major minerals and minor minerals.**
- **Minor minerals means** building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes and **any other mineral which the Central Government may declare** to be a minor mineral.
- **Major minerals** include all minerals other than minor minerals. E.g. Coal, Iron, Zinc, Limestone etc.
- **Framework for Governance:**
  - **Legal Framework for Mineral Regulation:** The **MMDR Act, 1957** is the primary law governing the mining sector, **except for petroleum and natural gas.**
  - The **GoI has framed additional rules** for mineral management:
    - **Mineral Concession (MC) Rules, 1960**: Regulates permits, licenses, and leases for all minerals **except Atomic and Minor Minerals**.
    - **Mineral Conservation and Development (MCD) Rules, 1988**: Ensures **conservation and systematic development** of minerals.
  - **Role of State Governments in Mineral Regulation:**
    - **Section 15 of MMDR Act, 1957**: Gives **State Governments** the power to **make rules** for **minor minerals**.
    - **Section 23C of MMDR Act, 1957**: Empowers **State Governments** to **prevent illegal mining, transportation, and storage** of minerals.
    - **Section 9 (b) of the MMDR Act as amended in 2015:** Mandates the State Government to establish District Mineral Foundation Trust in every district affected by the mining operation.

3.3. PRIME MINISTER DHAN DHAANYA KRISHI YOJANA

Why in the news?

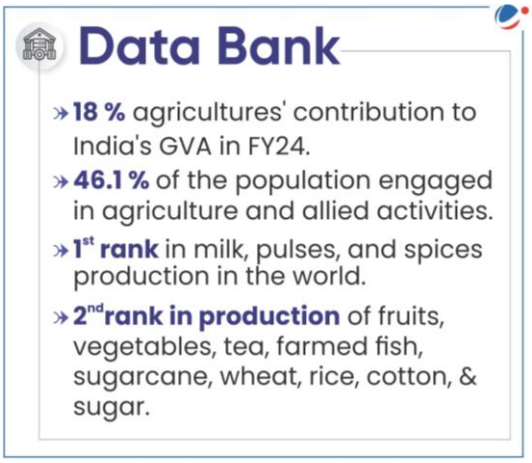
Finance Minister announced the launch of the Prime Minister Dhan-Dhaanya Krishi Yojana (PMDKY) in the Union Budget 2025.

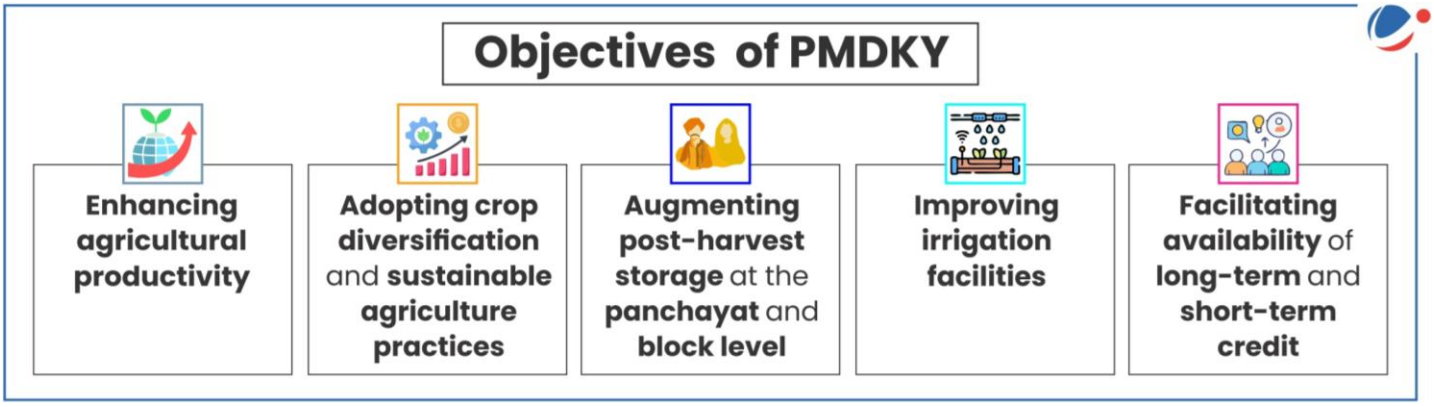
About Prime Minister Dhan-Dhaanya Krishi Yojana (PMDKY)

- **Coverage:** It will cover **100 districts** based on 3 broad parameters: low productivity, moderate crop intensity, and below-average credit parameters.
  - Cropping intensity is a measure of how efficiently land is used, and it is defined as number of crops grown on the same field during a given agricultural year.
  - At the all India level, the **cropping intensity was recorded at 155%** in 2021-22 (Ministry of Agriculture).
- **Inspired by ADP:** It will be on the line of **Aspirational Districts Programme** (ADP), which was launched in 2018.
- **Outlay:** Budget documents do not provide a separate allocation for the scheme.
- **Implementation Strategy:** The program will be executed in partnership with state governments, focusing on the convergence of existing schemes.

Aspirational Districts Programme (ADP)

- It is initiated by the **NITI Aayog** in collaboration with the state governments.
- **Aim:** To quickly and effectively transform **112 of the most under-developed districts across India**, based on 3 Cs
  - Convergence (of Central and State schemes),
  - Collaboration (of Central and State level nodal officers, and District Collectors), and
  - Competition (among districts through monthly delta ranking).
- It focuses on the **strength of each district**, identifying low-hanging fruits for immediate improvement and measuring progress by **ranking districts on a monthly basis.**
- The ranking is based on the incremental progress made across 49 Key Performance Indicators under **5 broad socio-economic themes.**
  - Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Infrastructure.





Agriculture in India

- **Backbone of India's economy:** Agriculture plays a pivotal role in ensuring food security, providing employment, and contributing to overall economic development.
- **Agricultural production and yield:** Despite high level of production i.e 329.7 million tonnes for FY23, agricultural yield is found to be lower in most crops compared to other countries like China, Brazil & US.

- **Example**: India's **rice yield stands at 2,191 kg per hectare**, compared to the **global average of 3,026 kg per hectare**. Wheat yield in India is **2,750 kg per hectare**, lower than world average of 3,289 kg per hectare.

Key Reasons for Low Agricultural Productivity

- **Small and Fragmented Landholdings:** The average farm size in India is only 0.74 hectares in 2021-22 (NABARD), leading to inefficiencies in farming operations.
  - Fragmentation **makes mechanization and irrigation difficult,** reducing overall productivity.
- **Dependence on Monsoons:** Nearly **51%** of India's farmland depends on rainfall rather than irrigation.
- **Poor Irrigation:** Percentage of net un-irrigated area over net area sown in the country is estimated to be about **48.65%.**
  - It is estimated that **40% of the net sown area** is expected to remain rainfed even after attainment of full irrigation potential of the country.
- **Low Use of Modern Technology:** Limited access to **high-yield seeds, fertilizers**, and advanced machinery restricts productivity.
- **Soil Degradation & Overuse of Chemicals:** Soil erosion, salinity, and loss of organic matter reduce agricultural output.
- **Lack of Credit and Investment:** Hardly **20% of the 12.56 crore small and marginal farmers** have access to institutional credit.

Recent Initiatives to Increase Productivity of Agriculture

- **National Food Security Mission (NFSM):** Launched in 2007-08 to increase the production of rice, wheat, pulses, coarse cereals, and nutri-cereals sustainably.
- **Pradhan Mantri Krishi Sinchayee Yojana (2015):** For extending the coverage of irrigation '**Har Khet ko pani'** & improving water use efficiency '**More crop per drop'** in a focused manner.
- **PM-KISAN (Pradhan Mantri Kisan Samman Nidhi):** Launched in 2019, it is a **Central Sector scheme** providing ₹6000 per year in 3 equal installments to farmers as an income support.
- **Agriculture Infrastructure Fund (2020-21):** To mobilize a medium to long term debt financing facility for investment in viable projects for **post-harvest management infrastructure** and community farming assets.
- **MSP Enhancement:** Government has increased the MSP for all mandated Kharif, Rabi and other commercial crops with a return of at least 50% over all India weighted average cost of production from 2018-19.
- **Kisan Credit Card Scheme:** To provide farmers with easy access to affordable credit.
  - In 2019, KCC scheme was **expanded to include animal husbandry, dairying, & fisheries.**
- **Pradhan Mantri Fasal Bima Yojana (2016):** Aims to provide **insurance coverage** to farmers for crop failure, **stabilise farmers' income**, and encourage farmers to adopt modern agricultural practices, etc.
- **Nutrient based subsidy policy (2010):** The policy was formulated with the objective of promoting a **balanced use of N, P and K fertilizers**.

Conclusion

Enhancing **agricultural productivity** is crucial for ensuring **food security, rural development, and economic growth** in India. By promoting **modern irrigation, mechanization, high-yield seeds, and sustainable farming practices**, India can bridge the **productivity gap** with global standards. Making **markets easier to access, giving financial support, and educating farmers** will further increase crop yields. **A multi-dimensional approach**, combining policy support, innovation, and rural infrastructure development, is essential for achieving **higher yields, and a more resilient farming ecosystem** in India.

3.4. MAKHANA

Why in the News?

Union Budget 2025-26 announced constitution of **Makhana Board in Bihar** under 'Agriculture as the first engine' for India's development journey.

More on the News

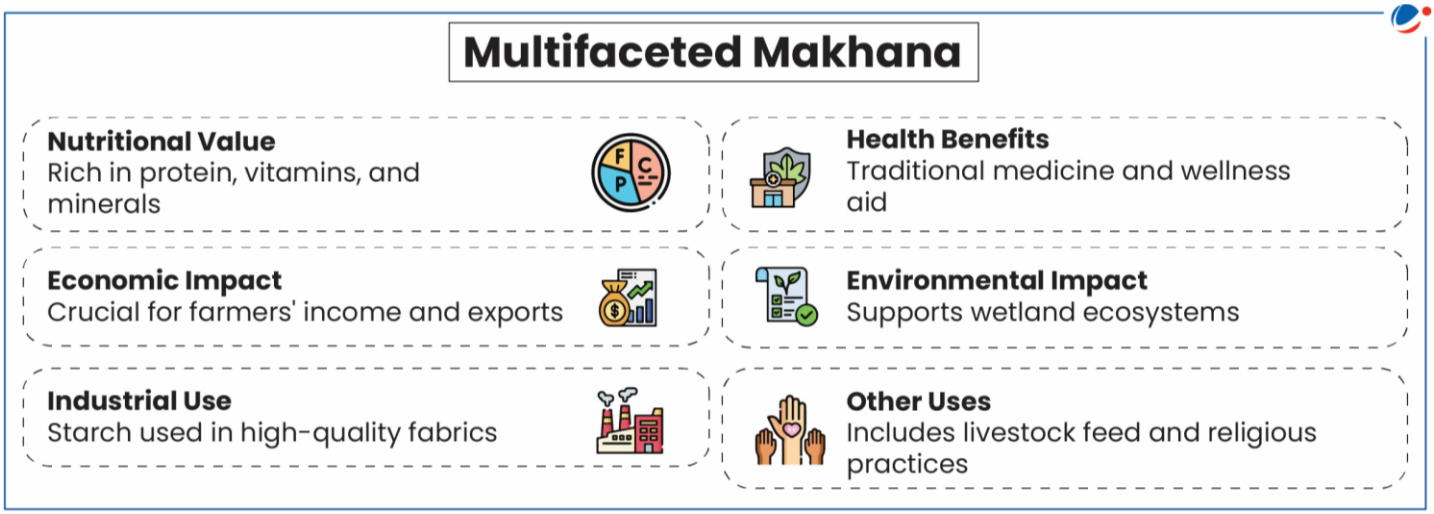
- Board will be established to improve **production, processing, value addition, and marketing** of makhana.
- Board will also provide **handholding and training support to makhana farmers** and will also work to ensure they receive the **benefits of all relevant Government schemes**.
- **Budget Allocation:** Rupee 100 crores.
- To streamline operations and improve collective bargaining power, people engaged in these activities will be **organized into Farmer Producer Organizations (FPOs).**

Do you know

- Superfood describes **foods that are rich in nutrients, antioxidants, probiotics, fiber and other health-promoting compounds.** They tend to contain good fats like mono and polyunsaturated fats.
  - It is **not a scientifically recognized classification** of food but rather a marketing term.
- **Other Superfoods:** Jackfruit, Moringa, Tamarind, Turmeric, Garlic, etc.

About Makhana

- **Foxnut,** commonly known as **Makhana,** is an important **aquatic flowering crop** with botanical name **Euryale ferox (prickly water lily).**
- It is a plant of **tropical and subtropical climate**.
- It is also referred to as the **'Black Diamond'** due to its dark outer layer.
- It is grown in **stagnant perennial water bodies** like ponds, land depressions, oxbow lakes, swamps and ditches with water depths of 4-6 feet.
- Makhana is now being recognized as a **super food.**
- **Preferred Climatic conditions**
  - **Temperature:** 200C to 350 C
  - **Relative humidity**: 50% to 90%
  - **Annual rainfall:** 100 cm to 250 cm
  - **Soil:** Smooth loamy soil
- Makhana plant is considered as **native of South-East Asia and China**.
- **Major Producing Regions**
  - **Domestic:**
    - **Bihar** in India is the **leading state** accounting for **~90% of India's makhana production**.
    - **Other states:** West Bengal, Manipur, Tripura, Assam, Jammu & Kashmir, Odisha, Rajasthan, Madhya Pradesh & Uttar Pradesh but commercially produced in few states only.
  - **International:** Makhana is also grown in Nepal, Bangladesh, China, Japan, Russia and Korea.



Other initiatives taken to promote Makhana Cultivation

- **National Research Centre for Makhana, Darbhanga**: Established under the Indian Councuil Agricultural Research in 2001.
- **National Institute of Food Technology:** Provides a strong fillip to makhana processing activities.

- **One District One Product (ODOP):** Makhana recognize under ODOP for the districts of **Darbhanga and Muzaffarpur from Bihar.**
- **GI Tag**: In 2022, **'Mithila Makhana'** was conferred a GI tag.

Challenges in Makhana Cultivation

- **Low productivity:** Traditional farming methods result in lower yields, with farmers achieving only 1.7–1.9 tonnes per hectare compared to the potential 3–3.5 tonnes per hectare using modern techniques.
- **Lack of processing infrastructure:** Due to inadequate food processing units, raw makhana is often sold at lower prices to companies outside Bihar, reducing local farmers' earnings.
- **Export barriers:** Strict global quality standards like food safety and hygiene certifications have limited exports, with only 2 percent of Bihar's makhana meeting international requirements.
- **Market inefficiencies:** The absence of an organized marketing chain means farmers often receive lower prices due to the dominance of intermediaries.
- **Limited awareness among farmers:** Many makhana farmers lack awareness about government schemes, financial incentives, and modern agricultural practices.
- **Others:** Proper weed management in water bodies, better quality equipment and related accessories, better cold storage facilities etc.

Conclusion

The establishment of the Makhana Board marks a significant step towards the organized promotion, research, and commercialization of makhana cultivation in India. By addressing challenges like traditional farming inefficiencies, post-harvest losses, and limited global reach, the board can play a pivotal role in making makhana a globally competitive superfood. Sustainable cultivation practices, coupled with government initiatives, will not only boost rural livelihoods but also position makhana as a key player in India's agri-export sector.

3.5. MISSION FOR COTTON PRODUCTIVITY

Why in the News?

The **'Mission for Cotton Productivity' was announced** during Budget 2025-26.

Mission for Cotton Productivity

- It is a **five-year mission** to facilitate improvements in **productivity and sustainability** of cotton farming, and promote **extra-long staple (ELS) cotton varieties**.
- **Ministry**: Ministry of Textiles
  - It will provide **science & technology support** to cotton growing farmers.
- Aligned with the Government's integrated **5F vision for the textile sector**, the mission will **help in increasing incomes of the farmers** as well as **ensure a steady supply of quality cotton** for rejuvenating India's traditional textile sector.
- It will aid in **reducing import dependence** and enhance the **global competitiveness** of India's textile sector, where **80% of capacity** is driven by **MSMEs**.

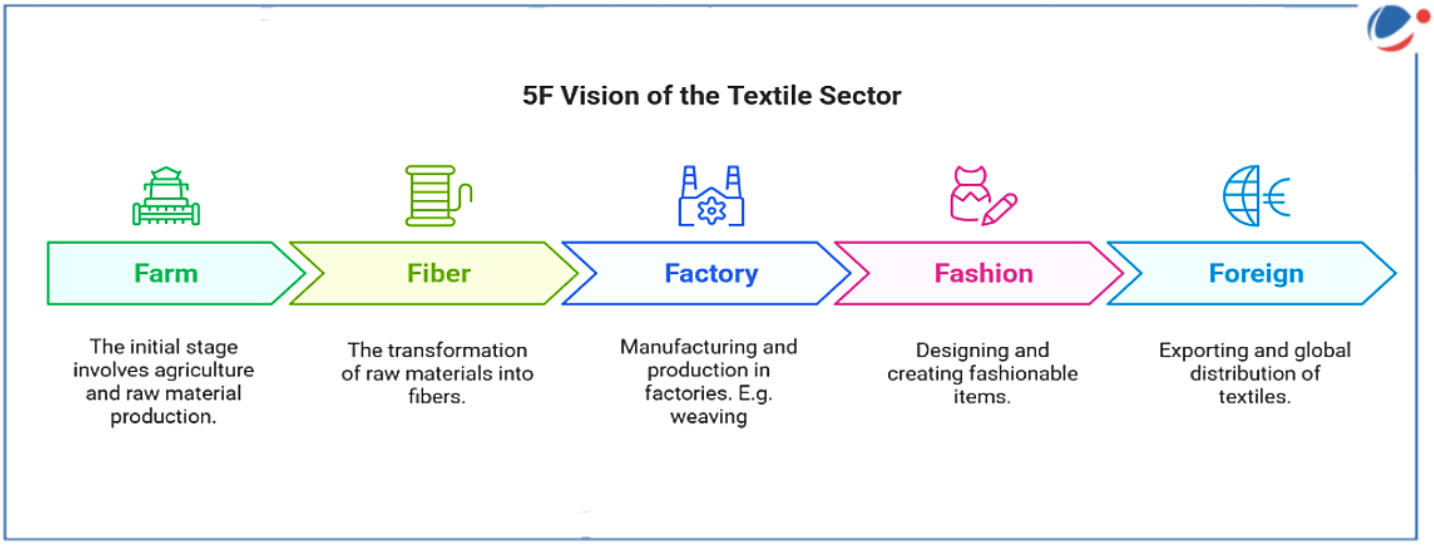
About Staple Cotton Fibre

A **staple** is an individual cotton fibre. Based on the **length of the staple, cotton is classified as:**

- **Very short-staple cotton**: ≤21 mm
- **Short staple cotton**: >22mm and <25 mm
- **Medium Staple cotton**: >26 mm and < 28 mm
- **Long staple cotton**: >29mm and < 34 mm
- **Extra-long staple cotton: ≥34.925 mm**
  - It is a **premium cotton variety** cultivated in about 10% of the cotton area, contributing **4% of global production**.
  - **Major ELS Producing states in India**: Karnataka, Tamil Nadu, Madhya Pradesh etc.

Need for the Mission:

- **Stagnant Productivity**: Challenges of stagnant cotton productivity. For instance, in 2023-24 the **cotton yield was 435kg/hectare which is similar to 2024-25's yield of 447kg/hectare**.
- **Rainfed Crop**: Majority cotton area is rainfed, mainly in the Central and Southern States.
  - Approximately **67% of India's cotton** is produced on **rain-fed areas** and **33% on irrigated** lands.
- **Pests Menace**: Cotton crop is highly prone to pests and diseases. E.g. Pink Bollworm, Whitefly etc.
- **Unstable Prices**: Wide fluctuation in cotton prices, inadequate market infrastructure and cotton export policy.



Cotton Production, Productivity and Consumption in India

- **Production**: India ranks **1st in cotton acreage** with around **40% of the world area** under cotton.
- **Major Cotton Producing Zones in India**:
  - Northern Zone - Punjab, Haryana and Rajasthan
  - Central Zone - Gujarat, Maharashtra and Madhya Pradesh
  - Southern Zone - Telangana, Andhra Pradesh and Karnataka.
- **India ranks 2nd** in cotton **production** with estimated production of 343.47 lakh bales (5.84 MMT) in 2022-23 i.e. **23.83% of world cotton production.**
- **Productivity**: India ranks **39th** in overall cotton **yield** which is **lower** than countries like **USA, China, Brazil etc.**
- **Consumption**: India is the **2nd largest consumer of cotton** in the world with **22.24%** of world cotton consumption (2023).
  - Less than **10%** of the total consumption of cotton in India is **imported** by the textile industry (2023).

Significance of Cotton in India

- **Economic Significance:** It is a commercial/cash crop also called **'White Gold'** due to its economic importance in India.
- **Contributes to Forex Reserves: It** is **one of the largest contributors to India's net foreign exchange** by way of **exports**.
- **Export Potential**: India **exported** an estimated 30 lakh bales i.e. **6% of world export in 2022-23**.
- **Livelihood Provider**: It helps in sustaining the livelihood of an estimated **6 million cotton farmers** and **40-50 million** people engaged in related activity such as **cotton processing & trade**.
  - The **cotton textiles industry** is the **second largest employer** in the country after agriculture.

Cotton (Scientific name: Gossypium spp)

- Cotton is a **soft, fluffy staple fiber** that grows in **a boll (protective case) around its seeds.**
- It is a **shrub (semi-xerophyte) native** to **tropical and subtropical** regions around the world, including the **Americas, Africa, Egypt and India.**
- **Four species of cotton** are G. Arboreum & G. Herbaceum (Asian cotton), G. Barbadense (Egyptian cotton) and G. Hirsutum (American Upland cotton).
  - India is reportedly the **only country which grows all four species of cotton**.
  - G. Hirsutum represents 90% of the hybrid cotton production in India and all the current Bt cotton hybrids are G. Hirsutuim.

Bt Cotton

- **Genetically Modified (GM) cotton**, also known **as Bt cotton**, is developed **by incorporating a gene** from **the bacterium Bacillus thuringiensis (Bt) m**aking it resistant against pests like bollworm.
- It is the **only GM crop** approved in 2002 by the **Genetic Engineering Appraisal Committee (GEAC) of** the Ministry of Environment, Forest and Climate Change **for commercial** cultivation.
- **Bollgard I and II technologies** are famous for developing **Bt Cotton**.
- Recently, **CSIR-National Botanical Research Institute (NBRI)** has developed the **world's First Pink Bollworm-Resistant GM Cotton.**
  - CSIR-NBRI engineered **a novel insecticidal gene** demonstrating superior resistance against Pink bollworm compared to **Bollgard II cotton.**
  - It also **protects** against other pests like the **cotton leafworm and fall armyworm.**

- **Climate & Soil Requirement**
  - **Temperature**:
    - At **germination** stage, **minimum** temperature required is **15°C** whereas in **vegetative growth** the optimum temperature is **21-27°C**.
    - It can **tolerate** temperature to the extent of **43°C** but temperature **below 21°C is detrimental** to the crop.
    - It requires **at least 210 frost-free days** and **50 to 100 cm of rainfall** for its growth.
    - **Warm days of cool nights** with **large diurnal variations** during the period of **fruiting** are conducive to good boll & fibre development.
  - **Soil**: Cotton is grown on a variety of soils like **well drained deep alluvial** soils in the north, **black clayey soils** of varying depth in central region and **black and mixed black and red soils** in south zone.
    - Cotton is **semi-tolerant to salinity** and **sensitive to water logging** and thus prefers light **well drained soils capable of retaining moisture.**
  - **Crop Season**: April-May in northern India and is delayed as we proceed down south (monsoon based in southern zone).

Other Steps taken for development of cotton sector:

- **Minimum Support Price (MSP) for Cotton**: Cotton is procured by Government at MSP through **Cotton Corporation of India (CCI).**
  - There is **no maximum quantity limit** of purchase of produced cotton from farmers.
  - Based on the recommendations of CACP, Ministry of Agriculture declares **MSP for two basic varieties of Fair Average Quality (FAQ) cotton viz. Medium Staple length and long staple length**.
- **Branding of Indian Cotton: Brand "KASTURI Cotton India"** launched to attain the objective of making India Atmanirbhar and vocal for local in the field of cotton.
  - E.g. Encourage self-regulation by industries by owning complete responsibility of **Traceability, Certification and Branding** of KASTURI Cotton India.
- **Mobile App "Cott-Ally":** A farmer-friendly app to increase **awareness** about MSP of cotton, best farm practices and nearest procurement centres of CCI in regional languages.
- **Technological Interventions**: **High Density Planting System (HDPS),** scientific assessment of quality, processing of cotton in **modernized Ginning & Pressing factories**, Extension services etc.

Conclusion

There is a need to **improve processing** of cotton beyond yarn and weaving to production of finished products. The **role of MSMEs** is primary in promotion of the cotton textile industry. The **Mission** promotes production of **quality cotton** to help cotton **farmers** increase their **income** along with promoting **exports**. It is vital for the growth of **Brand India** and making **India self-reliant.**

3.6. URBAN CHALLENGE FUND (UCF)

Why in the News?

Budget 2025-26 announced the creation of **Urban Challenge Fund (UCF).**

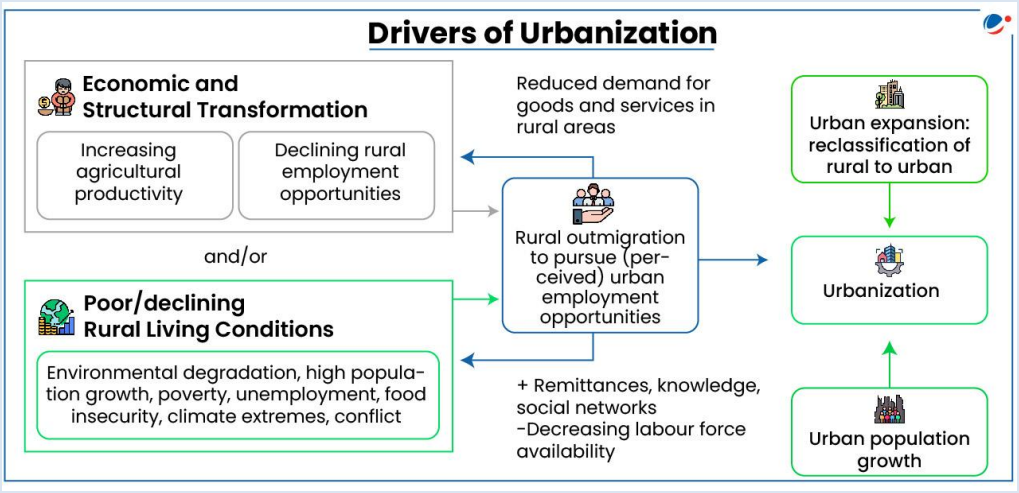
What is the Urban Challenge Fund (UCF)?

- Urban Challenge Fund (UCF) of Rs 1 lakh crore aims to encourage states to think innovatively towards attaining sustainable urbanisation and redevelopment goals in existing cities.
  - **F**und is to implement the proposals for **'Cities as Growth Hubs', 'Creative Redevelopment of Cities'** and **'Water & Sanitation'**
- **Financing Mechanism:** Fund will finance up to **25% of the cost of bankable projects** with a stipulation that at least **50% of the cost is funded from bonds, bank loans, and PPPs.**
  - An allocation of **Rs. 10,000 crore** is proposed for 2025-26.

What is the need for the UCF?

- **Cater to rising Urban Population:** India's urban population increased from **27.7% in 2001 to 31.1% (377.1 million) in 2011,** at a **rate of 2.76%** per year. (Census 2011).
- **Ensure Sustainability:** Cities in India face the risk of looming water crisis, are prone to disasters like earthquakes, face severe pollution leading to **urban heat island effect.**
  - E.g., **Delhi** is located in Seismic zone IV and is also one of the polluted cities in the world.
- **Support Developmental Projects:** Focus on **integrated development** covering critical infrastructure components in Transport and Logistics, Energy, Water and Sanitation, etc.
- **Ensure absorption of the available funds:** Ensuring ability to divert the available money properly into bankable, needs-based projects with effective delivery mechanisms.
- **Address issues with Urban Planning:** Land parcels of high urban densities are sub-optimally utilized due to fragmented and poorly recorded ownership of land.
  - **Urban Planning** is a **state subject** as per the **12th Schedule** of the Constitution.
- **Address Deficit of Human Resources:** It is a major bottleneck as the State machinery lacks **qualified urban planners** responsible for **urban planning and design.**

Urbanisation in India



- **Urbanisation**: It is an **index of transformation** from traditional rural economies to modern industrial one.
  - It is a **long term process** and a **cycle** through which a nation pass as they evolve from **agrarian to industrial society.**
- **As per Census 2011,** an **urban unit in India is** referred to as:
  - All **administrative units** that have been **defined by statute as urban** like Municipal Corporation, Municipality, Cantonment Board, Notified Town Area Committee, Town Panchayat, Nagar Palika etc. are known as **Statutory Town.** Further, Statutory Towns with population of 1,00,000 and above are categorized as cities.
  - All other places which satisfied the following criteria:
    - A **minimum population of 5,000 persons;**
    - **75% and above** of the male main working population being engaged in **non-agricultural pursuits;** and;
    - A density of population of at **least 400 persons per sq. km.** (1,000 per sq. mile)
- **Key Characteristics of Urbanisation in India**
  - **Poverty Driven:** It is **largely driven** by economic distress, with both **rural-to-urban** and **urban-to-urban migration.**
    - This is **different from Western countries** where urbanisation followed industrialisation creating jobs for rural labour.

- **Slow Progress:** India's urbanisation has **progressed slowly** due to slow process of reclassification of rural areas as urban when compared to other countries.
  - The lack of **'urban' status** poses an **institutional challenge** in terms of planning and management of these settlements.
- **Spatial Variations:** While India's level of urbanisation as a whole appears to be low, it varies **significantly across the States and UTs.**
  - **Economically diverse states** such as Goa, Kerala, Maharashtra, etc., have greater urbanisation.
- **Obsolete Definition:** Definition of **'urban'** is based on the criteria formulated in 1961.
  - Currently, **socio-economic landscapes** in India have changed with cities emerging as the **loci of economic growth.**
- **Paradox of exclusion:** India's urban infrastructure is fraught with issues like **growing influx, proliferation of slums, overburdening public services** leading to **social alienation.**

What more can be done to improve the situation of urban areas in India?

- **Re-engineering and Strengthening of Urban Governance Structures:** It can be done based on the **2nd Administrative Reform Commission (ARC)** recommendations suggesting **clear division of roles and responsibilities** among various authorities.
- **City Master Plan:** It should be statutorily backed as it is essential for socio-economic development, better liveability, inclusion, citizen engagement, environmental sustainability, etc.
  - About **52% of statutory towns in India** lack any kind of master plan. (NITI Ayog, 2020)
- **Town Planning Professionals:** An **All India Urban Planning Service** similar to other civil services like Indian Information Service, etc., should be set up to have qualified planners. [**High Level Committee (HLC)** on Urban Planning under the Ministry of Housing and Urban Affairs (MoHUA)].
  - NITI Ayog recommends constitution of **National Council of Town and Country Planners** as a statutory body.
- **Integrated Capacity Building Programme**: MoHUA is funding capacity-building events for town planners and urban functionaries which should be strengthened.
  - Further, **capacity building institutions** should be rejuvenated by **strengthening centres of excellence** established by MoHUA.
- **Reviewing existing legislations:** States should undertake a **regular review of planning legislations** (including town and country planning or urban and regional development acts, etc.).
- **Involvement of Citizens: Technocratic planning** without **adequate citizen participation** is the reason for the **disconnect between plan preparation and its acceptance on ground.**
- **Strengthen the role of Private Sector:** This should be enhanced by **creating gainful employment** opportunities, adopting of **fair processes** for procuring technical consultancy services, etc.

Measures taken for reforming Urban Areas

India

- **Swachh Bharat Mission** focuses on safe sanitation, waste management with focus on door to door collection/segregation, waste processing etc.
- **Smart Cities Mission** promotes cities that provide core infrastructure, clean and sustainable environment and decent quality of life through the application of **'smart solutions'.**
- **National Urban Livelihood Mission (NULM)** aims to **reduce poverty** and **vulnerability of the urban poor households** by enabling them to access gainful self-employment and skilled wage employment.
- **PM SVANidhi scheme**, special **micro-credit** facility of the **Ministry of Housing and Urban Affairs** for providing affordable loans to street vendors.
- **Pradhan Mantri Awas Yojana (Urban) (PMAY-U)** intends to provide housing in urban areas among Economically Weaker Sections/Low-Income Groups and Middle Income Groups.
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)** focuses on development of basic infrastructure, in the selected cities and towns, in the sectors of water supply, sewerage, etc.
- **Incentives to states** under schemes like **Scheme for Special Assistance to States for Capital Investment 2022-23 – Part – VI (Urban Planning Reforms), etc.**

Global

- **Sustainable Development Goal-11** aims to make cities and human settlements inclusive, safe, resilient and sustainable.
- **United Nations Human Settlements Programme (UN-Habitat)** is the **focal point** for all urbanization and human settlement matters within the UN system.
- **Other Initiatives** like Global Alliance for Buildings & Construction (Global ABC), the UrbanShift initiative, or the Cool Coalition by **United Nations Environment Programme (UNEP)** to reduce climate impacts in urban environments.

Scan the QR code to know more about the need of **investing in sustainable cities**

Weekly Focus #103- Investing in Future Cities: Building Inclusive, Resilient, and Sustainable Urbanscapes

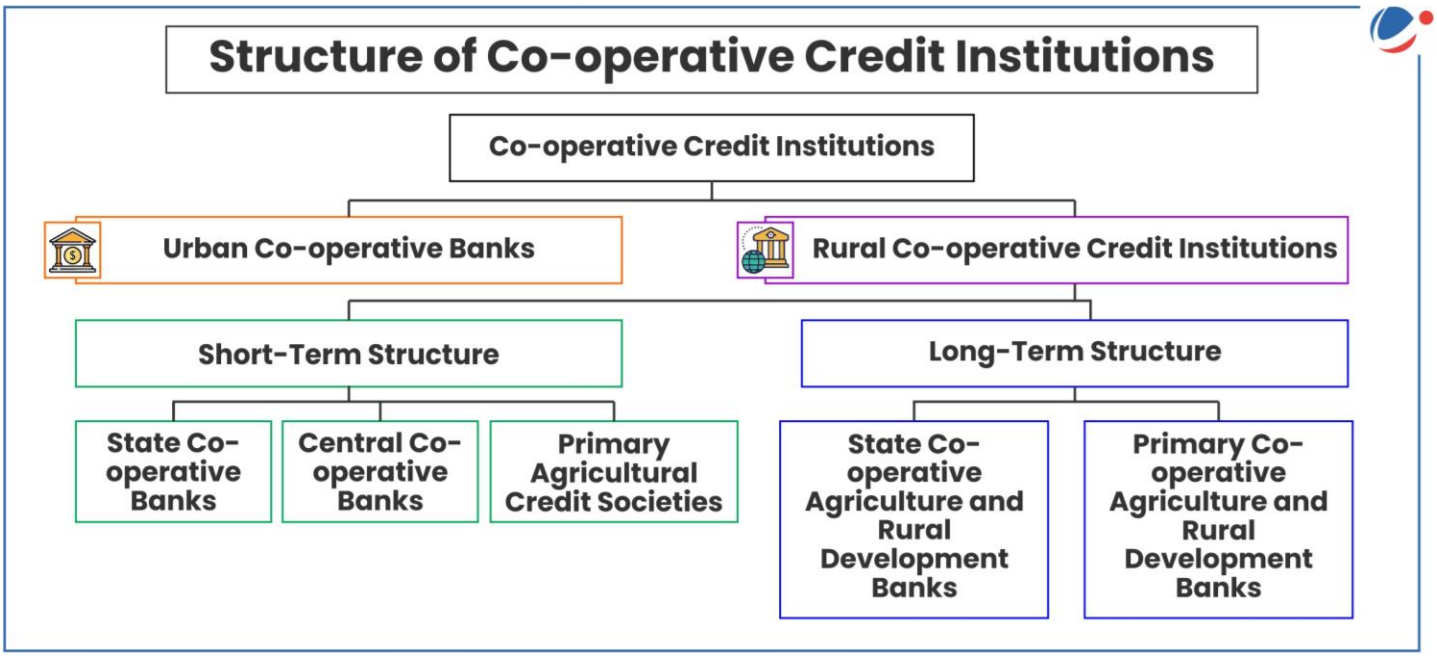
3.7. URBAN COOPERATIVE BANKS

Why in the news?

The RBI has imposed a **six-month moratorium on New India Co-operative Bank Limited**, restricting loans, deposits, and withdrawals.

More on the news

- According to the RBI, these measures have been taken due to **concerns over the bank's financial stability and liquidity situation.**
- The RBI also **superseded its Board of Directors** for 12 months, citing "poor governance standards".



About Urban Cooperative Banks

- **Urban Cooperative Banks (UCBs)** are a subset of cooperative banks in India that operate primarily in urban and semi-urban areas.
- **History**: The **Cooperative Credit Societies Act of 1904 (during Lord Curzon's tenure)** and its 1912 amendment laid the legal foundation for these institutions.
  - The **first** urban cooperative credit society was established in **1889 in Baroda (Anyonya Sahakari Mandali).**

- Currently**,** they are registered as cooperative societies **under the respective State Cooperative Societies Acts** (for single-state operations) **or the Multi-State Cooperative Societies Act, 2002** (for operations across multiple states).
- **Control and Regulation:** UCBs function under a **dual regulatory framework**:
  - **Banking Regulation Act, 1949**: **Since 1966, RBI** has been supervising UCBs regarding licensing, capital adequacy, loan policies, and financial stability.
    - The **Banking Regulation (Amendment) Act, 2020** has given RBI more control over UCBs, allowing it to intervene in their **management and governance.**
  - **Registrar of Cooperative Societies (RCS):** The respective state governments or the central government control administrative functions through the RCS.

Key Differences Between UCBs and Commercial Banks

Feature	Urban Cooperative Banks (UCBs)	Commercial Banks
Ownership	Owned and controlled by members **(cooperative structure)**	Owned by shareholders **(public or private entities)**
Regulation	Dual control by **RBI and Registrar of Cooperative Societies.**	Regulated solely by RBI
Profit Motive	Not focussed on profit maximization.	Profit-driven institutions
Lending Focus	Small businesses, self-employed, weaker sections.	Large corporate loans, retail banking, government projects.
Voting Rights	**One-member-one-vote system.**	**Shareholders' voting rights** based on shares held

Significance of UCBs

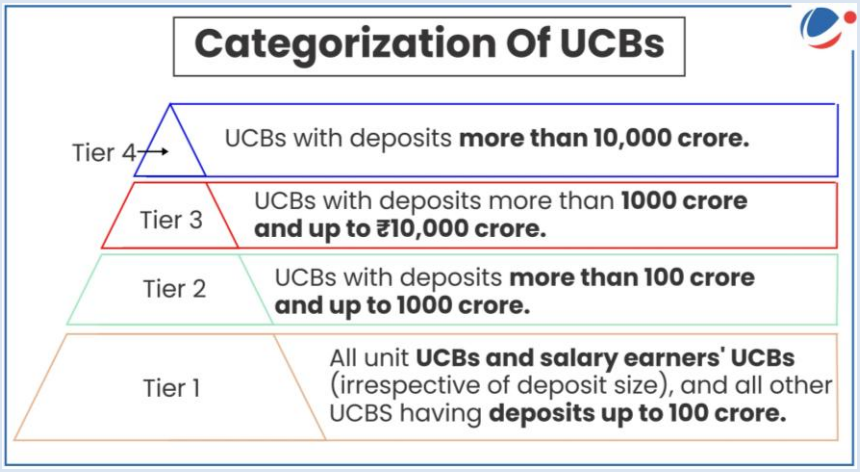
- **Financial Inclusion**: UCBs primarily cater to small borrowers, micro-businesses, and lower-income groups in urban and semi-urban areas.
- **Local Focus:** UCBs operate within specific communities, allowing them to understand local needs and provide tailored financial services.
- **Priority Sector Lending:** UCBs have to allocate 65% to PSL in FY 2024-25 but increasing it to 75% by March 2026.
- **Developmental Support:** UCBs are catering the **needs of the non-agricultural sector**, particularly small borrowers in urban and semi-urban areas.
  - UCBs, till 1996, were allowed to lend **money only for non-agricultural purposes**. This distinction does not hold today.

Challenges Faced by UCBs

- **Weak Governance and Fraud Risks**: Many UCBs suffer from political interference, nepotism, and financial mismanagement, leading to fraud and operational inefficiencies.
  - During 2023-24, licenses of 24 UCBs were cancelled.
- **Competition from Commercial Banks and Fintechs: UCBs** share in the banking sector **declined to 2.5%** of total banking assets in March 2024, **down from 3.8% in 2017**.

- **High Non-Performing Assets (NPAs): High levels of NPAs** erode profitability and weaken the financial health of UCBs.
  - Gross NPAs of UCBs were 8.8 per cent at the end of March 2024.
- **Capital Adequacy Shortfalls**: Limited access to capital markets restricts their ability to meet regulatory capital requirements and expand operations.
- **Regulatory Non-Compliance: Dual regulation** by RBI and state cooperative bodies leads to compliance challenges and operational inefficiencies.
- **Technological Obsolescence**: Many UCBs lag in adopting digital banking technologies, impacting efficiency and customer experience.

Recent measures taken



- **Banking Regulation Amendment Act, 2020:** The amendment empowered the RBI to supersede boards, restructure managements and formulate resolution plans.
- **Revised Prompt Corrective Action (PCA) Framework:** In 2024, the RBI extended the PCA framework to UCBs, setting thresholds for **capital adequacy, asset quality, and profitability.**
  - PCA is a mechanism that allows the RBI to intervene early when a bank shows signs of financial distress.
- **Liquidity Support via Umbrella Organization (UO):** Established **National Urban Co-operative Finance and Development Corporation** as UO for UCBs.
- **Tiered Regulatory Framework:** The RBI introduced a four-tiered regulatory framework for UCBs based on deposit size to tailor regulatory approaches effectively.
- **Other steps**
  - UCBs can now open **new branches up to 10% (maximum 5 branches)** of the existing number of branches in the previous financial year without prior approval of RBI.
  - UCBs have been allowed by RBI to offer **doorstep services to their customers.**
  - Cooperative banks have been allowed to **make one-time settlement of outstanding loans, like Commercial Banks.**

Way forward

- **Strengthening Governance and Supervision:** Mandate **professionalization of UCB boards** by requiring at least 50% of directors to have expertise in banking, finance, or law.
- **Consolidation and Mergers**: Encourage voluntary mergers of weak UCBs with stronger ones to create financially resilient entities.
- **Independent Audits: Conduct regular audits by autonomous bodies** for all UCBs to ensure financial discipline.
- **Technology Adoption:** Cooperative banks are encouraged to adopt **modern technology for efficient operations** and better customer service.
- **Social Audits:** Enable stakeholder-led audits to assess policies and fund allocation.

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

Weekly Focus #48- Cooperatives: Prosperity through Cooperation

3.8. RESTRUCTURED SKILL INDIA PROGRAMME

Why in the News?

Union Cabinet approves continuation and restructuring of **Skill India Programme (SIP).**

More on the News

- It has been extended till **2026** with an outlay of **Rs.8,800 crore** from the period **2022-23 to 2025-26**.
- The scheme is restructured by **combining 3 key components**, namely, Pradhan Mantri Kaushal Vikas Yojana 4.0 **(PMKVY 4.0)**, Pradhan Mantri National Apprenticeship Promotion Scheme **(PM-NAPS)** and Jan Shikshan Sansthan **(JSS) Scheme**.

Skill India Mission

- Launched in **2015** as a Centre Sector Scheme under **Ministry of Skill Development and Entrepreneurship (MSDE).**
- **Aim**: To provide a strong **institutional framework** to implement and scale up skill development and to impart **training to 1 crore youth every year**.
- Skill Development through:
  - **Short-term training**: Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and Jan Shikshan Sansthan (JSS)
  - **Long-term training**: Craftsmen Training Scheme through Industrial Training Institutes (ITIs)
- **Other Schemes**
  - **Pradhan Mantri Kaushal Kendras (PMKK)** to standardize quality training.
  - **Pradhan Mantri YUVA Yojana** promotes entrepreneurship.
  - **PM Vishwakarma Yojana** supports traditional artisans by modernizing their skills.
  - **SANKALP** (Skills Acquisition and Knowledge Awareness for Livelihood Promotion)

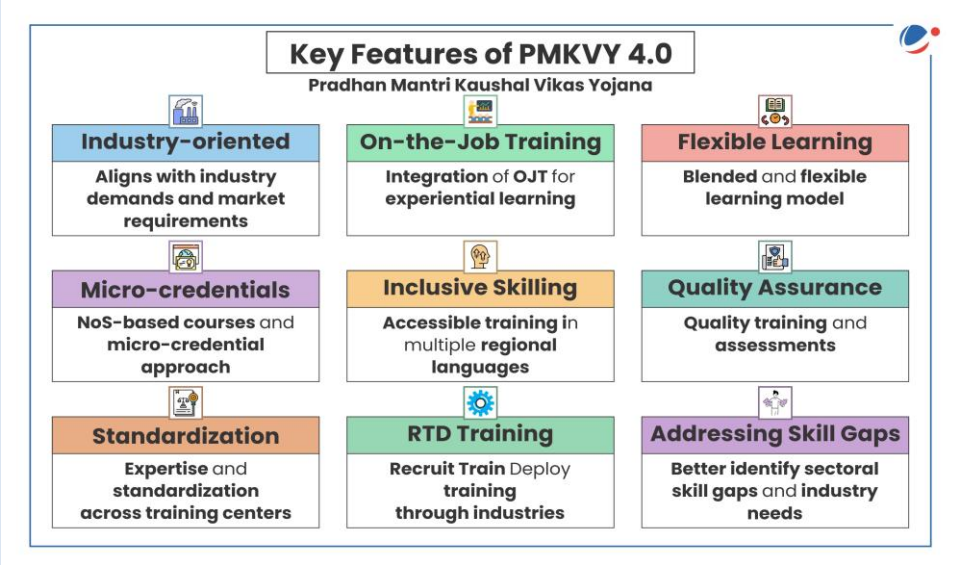
About the Restructured Schemes

Restructured Skill India Programme

- It is a composite **Central Sector Scheme** under **MSDE.**
- **Aim**: To provide **structured skill development, on-the-job training, and community-based learning** ensuring access to high-quality vocational education.
- **Formal recognition of skills**: All certifications are mapped to the **National Skills Qualification Framework (NSQF)** and seamlessly integrated with **DigiLocker** and the **National Credit Framework (NCrF).**

Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0)

- Provides **NSQF-aligned demand-driven skill training** through **Short-Term Training (STT)** and reskilling and upskilling through **Recognition of Prior Learning (RPL).**
- **Target beneficiary**: 15-59 years
- **Future Skills**: 400+ new courses on **emerging technologies** like AI, 5G technology, Cybersecurity, Green Hydrogen, Drone Technology etc.
- **Skill Hubs**: Established across premier academic institutions like IITs, NITs, Jawahar Navodaya Vidyalayas (JNVs), CIPET etc.
- **International Mobility Initiatives**: Equipping Indian workers with globally recognized skills through **Mobility Partnership Agreements (MMPAs),** sectorial skill gap studies and training in domain skills, soft skills etc.
  - India has signed **MMPAs** with 10 countries. E.g. France, Germany, Israel etc.
  - 30 **Skill India International Centers** to be set up to cater to the demand for skilled workers for foreign countries.
- **Whole-of-government approach**: Inter-ministerial convergence and **"Ease of Doing Business" approach** for seamless execution of skilling initiatives.
  - E.g. collaboration with PM Vishwakarma, PM Surya Ghar: Muft Bijli Yojana, National Green Hydrogen Mission, NAL JAL Mitra etc.



Jan Shikshan Sansthan (JSS) Scheme

- **Objective: Community-centric** skilling initiative to provide **vocational training** to non-literates, neo-literates as well as school drop-outs in rural regions by identifying relevant skills in that region.
- **Target Beneficiary**: 15-45 years
- **Inclusivity**: Focus on women, rural youth, and economically disadvantaged groups.
  - JSS is linked with initiatives like **PM JANMAN**, Understanding of Lifelong Learning for All in Society (**ULLAS**), etc. to promote inclusive skilling.

Pradhan Mantri National Apprenticeship Promotion Scheme (PM-NAPS)

- Aimed at fostering **apprenticeship training** across India, ensuring apprentices gain **industry-specific skills** in both **manufacturing and services** through **real-world exposure**.
  - This is in accordance with the **Apprenticeship Act, 1961**.
- **Target Beneficiary**: 14-35 years
- **Financial incentives** to industries for engaging apprentices
  - **25% of the stipend**, up to **Rs.1,500** per month per apprentice, will be provided by the **Central Government** through Direct Benefit Transfer (DBT).
- **Future Skills**: Apprenticeship opportunities in emerging fields such as **AI, Industry 4.0 technologies etc.**
- **Inclusivity**: Promotes enrolment of apprentices in **small establishments like MSMEs** and **underserved areas** such as aspirational districts and North-East Region.

Need for Restructuring Skill India Mission

- **In-silos approach:** Low impact of schemes like PM-NAPS, PMKVY, and JSS due to **lack of convergence** in impact on skilling of population.
- **Industry-academia linkage: Lack of industry-specific skilling** leading to **low employability.**
  - E.g. Under PMKVY while 3,155,984 are enrolled, only 1,445,166 are certified and fewer are employed. (March 2025)
- **Others**: **Mismatch** between demand and supply at the sectoral and spatial levels, **limited mobility** between **skill and higher education** programmes and **vocational** education and very **low coverage of apprenticeship** programmes.

Other Challenges to skilling

- **Fast-changing job market**: The dynamics of the employment market require constant upskilling and reskilling which is not effectively available for all.

- **Lack of quality skilling**: Lack of quality faculty, curriculum, lack of application-oriented learning methods etc. impact the quality of skilling.
  - This also limits the opportunities of **international employment**.
- **Governance issues**: Multiplicity of assessment and certification leading to inconsistent outcomes and confusion among employers, and lack of assured wage premium for skilled workers.
- **Lack of Quality Infrastructure**: Inadequate maintenance and lack of resources in skilling institutions.
- **Gender inequality**: Low participation of women compared to men in skilling as well as labour force.

Way Forward

- **Evidence-based interventions**: Improve **mapping of skills** to understand the job market and design programmes catering to the evolving needs of the employment market.
  - **E.g. 36 Sector Skill Councils (SSCs),** led by **industry leaders** set up by **NSDC** to identify the skill development needs of sectors and to determine skill competency standards.
- **Promote experiential learning**: Strengthening **vocational education** and expanding apprenticeship opportunities.
  - Strengthen the **National Council for Vocational Education and Training (NCVET)**
- **Private sector participation**: Encourage active involvement of **industries and civil society** in skilling through awareness generation, providing apprenticeship opportunities etc.
- **Learning from Global Best Practises**:
  - **Technical and Vocational Vouchers Program (TVVP), Kenya**: To increase access to vocational education by stimulating supply of vocational training through vouchers.
  - **Apprenticeship Levy, United Kingdom**: To incentivise employers to recruit apprentices, the levy on employers is used to fund apprenticeship training.

Scan the QR code to know more about **changing nature of work**

Weekly Focus #99- Future of Work

3.9. NEWS IN SHORTS

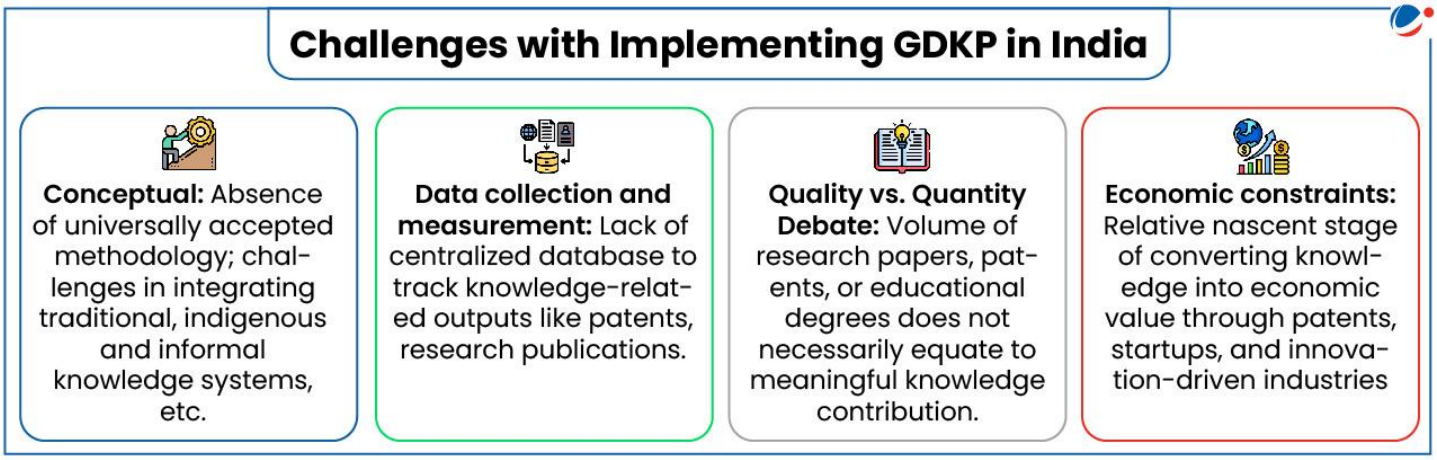
3.9.1. GROSS DOMESTIC KNOWLEDGE PRODUCT

Recently, Union Ministry of Statistics and Programme Implementation (MoSPI) organised a session on "**Conceptual Framework of Gross Domestic Knowledge Product (GDKP) Measurement**".

- Previously, GDKP was discussed earlier in **2021** when **NITI Aayog** made a presentation on the concept note.
- **Gross Domestic Knowledge Product (GDKP)** captures the contributions of **knowledge-driven sectors, innovation, and intellectual assets to India's economic growth.**
  - It evaluates the impact of knowledge on economic and social life in the country.
- **MoSPI** will form a technical committee to evaluate the proposal and provide guidance on measuring the knowledge economy.

Need of GDKP

- **Enhancing Economic Metrics:** Better measure knowledge sectors, innovation, and intellectual assets driving India's economic growth.
- **Supplementing the GDP measure:** GDKP would supplement the Gross Domestic Product measure.
- **Sync with global standards:** Advanced economies are adopting indicators for intangible assets, digital innovation, and intellectual capital. India plans to align its framework with global standards.
- **Guiding Policy Innovation for Key Sectors:** A clear GDKP framework can assist the government in shaping effective policies for education, research, technology, and entrepreneurship development.



3.9.2. DEPOSIT INSURANCE

Government is considering increasing the bank deposit insurance cover above current limit of ₹ 5 lakh.

About Deposit insurance

- It is a measure of **protection to depositors**, particularly small depositors, **from the risk of loss of their savings** arising from **bank failures**.
- **Background:** Deposit insurance was introduced in India in **1962** under the **Deposit Insurance and Credit Guarantee Corporation (DICGC) Act, 1961.**
  - India was the **second country (after the US in 1933)** in the world to provide for such provision.

About Deposit Insurance and Credit Guarantee Corporation (DICGC)

- Established on **January 01, 1962** under the DICGC Act, 1961.
- It is a **wholly owned subsidiary** of the **Reserve Bank of India**.
- **Head Office:** Mumbai

- **Coverage:** The insurance **protection extends to ₹ 5 lakh per depositor**, which covers the aggregate of all accounts maintained by that depositor across all branches of the insured bank.
  - However, if the **deposits are held with more than one bank**, deposit insurance coverage **limit is applied separately to the deposits in each bank**.
- **Covered Bank:** Insures all commercial banks, including branches of foreign banks functioning in India, local area banks, regional rural banks, and cooperative banks.
  - Deposit insurance scheme is **compulsory and no bank can withdraw from it**.
  - **Exceptions:** Land development banks, Non-Banking Financial Company's (NBFCs) etc.
- **Insures:** Savings, fixed, current, and recurring deposits are insured**.**
  - **Exceptions**: Does not provide insurance for **deposits by foreign, central, and state governments**, and for **inter-bank deposits**.
- It insures both the **principal and interest amount** held by a depositor in a bank.
- Through amendment in **2021**, **Section 18A amendment to the DICGC Act** allowed depositors to receive time-bound (within 90 days) interim payments up to the insured amount when the RBI imposes restrictions on banks.
- Deposit insurance **premium is borne entirely by the insured bank**.
  - DICGC collects premiums from **member banks at flat or risk-based differentiated rates**.

3.9.3. NEW HARMONISED SYSTEM CODES FOR GI TAGGED RICE

India reportedly introduces New Harmonised System (HS) Codes for GI Tagged Rice.

- An amendment to the **Customs Tariff Act (1975)** was introduced to provide **an HS (Harmonised System) code for GI-recognised rice varieties.**
- The amendment will make it possible for the **exports of GI-tagged rice without any problem or special notification** from the Ministry of Finance.

About HS

- **Definition:** HS is a gl**obal product classification system developed by the World Customs Organization (WCO)**.
- **Classification Structure:**
  - HS assigns specific **six-digit codes for varying classifications and commodities.**
  - **Countries are allowed to add longer codes** to the first six digits for further classification.
- **Governance and Updates**
  - HS is governed by "**The International Convention on the Harmonized Commodity Description and Coding System**".
  - **HS Committee**, made up of member countries, oversees the HS classification system and also updates **HS every 5 – 6 years**.
- **Widespread adoption**
  - Classifies approximately **98% of international trade**
  - Encompasses over **5,000 commodity groups**
  - Implemented by **more than 200 countries**
- **Benefits of HS**
  - **Common coding method** helps countries **organize** and **track products** in global trade.
  - Extensively used by governments, international organizations and private organisations for **internal taxes, trade policies, e**tc.
  - Reduces **international trade costs and** supports **economic research.**

To know more about GI Tags, refer to Article 8.2. Geographical Indication (GI) tag in January 2025 Monthly Current Affairs Magazine.

3.9.4. 'AI FOR ENTREPRENEURSHIP' MICRO-LEARNING MODULE

Ministry of Skill Development and Entrepreneurship launched the **'AI for Entrepreneurship' micro-learning module**.

'AI for Entrepreneurship' Micro-learning Module

- **Launched in** collaboration with **National Skill Development Corporation (NSDC) and Intel India**
- **Purpose:** To simplify **AI concepts and encourage entrepreneurial thinking** among young innovators across India.
- **Target**: To **empower 1 lakh youth by 2025** by equipping them with **essential skills** to thrive in a technology-driven economy.

3.9.5. E-SHRAM MICROSITES & OCCUPATIONAL SHORTAGE INDEX (OSI)

Union Minister for Labour & Employment launched the **State and Union Territory Microsites** under the **e-Shram initiative** and the **Occupational Shortage Index (OSI).**

About e-Shram Microsites

- **State-specific digital platforms** seamlessly integrated with the **National e-Shram database.**
- **Benefits**
  - **For States/UTs**: Ready-to-use digital infrastructure, real time data analytics dashboard, etc.
  - **For Workers**: Seamless registration process, multilingual facility, etc.

About OSI

- **Purpose:** Identify **workforce demand-supply gaps** using ILO methodology and PLFS data.
- **Key Functions**: Tracks job shortages in high-demand sectors, Supports workforce planning and skill development etc.

3.9.6. TIME USE SURVEY (TUS)

Recently, **National Statistics Office** (NSO) released the 2nd **Time Use Survey** (TUS) for the year 2024.

About Time Use Survey (TUS)

- **Purpose**: It **provides a framework for measuring time dispositions** by the population on different activities.
- **Objective:** To **measure the participation of men and women in paid and unpaid** activities.
- **Key findings**
  - **Increase in women** participation in **employment** related **activities (paid activities)**.
  - There is increased **acknowledgement of caregiving activities regardless of gender** within Indian families.
  - **Time spent in Culture, leisure**, mass-media and sports practices **has increased in both men and women**.

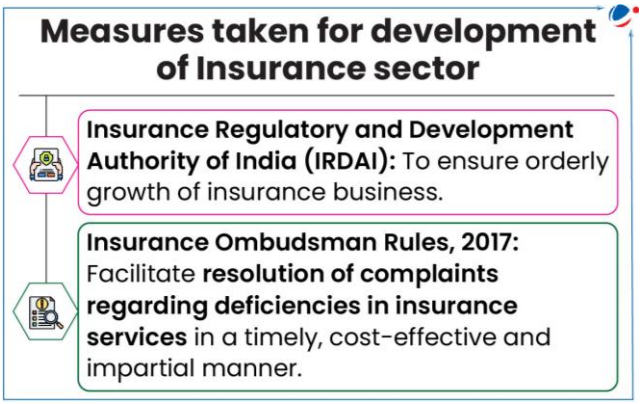
3.9.7. FDI LIMIT HIKED IN INSURANCE SECTOR

Finance Minister announced proposal to **raise FDI limit in Insurance sector from 74% to 100%.**

- This enhanced limit will be available for those companies which **invest entire premium in India.**
- To enhance FDI limit, government will have to bring **amendments to Insurance Act 1938, Life Insurance Corporation Act 1956,** and **Insurance Regulatory and Development Authority Act, 1999.**

Significance of 100% FDI in insurance sector

- **Higher Investment**: More foreign capital for growth and expansion.
- **Enhanced Competition**: Better products, improved services, and competitive pricing.
- **Technological Advancements**: Adoption of advanced tech and innovative products.
- **Improved Penetration:** More people brought under insurance coverage and help achieve the target of 'Insurance for All' by 2047.



Status of India's Insurance sector (Economic Survey 2024-25)

- **Total insurance premium grew** 7.7% in FY24, reaching Rs.11.2 lakh crore.
- **Insurance penetration declined** from 4% in FY23 to **3.7% in FY24.**
- **Insurance Density rose** from USD 92 in FY23 to **USD 95 in FY24**.
  - **Insurance penetration** is measured as percentage of **insurance premium to GDP** whereas **insurance density** is calculated as **ratio of premium to population** (per capita premium).

Challenges Faced by Insurance Sector in India

- **Absence of top companies:** Out of 25 world's top insurance firms, 20 are not present in India now.
- **Economic Constraints:** Affordability issues restrict insurance adoption.
- **Cultural Preferences:** Preference for traditional financial practices over insurance.

To know more about IRDAI, refer to Article 3.13. Insurance Regulatory and Development Authority of India (IRDAI) in April 2024 Monthly Current Affairs Magazine.

3.9.8. ENHANCED CERTIFICATE OF ORIGIN (ECOO) 2.0 SYSTEM

The Directorate General of Foreign Trade (DGFT) has launched the enhanced **Certificate of Origin (eCoO) 2.0 System.**

About eCoO 2.0

- It is a **significant upgrade** to simplify the **certification process** for exporters and enhance trade efficiency.
- Offers several **user-friendly features, such as multi-user access, which enables exporters** to authorize multiple users under a **single Importer Exporter Code (IEC).**
- Supports **Aadhaar-based e-signing alongside digital signature tokens,** providing greater flexibility.

About Certificate of Origin:

- It is a **document used in international trade** to certify that the goods being exported **originated in a specific country.**

3.9.9. TONNAGE TAX SCHEME

The **Budget 2025-26** has expanded the **tonnage tax scheme.**

Tonnage Tax Scheme

- The Scheme was previously available to **sea going ships**.
- Now it is available **to inland vessels r**egistered under the **Indian Vessels Act, 2021** to promote water transport.
  - **Inland Vessels Act, 2021** aims to promote safe, economical inland water transport, ensure legal uniformity and vessel procedures.
- **Ministry:** Ministry of Shipping (now part of the Ministry of Ports, Shipping, and Waterways).
- **Genesis:** Introduced in 2004 under the Indian Finance Act, 2004.
- **Significance:** Encourage more cargo movement; will further incentivises shipping companies to invest in inland waterways vessels.

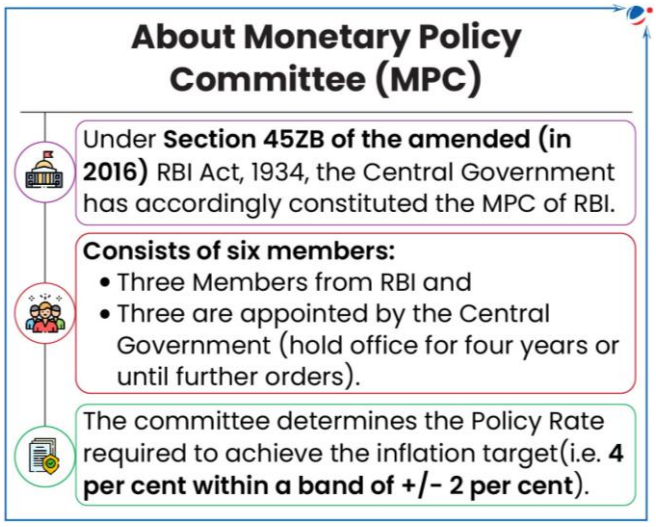
3.9.10. RBI CUT REPO RATE

Monetary Policy Committee (MPC) of RBI has **cut repo rate by 25 bps to 6.25%.**

- MPC has cut policy repo rate under the **liquidity adjustment facility (LAF)** nearly after a five-year gap.

Other important decisions

- To continue a **'neutral' monetary policy stance.**
  - A neutral stance indicates that the RBI maintains **flexibility in adjusting policy rates based on prevailing economic conditions.**
- GDP growth for FY '26 **projected at 6.7%.**
- **Food inflation pressures** are likely to see significant "softening", **Core inflation expected to rise** but remain moderate.



Rationale for MPC decisions

- **Inflation has declined** and growth is **expected to recover** from the low of Q2:2024-25.
- Excessive volatility in **global financial markets** and
- Continued uncertainties about **global trade policies coupled with adverse weather events.**

About Liquidity Adjustment Facility (LAF)

- It is a monetary policy tool used by **central banks to manage liquidity** in the banking system. It includes repo and reverse repo rates.
  - The repo rate is the interest rate at which the **central bank lends money to banks**, while the reverse repo rate is the rate at which banks can **park their surplus funds with the central bank.**

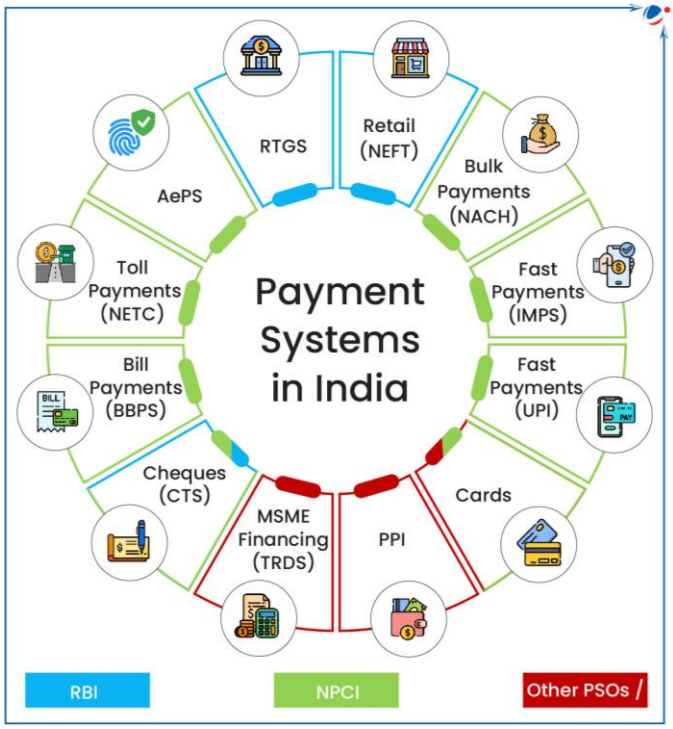
3.9.11. REGULATION OF PAYMENT SYSTEMS IN INDIA

Reserve Bank of India (RBI) released 'Payment System Report, December 2024'.

- It is a **bi-annual report** which analyses the **trends in payment transactions** carried out **using different payment systems** in the **last 5 calendar years** (CY) up to CY-2024.

Key findings:

- **Digital payment transactions:** In 2013 there were 222 crore digital transactions valued at Rs 772 lakh crore, it has **increased 94 times in volume and more than 3.5 times in value** in CY-2024.
- **Unified Payment Interface (UPI):** Volume of UPI transactions reflects a CAGR of 74.03 %, value of the transactions represented a CAGR of 68.14% in last 5 years.
- **Credit cards & Debit cards: Number of credit cards has more than doubled in five years** whereas debit cards have remained relatively stable in last 5 years.
- **Global trends: India joined Project Nexus**, facilitating multilateral linkage of fast payment systems (FPS) of four ASEAN Nations (Malaysia, Philippines, Singapore and Thailand) and India.
    - **Project Nexus**, conceptualized by **Bank for International Settlements** (BIS), **enables instant cross-border retail payments** by interlinking domestic FPSs.



Payment Systems in India

- **Payment systems** are **mechanisms established to facilitate the clearing and settlement of monetary** and other financial transactions.

3.9.12. DIGITAL PAYMENTS INDEX (DPI)

Recently, **RBI published** the **Reserve Bank of India–Digital Payments Index** (RBI-DPI).

About RBI-DPI

- Objective**: capture the extent of digitisation of payments systems** & measure the **adoption of online transactions**
- **Released frequency:** Semi-annual (March & September).
- **Base Period:** March 2018.
- **Parameters involved:**
    - Payment Enablers
    - Payment Infrastructure (demand-side factors)
    - Payment Infrastructure (supply-side factors)
    - Payment Performance and
    - Consumer Centricity.

Scan the QR code to know more about **Digital inclusion in India**

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

3.9.13. MARKET INFRASTRUCTURE INSTITUTIONS (MIIS)

The SEBI issues guidelines for the evaluation of the performance of statutory committees of **market infrastructure institutions** (MIIs).

- Under the guidelines, MIIs are required to appoint an **independent external agency** to **evaluate** their **performance and the functioning** of their statutory committees.
- This needs to be done **once every three years**.

About Market Infrastructure Institutions (MIIs)

- These are **organizations that provide the infrastructure for trading securities** & are regulated by SEBI.
- It **includes stock exchanges, depositories, and clearing corporations**.
- **Purpose:** Enabling trading, securing investor holding, transaction settlement etc.

3.9.14. ALGORITHMIC TRADING

SEBI proposed **Retail Algo Trading Framework.**

- Algo trading **automates buy/sell orders** using preset conditions for precise execution.
- Erstwhile, only **institutional investors** were allowed to use it **via Direct Market Access (DMA).**

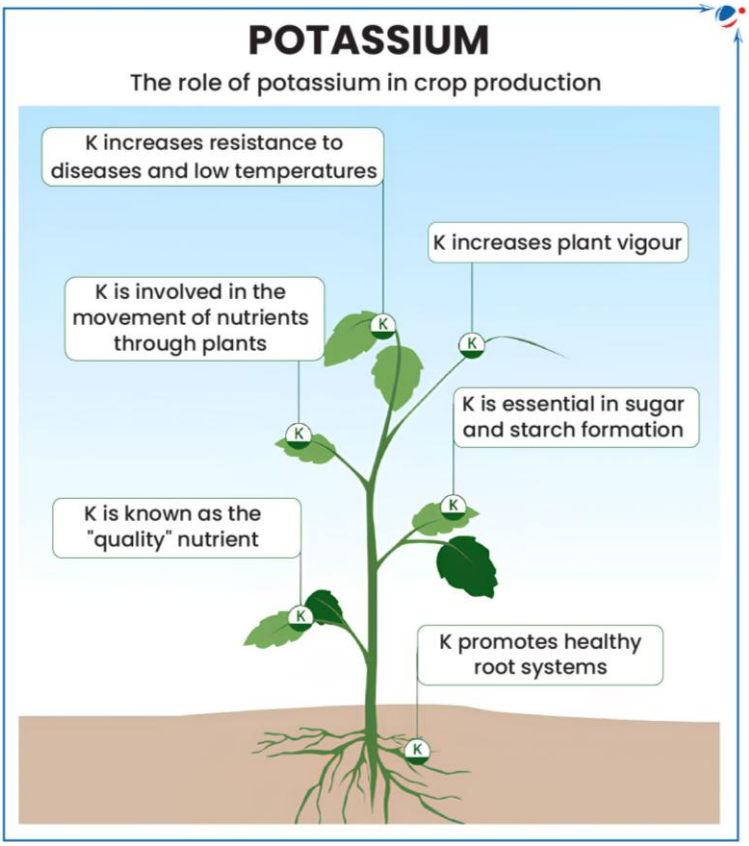
Key highlights of Regulatory Framework

- **Categorization of Algorithms**
  - **White-box:** Logic is disclosed and replicable i.e. Execution Algos
  - **Black-box:** Algos where the **logic is not known to the user** and is not replicable
- **Trading Limits for Retail Traders**: Retail traders must follow exchange-set limits (yet to be decided).
- **Registration of Algo Provider**s: Algo providers are not regulated by SEBI, but must **register with exchanges and partner with a broker** to sell algos.

3.9.15. POTASH

Government will explore Potash Mining in Punjab's **Fazilka and Sri Muktsar Sahib Districts.**

- **Geological Survey of India (GSI)** surveys have also identified potash reserves in Rajasthan, highlighting potential to reduce India's import reliance.



About Potash

- **Definition:** Potash is an impure combination of potassium carbonate & potassium (K) salts.
- **Principal ore**: Sylvinite.
- **Uses of Potash**:
  - **Agriculture: Over 90% of potash** is utilized as fertilizer, making it one of the three primary nutrients in agriculture, alongside nitrogen and phosphorus, collectively known as **N-P-K.**
    - The **ideal nutrient ratio** for optimal plant growth is **4:2:1 (N:P: K).**
  - **Purification of water**: Potash alum removes hardness of water & has anti-bacterial properties.
  - **Other industrial Uses**: Manufacturing of Glass ceramics, Soaps and detergents, Explosives etc.
- **Common Types of Potash Fertilizers:** Sulphate of Potash (SOP) & Muriate of Potash (MOP).
- **Potash Derived from Molasses (PDM):** It is **100% indigenous fertilizer** under the **Nutrient Based Subsidy (NBS) scheme.**
  - **NBS**: Provides fertilizer subsidies to farmers based on **actual nutrient content** (Nitrogen, Phosphorus, Potassium).
- **Potash classified as Critical Mineral**: Under "The Mines & Minerals (Development and Regulation) Amendment (MMDR) Act, 2023".

Economic Status of Potash in India

- **Deposits**: Rajasthan (89%), Madhya Pradesh (5%) and Uttar Pradesh (4%).
- **Import**: India meets 100% of its Potash requirement through imports (Indian Mineral yearbook 2022).

3.9.16. ELECTRONICS MANUFACTURING

After China, India has become the **World's 2nd largest mobile manufacturing country** and is followed by Vietnam**.**

- Presently, **99.2%** of all mobile phones sold in India are **made in India**.
- Mobile phones constitute 43% of India's total electronics production.

Electronic manufacturing sector status

- **Total valuation:** India's electronics sector has experienced rapid growth, reaching USD 155 billion in FY23.
- **Production:** Production nearly doubled from USD 48 billion in FY17 to USD 101 billion in FY23.
- **Exports:** Electronics has become the country's fifth largest export commodity, but India **represents less than 1% of global share**.

3.9.17. UNION BUDGET 2025: DEVELOPING 50 TOP TOURIST DESTINATIONS IN 'CHALLENGE MODE'

These destinations will be developed in partnership with states to elevate **tourism infrastructure**, **improve ease of travel**, and **strengthen connectivity to key sites**.

- States will be required to provide **land for critical infrastructure**, which will be classified under the **Infrastructure Harmonized Master List (HML)**.

Key Focus of Budget

- **Employment-Led Growth**: Skill development programs, MUDRA loans for homestays, improved travel and connectivity to tourist spots.
- **Spiritual Tourism**: Focus on pilgrimage and heritage tourism, especially Buddhist sites.
- **Medical Tourism**: Promote "**Heal in India**" initiative to boost India's global healthcare position.
- **Gyan Bharatam Mission**: Documentation and conservation of India's manuscript heritage.

Contribution of Tourism Sector:

- Accounted for **5% of GDP in FY23.** The sector also created **7.6 crore jobs during the same period.**
- India received **1.8 per cent of world tourism receipts** and attained a **rank of 14th worldwide in world tourism receipts during 2023.**

Measures taken by government

- **Infrastructure Development**: Swadesh Darshan 2.0, PRASHAD Scheme, RCS-UDAN for regional connectivity.
- **Policy & Legal**: National Tourism Policy, E-Visa for multiple categories.
- **Thematic Tourism:** Promoting wellness, culinary, rural, and eco-tourism.
- **NIDHI (National Integrated Database of Hospitality Industry**): Digital system for ease of business in hospitality & tourism.

3.9.18. RUTAGE SMART VILLAGE CENTER (RSVC)

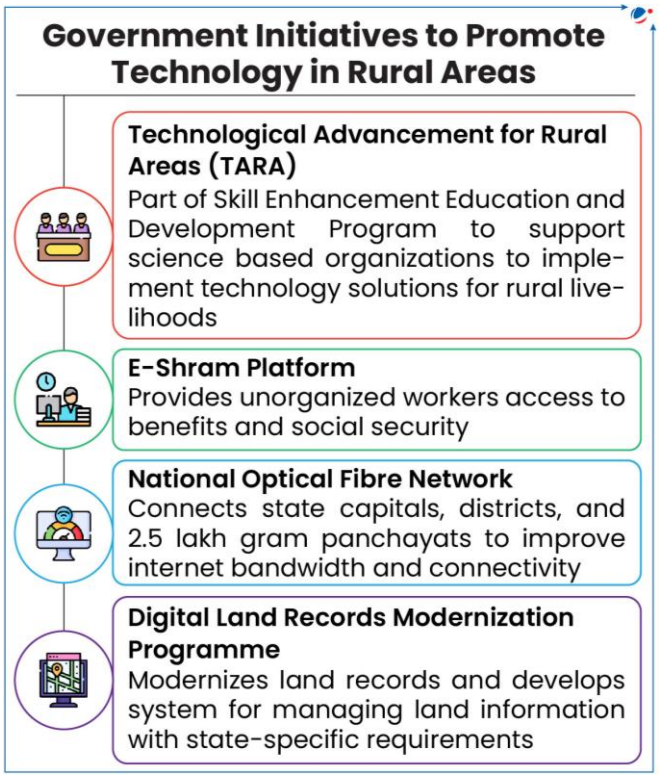
Rural Technology Action Group (RuTAGe) Smart Village Center (RSVC) launched in Mandaura, Haryana.

- RSVC was **developed under aegis of Office of Principal Scientific Adviser (PSA)**.

- It aims to **integrate cutting-edge technologies with rural needs**, enhancing quality of life and empowering communities through sustainable solutions.
- PSA conceptualized RuTAGe in 2003-04.

Key Features of RSVC Model

- **Physical Presence**: Offers **long-term tech support at Panchayat level**, assisting 15-20 villages with 12 technology tracks, including Agriculture & Waste Management etc.
- **Market Access**: Emphasizes collaboration with platforms like **ONDC, Amazon, and Market Mirchi** to connect rural producers with larger markets.
- **Scalability**: Plans to expand with 20 new centers and **empower women entrepreneurs** through Techpreneurs program to ensure sustainability.



Role of Technology in Rural Growth

- **Agricultural Innovation**: Platforms like **e-NAM** connect farmers to markets, offering better prices and transparent trade.
- **Entrepreneurship: E-commerce** and **3D printing** support small businesses, allowing them to access global markets and reduce dependency on imports.
- **Education**: Programs like **PM e-VIDYA** and **SWAYAM** offer online education, improving access to quality learning and bridging digital divide.
- **Financial Inclusion**: **DBT program** and PM Jan Dhan Yojana facilitate direct, cashless transfers, reducing fraud and increasing transparency.
- **Water Management**: **National Program on Aquifer Mapping and Management** uses technology to manage groundwater resources, ensuring efficient water use in agriculture.

Scan the QR code to know more about importance of **technology in fuelling Ruralisation**

Weekly Focus #128- Technology's Role in Redefining Indian Society

3.9.19. GLOBAL CAPABILITY CENTERS

Madhya Pradesh has become the first state in the country to bring a dedicated Global Capability Centre (GCC) policy.

About GCCs

- GCCs are designed to leverage global talent pools and technological advancements to enhance organizational capabilities and drive business transformation.
- India's GCC are emerging as **strategic hubs** reshaping the **Indian corporate landscape** while influencing **global business dynamics.**
- **Present Scenario**: Number of GCCs in India has grown from ~1430 (FY 2019) to >1700(FY 2024) in FY24.
    - As of FY24, GCCs in India employ nearly 1.9 million professionals.

3.9.20. SWARAIL APPLICATION

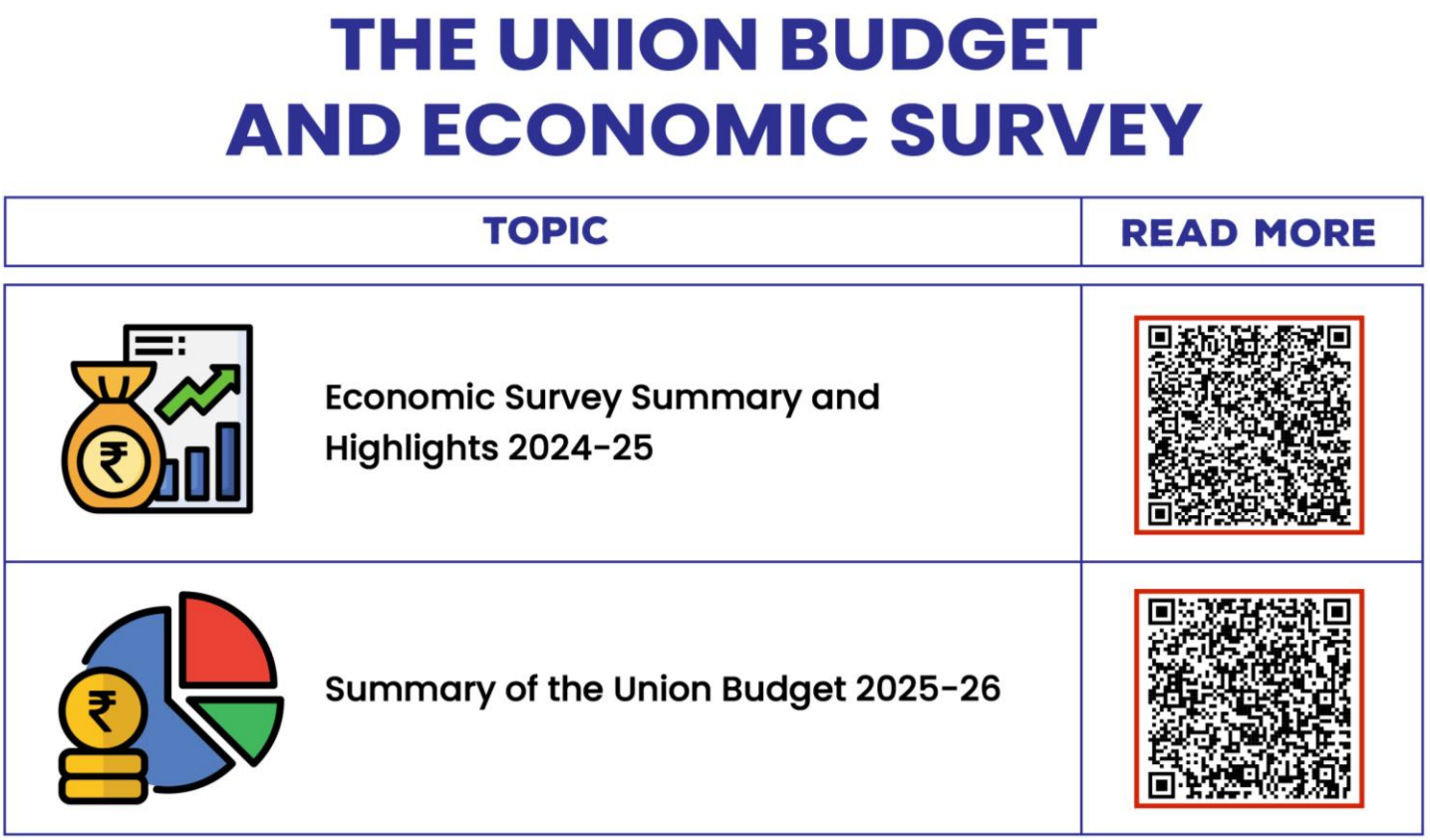
The **Ministry of Railways** has introduced the **'SwaRail' SuperApp**, a one-stop solution to streamline various railway services.

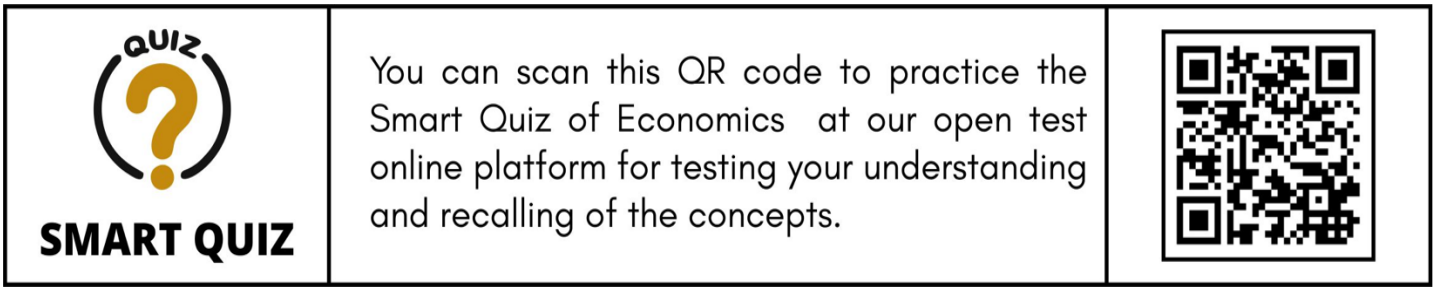
About SwaRail

- Offers services like **Reserved Ticket Bookings**, **Unreserved Ticket & Platform Ticket Bookings**, etc.
  - A key focus of the App is enhancing user experience with a seamless and clean user interface (UI).
- Developed by **Centre for Railway Information Systems (CRIS).**

3.9. ERRATA

- In the **Monthly Current Affairs Magazine (January 2025)**, under the **Article 3.1 titled 'Rupee Depreciation'**, it was incorrectly mentioned that "Currently, India follows Floating Exchange Rate with occasional RBI interventions, when necessary. "
  - **The correct information is** – Currently, India follows **Managed Floating Exchange Rate**, in the sense that there is a currency market and the exchange rate is not visibly administratively determined. However, RBI actively trades on the market, with the **stated goal of "containing volatility"**, and influencing the exchange rate.



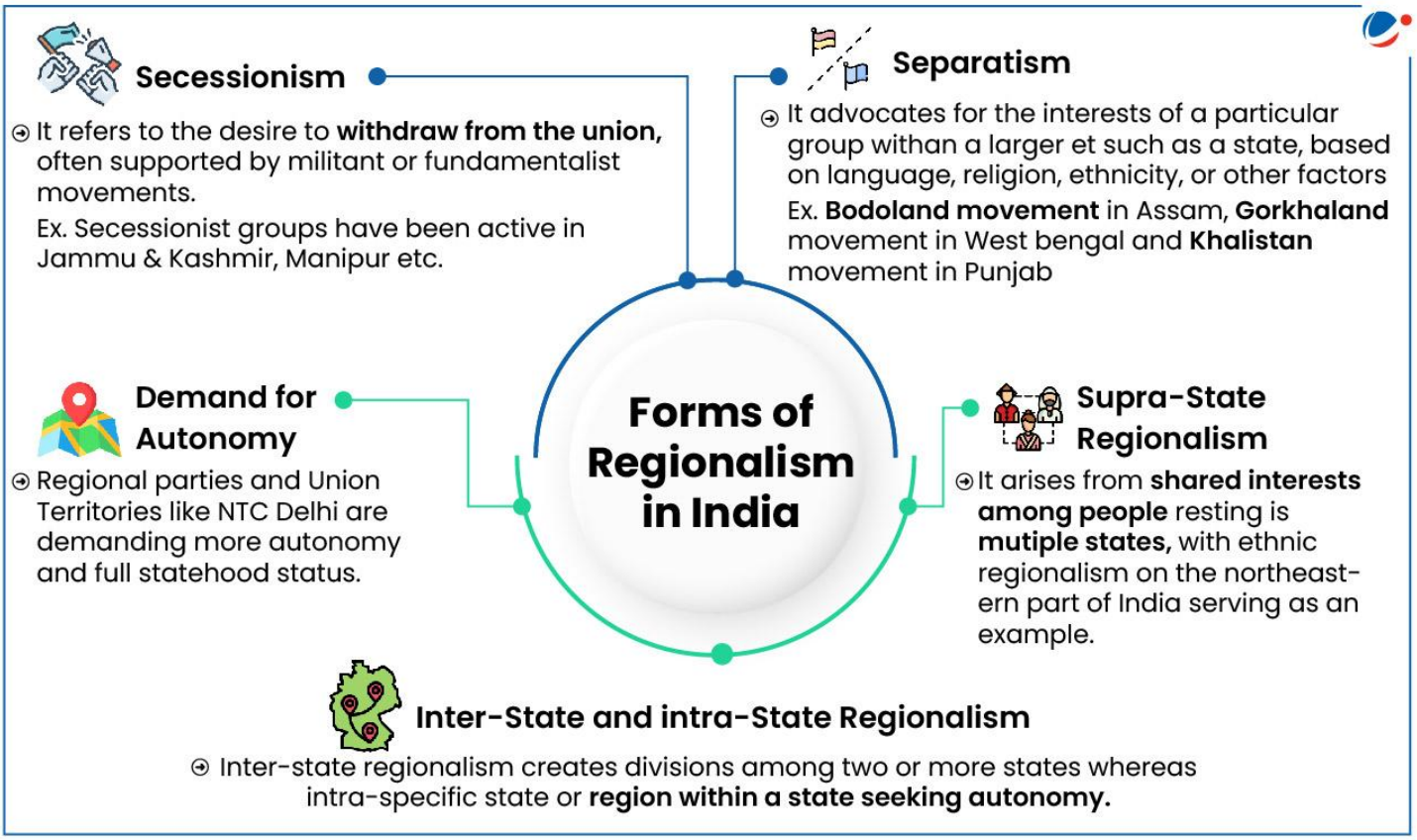


4. SECURITY

4.1. REGIONALISM

Why in the News?

Vice-President raised concerns about the forces that are trying to create a clash between nationalism and regionalism.



Regionalism

- **Shared Identity:** Regionalism reflects a **shared sense of identity** among people in a specific geographical area.
  - It often originates among groups in particular areas due to **distinct ethnic, linguistic, economic, and cultural consciousness**.
- **Evolution in India:** Roots of regionalism in India can be traced back to the **colonial period** which deepened regional disparities across the country.
  - **First form of regionalism in post-independent India** was the demand for the **creation of linguistic states**, sparked by the hunger strike of Potti Sriramalu, who fasted unto death in 1952.
  - Later on, the **creation of the states of Jharkhand, Chhattisgarh, and Uttarakhand** in 2000, and formation of **Telangana state** separated from Andhra Pradesh in 2014, are some of the recent chapters in the trajectory of regional movements in India.

Factors Behind Regionalism

- **Linguistic and Cultural Identity:** For example, the **Dravidian movements in Tamil Nadu** stemmed from linguistic identity.
- **Ethnocentrism:** Natives presume that they **possess the authenticity over the regional issues** and they imagine a sort of body politics that includes themselves and exclude the 'other' as outsiders.
  - For instance, the construct of **Marathi Manoos**, which is meant to imply **those persons who are natives of Maharashtra** belonging to Maharashtra, thus excluding persons of other states.
- **Tribal Identity:** Socio-economical differences in tribal life accentuates regional tendencies.

- Rationale for creation of **state of Jharkhand** was partly based on its tribal cultural heritage.
- **Unequal distribution of resources:** For example, **Gorkha Nationalist Liberation Forum (GNLF)** emerged in Darjeeling due to the feeling of regions underdevelopment compared to South Bengal.
- **Development and Administrative Issues:** Some regions feel left out while taking policy decisions for the entire region such as water distribution, budget allocations, employment opportunities etc.
  - These were driving factors for the formation of **state of Telangana** from Andhra Pradesh.

Impact of Regionalism (National Unity and Regionalism)

- **Positive Impact**
  - **Strengthening Federalism:** Promotes a stronger federal structure by encouraging states to assert their rights and seek greater autonomy.
  - **Enhanced Political Representation:** Gives voice to local issues and marginalized communities that national parties may overlook.
  - **Promotion of Cultural Diversity:** Preserves and promote India's cultural, linguistic, and ethnic diversity by championing local traditions, languages and customs, etc.
  - **Conflict Resolution and Integration:** Provides a platform for expressing regional grievances and aspirations within the democratic framework, reducing the likelihood of violent conflicts.
- **Negative Impact**
  - **Threat to National Unity: Extreme regionalism** can foster divisive sentiments, leading to conflicts between states or between regional and national interests and in extreme cases it also leads to **rise of Secessionist Movements.**
  - **Bias and Discrimination:** Regionalism often encourages **identity-based politics.**
    - ✓ For example, Driven by the spirit of **'Son of the Soil,'** demands for job reservations for locals have been raised. There have been many instances where attacks on migrant laborers led to their mass exodus.
  - **Political Fragmentation:** The proliferation of regional parties often leads to **fragmented electoral outcomes,** making it difficult to form stable governments.
  - **Prioritization of Regional over National Interests:** The narrow focus on regional interests can lead to resource allocation imbalances and policies that serve regional rather than national goals.

Way Forward

- **Fostering National Unity:** Encourage an **inclusive national identity** through education programmes and promote cultural exchange programmes.
- **Cultural Integration:** Frequent cultural contacts should be promoted to break the regional barriers and to develop the nationalist spirit.
  - For example, **Ek Bharat Shreshtha Bharat programme** enhances interaction & promote mutual understanding between people of different states/UTs.
- **Strengthening Federalism:** Empowering states and local bodies and **promoting Cooperative Federalism** can help in accommodating regional aspirations within the national framework.
- **Inclusive Development:** Implement **targeted programs and infrastructure projects** to boost economic activity and create jobs in under-developed areas.
- **Functioning Autonomy:** Union Government must not interfere in the affairs of the state unless it is unavoidable for national interest.

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Weekly Focus #74- Nuclear Disarmament: A step towards safe and better world

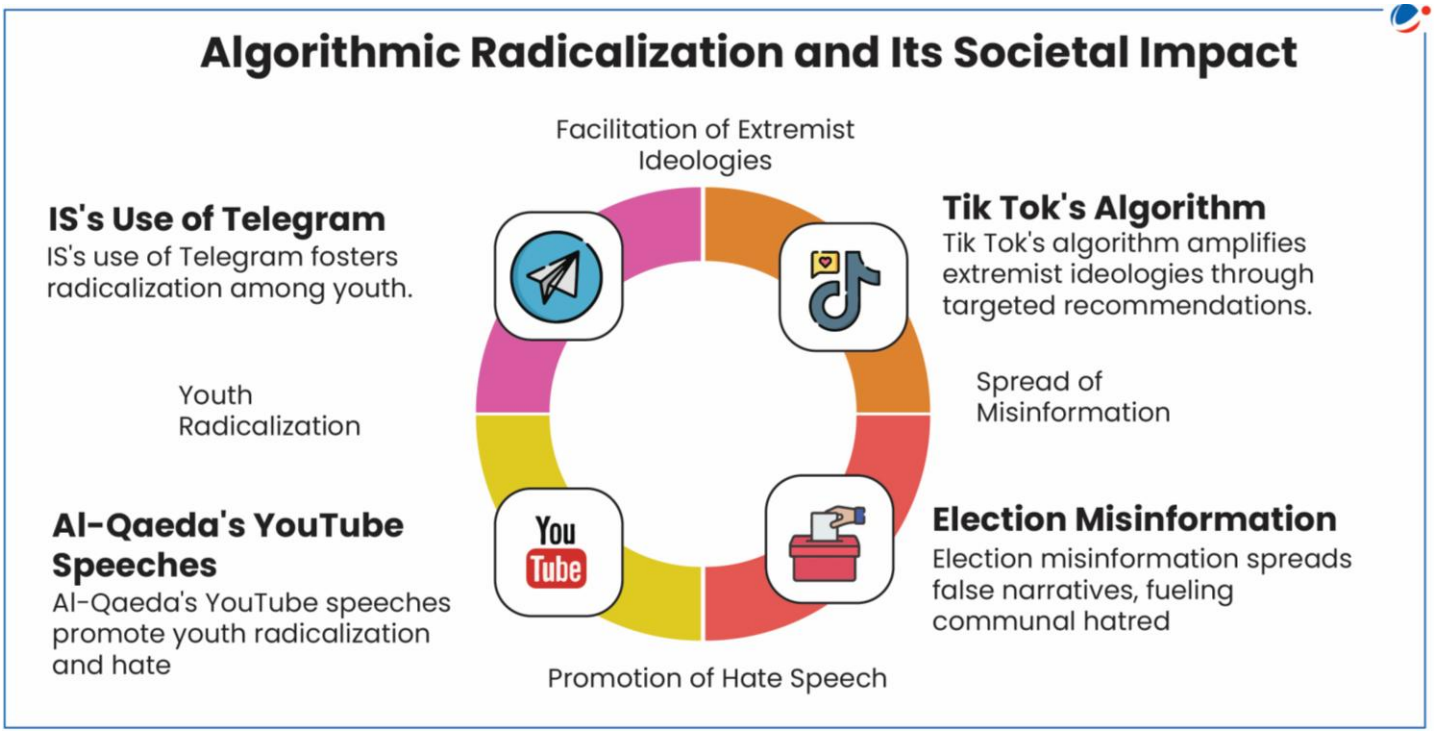
4.2. ALGORITHMIC AMPLIFICATION AND RADICALISATION

Why in the news?

Recently, experts have raised concerns regarding **social media algorithms having the potential to amplify and spread extremism**.

Understanding Social Media Algorithmic Amplification

- **Social media algorithms: These** are **computerized rules that examine user behaviour and rank content** based on interactive metrics such as likes, comments, shares, timelines etc.
  - **It uses machine learning models to make customized recommendations**.
  - It **works as amplifiers** because **posts with higher engagement**, shares, likes etc., alongwith hashtags, **quickly tend to gain popularity and emerge as viral trends**.
- **Algorithmic Radicalisation:** It is the idea that **algorithms on social media platforms drive users towards progressively more extremist propaganda and polarizing narratives**.
  - It then **influences their ideological stances, exacerbating societal divisions, promoting disinformation**, bolstering influence of extremist groups etc.
  - It reflects **social media algorithms**, which are intended to boost user interaction, **inadvertently construct echo chambers and filter bubbles**, confirming users' pre-existing beliefs, leading to confirmation bias, group polarization etc.
  - It **shows** how social media **platforms coax users into ideological rabbit holes and form their opinions through a discriminating content curation model**.



Challenges in curbing Algorithmic Radicalization

- **Complex mechanisms involved:** The opacity of algorithms used in social media **present challenges in addressing extremist contents**.
  - **Social media algorithms work as 'black boxes'**, in which even some **developers fully don't understand the underlying processes for recommending certain content**.
  - **E.g.,** complexity of TikTok's "For You" page's operational mechanics, limits the mitigation of its algorithmic bias.
- **Modulated content:** Extremist groups **change their radical contents** to euphemisms or symbols **to evade detection systems**.

- **E.g.,** IS and al-Qaeda uses coded language and satire to avoid detection.

- **Moderation vs. free speech:** Maintaining the right **balance between effective content moderation and free speech is a complex issue**.
  - **Extremist groups exploit this delicate balance** by ensuring that their **contents remain within the permissible limits of free speech**, while still spreading divisive ideologies.
- **Failure in accounting local context:** Extremist contents are **generated from the socio-political undercurrents in a specific country**, and **algorithms deployed globally often fail to account for these local socio-cultural contexts**, exacerbating the problem.
- **Lack of international regulation and cooperation:** Countries primarily view radical activities from their national interest rather than from the perspective of global humanity.

Steps taken to curb Algorithmic Radicalisation

Global steps

- **European Union's (EU's) Digital Services Act 2023** requires social media apps to disclose how their algorithms work and allows independent researchers to assess their impact on users.
- **Artificial Intelligence (AI)-driven moderation:** E.g., **YouTube's** machine-learning model, 2023, reduced flagged extremist videos by 30%.
- **Christchurch Call**: A community of over 130 governments, online service providers, and civil society organisations acting together to eliminate terrorist and violent extremist content online.

Indian steps

- **Ministry of Electronics and Information Technology's** several initiatives have **flagged over 9,845 URLs hosting harmful content**.
- **IT Rules 2021:** It enables **tracing the first originator of content on social media**, digital news, OTT platforms etc., and **removing flagged content within 36 hours**.

Way forward

- **Algorithmic Audits:** Regular algorithm audits should be **mandatory to ensure transparency and fairness**, similar to European Union's (EU's) Digital Services Act 2023.
- **Accountability measures:** Policymakers should **clearly define the rules for algorithmic accountability**, including penalties for platforms that fail to address the amplification of harmful content.
  - **E.g., Germany's Netz law imposes fines on social media platforms** for not removing illegal content within 24 hours.
- **Custom-made content moderation:** Customized **moderation policies** (or algorithmic frameworks), **tailored to localized contexts, can enhance the effectiveness of interventions** to curb radicalisation spread by social media platforms.
  - **E.g., regulators in France partnered with social media companies to enhance their algorithms' ability** to detect and moderate extremist content, **considering various dialects spoken within the country**.
- **Public awareness:** Government must conduct public awareness drives to **help users identify propaganda and avoid engaging with extremist content**.
  - **E.g., UK's Online Safety Bill** contains provisions for public education initiatives to improve online media literacy.

4.3. HYBRID WARFARE

Why in the news?

Recently, Union Defence Minister **underlined the dangers of hybrid warfare** to India.

More on the news

- Defence Minister **highlighted the growing overlap/ blurring line between border security and internal security**, emphasizing that **hybrid warfare can threaten critical national infrastructure**.

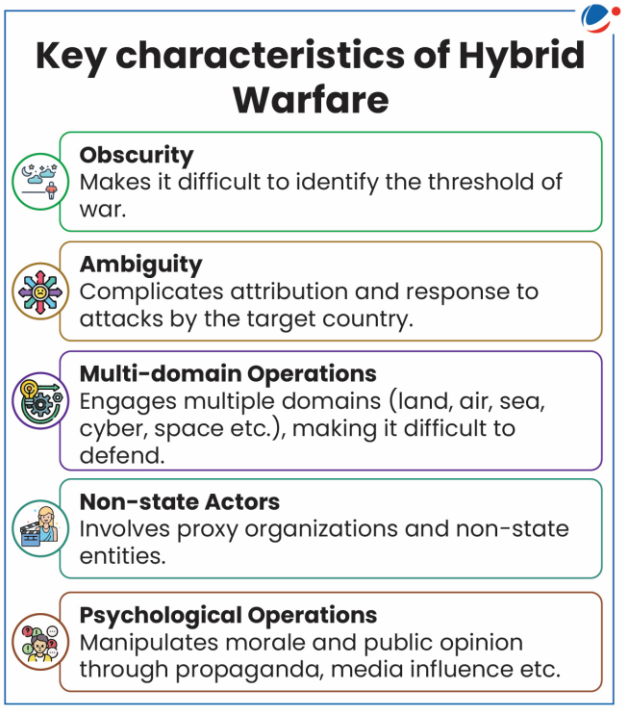
- He noted that, **traditional concept of frontline is rapidly changing**, with threats such as **terrorism, extremism, cyber warfare or cyber-attack, human trafficking** or humanitarian crises etc., **transcend national borders** and challenges the established notions of India's internal security.

About Hybrid Warfare

- **Definition:** Hybrid warfare, also known as **asymmetric warfare**, is a strategy that **combines conventional tactics** (kinetic warfare) **with unconventional methods** (non-kinetic warfare), often employed to achieve political or strategic goals **without resorting to full-scale war**.
- **Examples:**
  - **China's three warfare strategy** including psychological, political and legal tactics**;**
  - Use of **cyberattacks, disinformation and propaganda** witnessed during **Russia-Ukraine conflict;**
  - **Psychological and information warfare tactics** seen in **Israel-Palestine conflict;**
  - **Pager blasts** as a form of disruption in **Lebanon** etc.

Do you know

- **Kinetic warfare** typically means **traditional military operations,** employing a large range of weapons, troops (physical force), and military machinery to inflict damage through direct combat.
- **Non-kinetic warfare** is an evolving concept that **extends beyond the usual military tactics** and **involves electronic warfare, cyber-attacks** on critical infrastructure, **disinformation campaigns, psychological and economic pressure** etc., and may **include non-military stakeholders** as well.



Reasons for emergence of hybrid warfare

- **Strategic advantage:** Helps **achieve political, military or economic objectives without any declaration of war** keeping the possibility of diplomatic negotiations open.
  - **E.g.,** Use of '**little green men**' (unmarked soldiers) is a **hallmark of Russia's approach to hybrid warfare**, providing strategic **advantage to achieve its political and military objectives** while minimizing the risk of direct confrontation with other states.
- **Cost effectiveness:** It evades direct responsibility, and is **logistically and economically less costly and complex**.
  - **E.g., U.S.** uses a range of policy tools intended to **reduce threats posed by Iran**, including **economic sanctions**, which **restrict former's financial and military spending** without deploying troops or engaging in direct combat.
- **Technological advancement:** Rise of cyber capabilities, artificial intelligence, digital communication tools etc., has **enabled non-traditional methods of warfare**, such as cyberattacks and disinformation campaigns etc., **without direct military confrontation**.
  - **E.g., Russian cyber-attacks against Ukraine have persisted ever since Russia's illegal annexation of Crimea in 2014**, intensifying just before the 2022 invasion.
- **Rise of non-state actors and proxy warfare:** Traditional warfare has become less frequent, while **conflicts involving state and non-state actors** (terrorist groups, militias, cyber warriors, etc.) **have increased, engaging in a complex web of alliances, proxy support, information warfare** and vile tactics to achieve their strategic objectives, **while maintaining deniability**.
  - **E.g., Iran's support for Houthi rebels in Yemen** through arms smuggling.
- **Global interconnectivity:** Economic interdependence and internet, accelerated hybrid warfare **by allowing adversaries to exploit cyberspace, manipulate through economic coercion** (sanctions, trade restrictions etc.), **spread propaganda through media** (election interference) etc., destabilizing nations, without engaging in open conflict.
  - **E.g.,** alleged **Russian interference in the 2016 U.S. elections** using social media bots.

Hybrid warfare threats to India

- **Hostile neighbours and non-state actors:** E.g., **Pakistan** has been a **master in hybrid warfare** and its **support for proxy war, terrorist organisations, and counterfeit currency** threatens India's security.
- **External threats:** E.g., **China specializes in Grey Zone strategies** and has been winning wars without fighting to meet its global aspirations.
- **Internal insurgencies:** E.g., **Left Wing Extremism (Naxalism)** challenges in central India, **ethnic conflicts** in northeast, etc.
- **Threat to critical infrastructure:** E.g. **cyberattacks on the Kudankulam Nuclear Power Plant** in 2019; alleged Chinese malware attack on Mumbai grid in 2020 etc.
- **Economic warfare:** E.g., **significant Chinese imports** of electronic goods, APIs (pharmaceutical ingredients) etc., **makes India vulnerable to supply chain disruptions**.

India's preparedness towards hybrid warfare

- **Modernization of defence capabilities:** E.g., developing advanced weapons **under 'Directionally Unrestricted Ray-Gun Array (DURGA)-II Project'** (Initiated by DRDO), **defence indigenization** through 'Make in India' initiatives etc.
- **Structural reforms and establishing institutions:** E.g., **military integration** through creation of Chief of Defence Staff (CDS), **Defence AI Project Agency** (DAIPA), **Defence AI Council** (DAIC), etc.
- **Counter cyber security measures:** E.g., operationalization of **Defence Cyber Agency** in 2021 **to specifically address cyber threats to national security**.
- **International partnerships:** E.g. Cooperation through **General Security of Military Information Agreement** (GSOMIA) with USA, working with **Quad** (Quadrilateral Security Dialogue) framework to address issues like cyber security etc.
- **Parliamentary reviews:** Indian armed forces' **preparedness to deal with hybrid warfare** is one of the subjects that the **Parliamentary Standing Committee on Defence (2024)** has narrowed down for deliberation.
    - It will **assess areas like cyber defence, anti-drone technologies, integration of advanced systems** to address evolving threats etc.

Way forward

- **Capacity building:** Indian defence forces and security apparatus needs to **build experts, systems and doctrines in multiple domains** to tackle future hybrid challenges.
    - E.g., **building resilience of armed personals** to handle advanced technologies; develop capabilities for cyber retaliation and offensive cyber operations etc.
- **Integrate hybrid warfare into adaptive defence strategies:** E.g., creation of a **division dedicated to hybrid warfare with both offensive and defensive abilities**, which should form an integral part of national security strategy.
- **Adopting proactive approach instead of reactive:** Using **smart power and establishing a set of response options using all available tools**, such as diplomatic (Track-II channels), economic, informational, infrastructural, politico-military coordination etc.
- **'Whole of government' approach:** E.g., a **coordinated 'grand plan'** encompassing all ministries, **designed by National Security Council Secretariat** under the direction of the National Security Advisor and **with the consent of the Cabinet Committee on Security**, can be used to address hybrid warfare risks.

4.4. NUCLEAR DISARMAMENT

Why in the news?

UN Secretary-General António Guterres warned at the **"UN Conference on Disarmament" in Geneva** that the risk of nuclear war is rising and urged governments to push for total disarmament.

Factors behind Rising Risk of Nuclear War

- **Geopolitical Risks: Rising Geopolitical tensions** push nations toward nuclear security. For example, **Russia** suspended the **New Strategic Arms Reduction Treaty (New START)** and withdrew from the **Comprehensive Nuclear Test Ban Treaty (CTBT)**, during the **Ukraine war.**

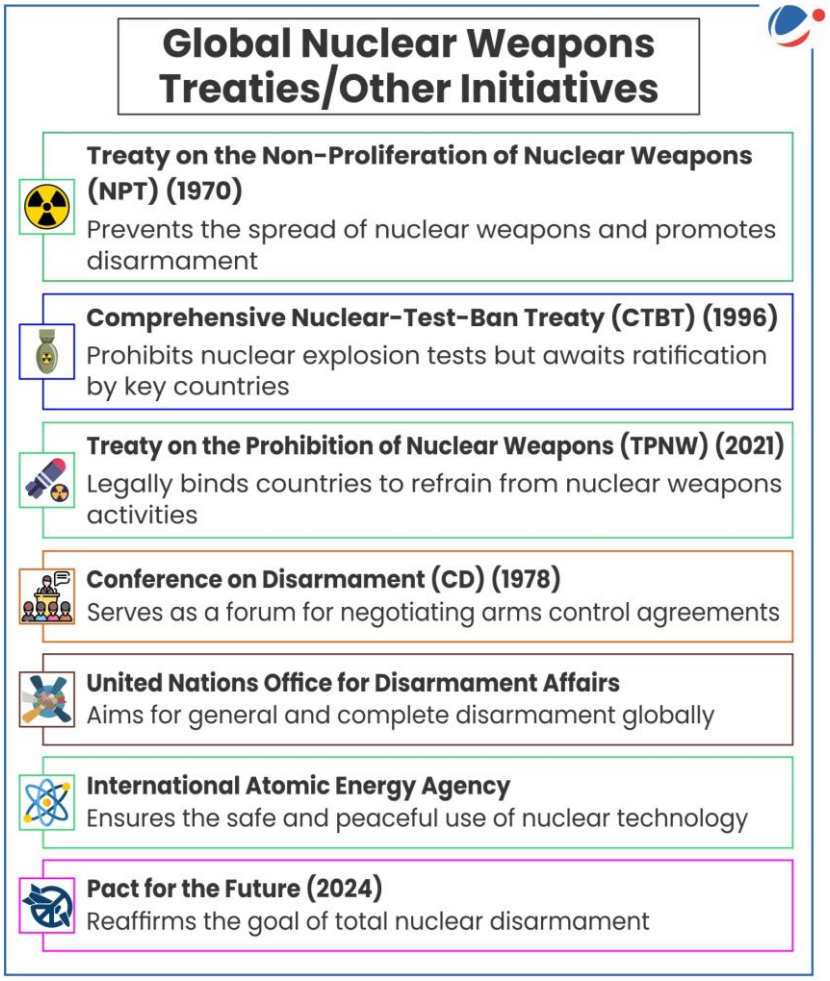
- **Doomsday Clock Alert**: In **January 2025**, the symbolic clock moved **one second closer to catastrophe**, signaling rising nuclear war risks.
- **Expanding Nuclear Arsenals**: Global stockpiles exceed **12,000 warheads**, with nations upgrading delivery systems.
    - **E.g., China** may reach **1,500 "operational" nuclear warheads by 2035** (Pentagon Report, 2022), signaling rapid expansion.
- **Nuclear Modernization Risks**: For example, **Hypersonic missiles** reduce response time, increasing the risk of misidentification and rapid escalation.
- **Risk of False Alarms & Accidental Escalation:** As highlighted during the **1983 Soviet false alarm incident**, where early warning systems wrongly detected a U.S. strike, later prevented by human intervention.
- **Newer Technologies: Weaponization of Artificial Intelligence** is moving forward at an alarming pace which raises concerns over automated nuclear decision-making.
- **Arms Race Spreading to Outer Space:** such as **U.S. Space Force Expansion**, **India's ASAT Test (Mission Shakti, 2019)** etc.

What is Nuclear Disarmament?

- Nuclear disarmament refers to the act, by unilateral decision or international agreement, of **reducing or eliminating the total number of nuclear weapons** worldwide, with the **end goal of a nuclear-free world.**

Key Obstacles to Nuclear Disarmament Efforts

- **Commitment vs. Implementation Gap**: Nuclear states pledge disarmament on one hand but modernize arsenals on the other.
    - **E.g., Russia** supports NPT and START but has also developed **ICBMs and hypersonic weapons.**
- **Key Issues Regarding Global Disarmament Initiatives**:
    - **Ineffective Implementation:** The **Conference on Disarmament** has made little progress in two decades, raising skepticism about disarmament efforts.
    - **Loopholes in Treaties**: Treaties like the **NPT** contain vague provisions, allowing nuclear-armed states to delay or evade commitments.
        - **E.g., USA & USSR** focused on stopping others from acquiring nuclear weapons but avoided binding self-reduction.
    - **Withdrawal from Agreements**: **E.g., North Korea (DPRK) exited NPT** and conducted nuclear tests, setting a precedent for treaty non-compliance.
- **Bilateral Arms Control Failure**: The **Intermediate-Range Nuclear Forces (INF) Treaty**, banning ground-launched missiles (500–5500 km), collapsed after the **U.S. accused Russia of violations,** exposing major powers' disarmament failures.
- **Outside Disarmament Framework:** Three De-facto Nuclear States **(India, Israel, and Pakistan) remain outside the NPT**, challenging global disarmament efforts.
- **Global Military Imbalance**: In **2023, the U.S. spent $916B** (37% of global defense spending), while **Russia spent $109B** (4.5%). This significant gap reinforces Russia's reliance on nuclear deterrence for strategic balance.



- **Other Issues:**
  - **Prestige and Power Symbolism**: Nuclear weapons enhance national status, discouraging disarmament (UN observation).
  - **Lack of Legal Framework:** No binding multilateral treaty **specifically regulates missiles.**
  - **NATO Nuclear Doctrine**: NATO upholds nuclear deterrence to **prevent coercion and aggression**, hindering disarmament.
  - **Mutually Assured Destruction (MAD) Doctrine:** The **U.S. and Russia** rely on MAD, assuming overwhelming retaliation would discourage either side from launching an attack.

India's stance on Nuclear Disarmament

- India is committed to **the goal of global, non- discriminatory and verifiable nuclear disarmament**.
- **Key Actions:**
  - **1954:** First country to call for a **ban on nuclear testing** worldwide.
  - **1978:** Proposed an **international convention** to prohibit the **use or threat of nuclear weapons.**
  - **1982:** Called for a **nuclear freeze**, urging a halt to fissile material production for nuclear weapons.
  - **1988:** Introduced an **'Action Plan for Ushering in a Nuclear - weapon free and Non - Violent World Order'** at the UNGA for eliminating nuclear weapons in **three phases by 2010**, emphasizing **global and non-discriminatory disarmament**.
  - **1998**: Voluntarily adopted measures to **prevent nuclear proliferation** despite conducting nuclear tests.
    - Policy of a **'no - first - use'** and **non - use of nuclear weapons against a non - nuclear weapon State.**
  - **1999: Draft Nuclear Doctrine** asserted **"global, verifiable, and non-discriminatory nuclear disarmament is a national security objective."**
- **India's Stands on Global Nuclear Treaties:**
  - **NPT: Opposes** due to its **discriminatory nature**, which legitimizes nuclear weapons for only five countries.
  - **CTBT:** Did **not sign** it because it failed to address nuclear disarmament, non-proliferation, and India's security concerns.
  - **TPNW:** Does **not support** this treaty since it lacks **new legal standards for disarmament**.
- **Multilateral Approach**
  - India advocates **gradual disarmament** through **universal agreements** and emphasized this in its **2006 Working Paper on Nuclear Disarmament** at the **UNGA.**
  - India supports negotiating a **Nuclear Weapons Convention** within the **Conference on Disarmament**, considering it the **primary platform for a global nuclear ban treaty**.

Way Forward

- **Transitional Approach**: A phased strategy balancing **deterrence and disarmament**, ensuring security while **gradually reducing** nuclear reliance. It covers -
  - **Bilateral Arms Reduction**: The **U.S. and Russia**, holding the largest nuclear stockpiles, must **lead by example** by reviving stalled **New START** negotiations to reduce arsenals.
  - Adopting **Minimal Nuclear Deterrence** & **No-First-Use (NFU) Policy.**
- **Treaty-based limits on strategic missile defences** in the light of emerging **hypersonic weapons.**
- Strengthened international norms against both nuclear and conventional aggression, in particular against preventive war.
- **Need for Global Cooperation**: Inspired by the Cold War era, health professionals should continue **International Physicians for the Prevention of Nuclear War (IPPNW)** nuclear disarmament efforts, which earned the **1985 Nobel Peace Prize**.
- **UN's Role in Disarmament**: **UN Secretary-General António Guterres** urged new negotiations to **prevent an arms race in outer space**, emphasizing a stronger **UN role in global security and disarmament**.

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4.5. NEWS IN SHORTS

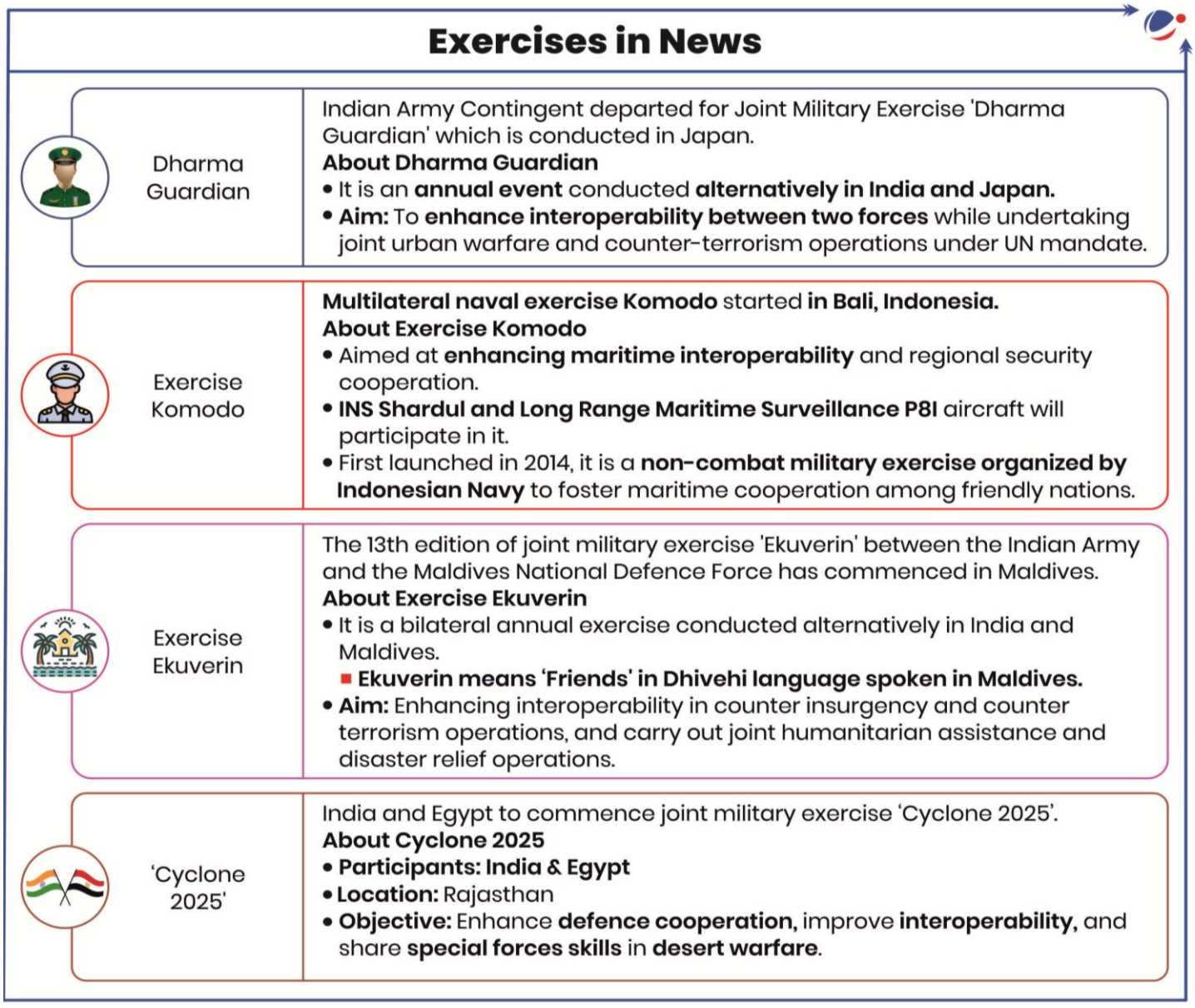
4.5.1. NAVAL ANTI-SHIP MISSILE–SHORT RANGE (NASM-SR)

DRDO and Indian Navy successfully flight-tested the **first-of-its-kind Naval Anti-Ship missile (NASM-SR)** from Integrated Test Range (ITR), Chandipur.

Key Features of NASM-SR

- **Indigenous Imaging Infra-Red (IIR) Seeker:** It facilitates high-precision strikes.
- **Man-in-Loop Control**: Allows real-time targeting adjustments.
- **Propulsion System:** It uses a **solid propulsion system** with an **in-line ejectable booster** and **long-burn sustainer** for extended range and efficiency.
- **Other:** Incorporates **advanced indigenous technologies**, including a **Fiber Optic Gyroscope-based Inertial Navigation System (INS),** etc.
- **Significance**: Strengthens naval strike capability, promotes indigenous defense production, and enhances operational flexibility.

4.5.2. MILITARY EXERCISES



4.6. ERRATA

- In the **January 2025 Monthly Current Affairs Magazine**, under **Article 4.3. Coastal Security Scheme,** due to a typographical error in the infographic titled 'Significance of Coastal security in India', it has been incorrectly mentioned that India is world's 7th largest fishing nation.
    - The correct information is- India is the world's **2nd largest fish producing country.**

5. ENVIRONMENT

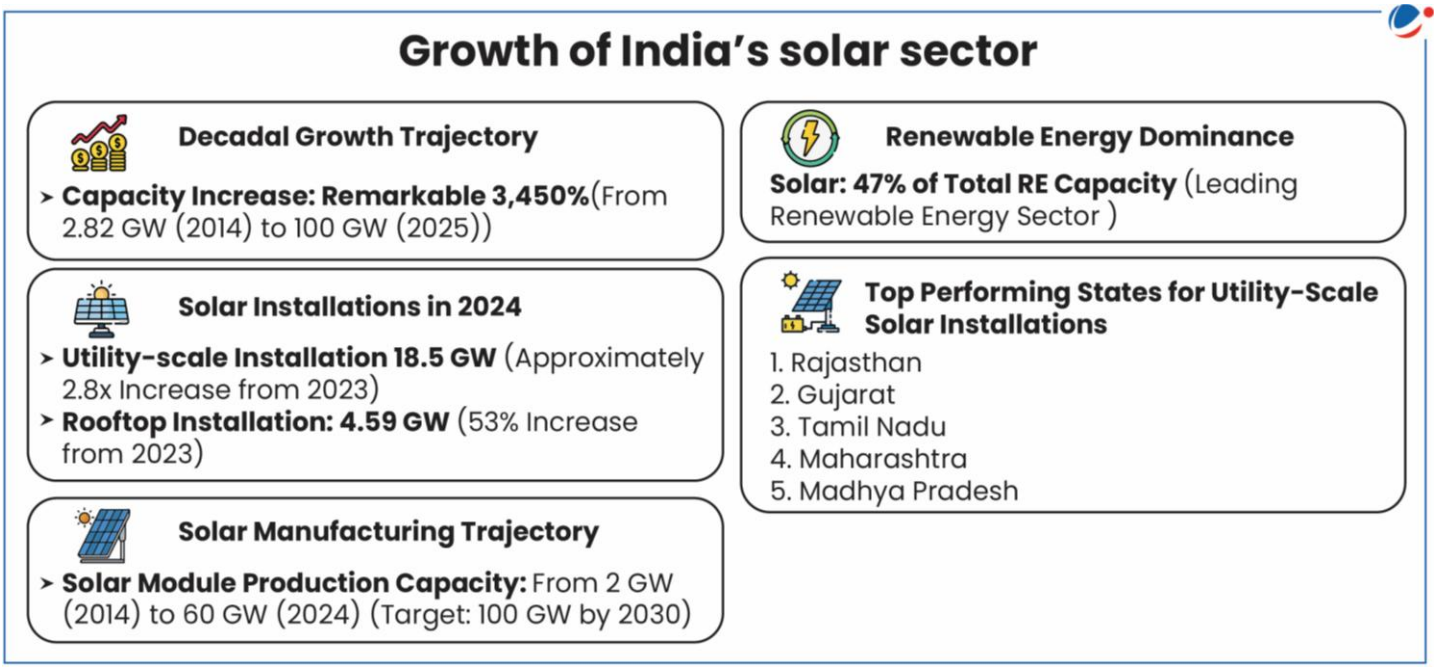
5.1. SOLAR ENERGY IN INDIA

Why in the News?

India has achieved a historic milestone by surpassing **100 GW of installed solar power capacity.**

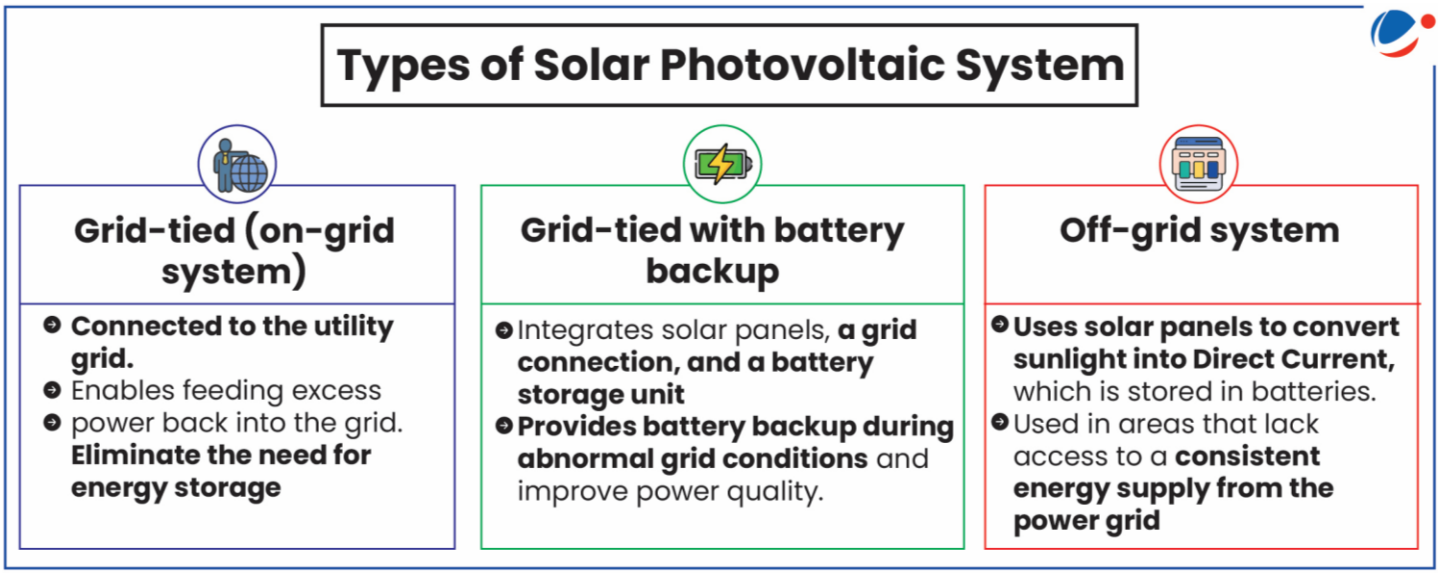
More on the news

- As of January, 2025, India's total solar capacity installed stands at 100.33 GW with remarkable growth trajectory (see infographic).
  - **84.10 GW is under implementation** and an additional **47.49 GW under tendering.**
- India's also witnessed growth in **hybrid and round-the-clock (RTC) renewable energy projects**.
  - Projects generating 64.67 GW are under implementation and tendered, bringing the grand total of solar and hybrid projects to 296.59 GW.



About Solar Energy

- Solar power is energy from the Sun that is **converted into thermal or electrical energy.**
- This is done through-
  - **Photovoltaic cells**: which is utilized in solar panels made of different semiconductor materials.
  - **Concentrating solar-thermal power (CSP) systems:** which use mirrors to reflect and concentrate sunlight onto receivers that collect solar energy and convert it to heat.



- **Potential of Solar Energy in India: 748 GW assuming 3% of the waste** land area to **be covered by Solar PV modules [National Institute of Solar Energy (NISE)]**
- **Significance of Solar energy in India**
  - **Achieving India's climate targets:** In accordance with the Paris climate agreement, India's **Nationally Determined Contributions (NDCs)** include cutting emissions intensity by 45% and achieving 50% non-fossil fuel capacity by 2030.
    - Further, India aims to achieve **500 GW of non-fossil fuel-based energy capacity by 2030** (**Panchamrit announced at UNFCCC COP26)**.
  - **Fulfill future Energy Needs**: India's energy use is 3 times the global average (India Energy Outlook 2021) and is expected to drive 25% of global demand growth over next 20 years.
  - **Rural Electrification**: Solar energy can support off-grid power generation with fast capacity expansion, benefiting remote areas.

Factors behind growth of Solar Energy in India

- **Geographical Advantage:** India receives abundant solar radiation, with **~300 sunny days per year** and an **average of 4-7 kWh/m^2/day,** making most regions ideal for solar power generation.
- **Government Schemes:**
  - **Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) Scheme** targeting 30.8 GW solar power in agricultural sector.
  - **PM Surya Ghar: Muft Bijli Yojana** enabling nearly **10.09 lakh rooftop solar installations** (March 2025), establishment of National Institute of Solar Energy etc.
- **Financial support and encouraging investment:** India has allowed **100% of foreign direct investment (FDI)** through the **automated process.**
  - Further, **Interstate transmission system (ISTS) fees are waived for solar and wind energy sales** across states for projects that are scheduled to be put into service by **June 30, 2025.**
- **Boost RE consumption:** Renewable Purchase Obligation (RPO) trajectory has been announced till 2029-30 including separate RPO for Decentralized Renewable Energy.
- **Indigenous manufacturing of solar components:** Through initiatives like Solar Park Scheme, **Production Linked Incentive (PLI) Scheme** under National Programme on High Efficiency Solar PV Modules, etc.
- **Consumer awareness**: Bureau of Energy Efficiency (BEE) launched **Standards and Labeling (S&L) programs for both grid-connected solar inverters and solar photovoltaic (PV) modules** in March 2024, aiming to help consumers make informed choices and improve energy efficiency.
- **Building infrastructure:** Under the **Green Energy Corridor Scheme**, the government is laying new transmission lines and creating new sub-station capacity for evacuation of renewable power.

- **International Cooperation and Leadership:** Initiatives like **International Solar alliance**, put India at the forefront of investing in clean energy technologies, by increasing energy access, guaranteeing energy security, and accelerating the energy transition among its member nations.
    - Further, **Indo-German Solar Energy Partnership (IGSP)** is developing market forces while introducing enabling mechanisms and facilitating investments in rooftop PV systems.

Issues constricting in further advancement of solar energy in India

- **Land Acquisition:** Solar can need 300 times as much space as nuclear energy (Economic Survey 2023-24).
    - Extremely large-scale solar farms require huge areas of land often conflicting with **food security and environmental interests.**
- **Infrastructure constraints**: Grid integration and energy storage**,** pose challenges to scalability due to technological limitations, high costs etc.
- **Environmental concerns**: Extraction of minerals needed for Solar, particularly Lithium, Cobalt, Nickel, and some rare earth minerals, leave **large scars in the landscape** and require substantial water, releasing about 15 tonnes of CO_2 per tonne of mineral. (Economic Survey 2023-24)
- **Challenges to domestic manufacturing**: Lack of R&D, modern development facilities, and manufacturing infrastructure impact the development of solar panels, equipment, and inverters in India leading to increased dependence on imports
- **Policy and Regulatory Hurdles:** Complex regulatory frameworks and inconsistent policies across states affect project implementation.
    - **Delays in approvals** and land clearances **reduce the pace of solar energy deployment.**
- **Other issues:** High initial Investment; waste problem as solar panels have to be replaced every couple of decades; etc.

Way forward

- **Modernize grid:** Invest in smart grid technologies and develop localized microgrids in rural areas.
- **Increase land-use efficiency**: **Promote agrivoltaics** and **increase development of floating solar panels** on reservoirs, irrigation canals, and water bodies to minimize land use conflicts.
- **Policy Simplification**: **Harmonizing** state and central policies can **help streamline project approvals and incentivize investments.**
- **Technological Innovations**: Advancements **in solar panel efficiency, energy storage (batteries), and hybrid systems (solar-wind) can boost adoption**.
    - The integration of **artificial intelligence (AI) and the Internet of Things (IoT) in solar systems** can optimize energy production and consumption.
- **Circular economy approach**: Establish a robust recycling ecosystem for solar panels and batteries to recover critical materials and reduce the need for new mineral extraction.
- **Boost Domestic Manufacturing**: Encouraging local production of solar cells, modules, and storage solutions through programs **like "Make in India" can help boost the solar production further.**

5.2. SOIL HEALTH CARD SCHEME

Why in the News?

Recently, **Soil Health Card Scheme**, launched in 2015, completed 10 Years of its implementation.

More on the News

- The Scheme was introduced to assist State Governments in issuing **soil health cards to all farmers** in the country.
- Since 2022-23, SHCS has been **integrated with PM-Rashtriya Krishi Vikas Yojana (RKVY) Cafeteria scheme** as one of its components under name '**Soil Health & Fertility'**.

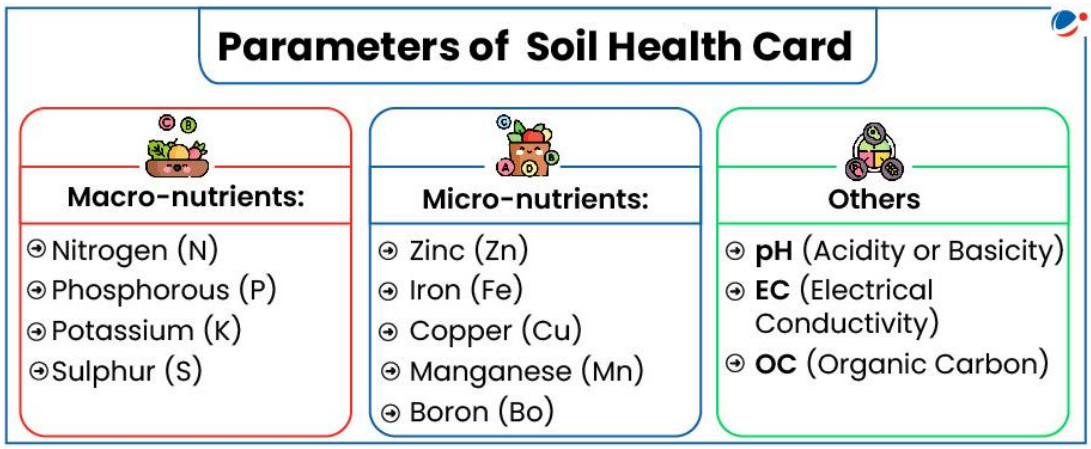
PM Rashtriya Krishi Vikas Yojana (RKVY) Cafeteria Scheme

- **Launched:** In 2007-08.
- **About**: **Flagship scheme of the Department of Agriculture & Farmers' Welfare** (DA&FW) in 2007-2008.

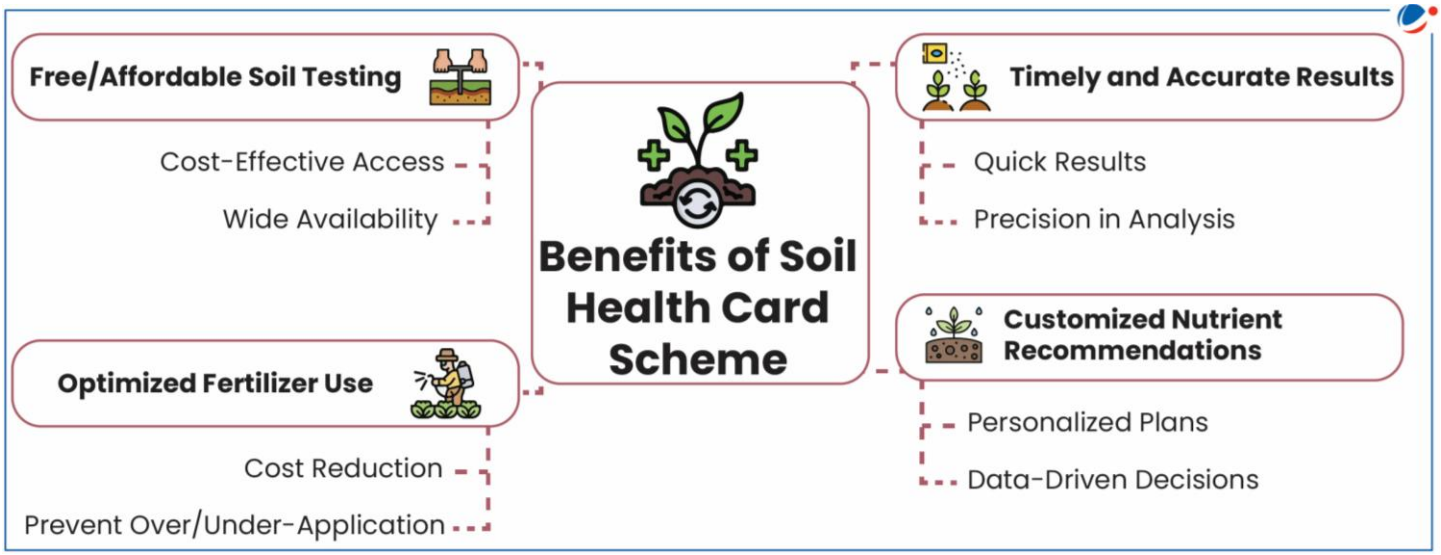
- **Objective**: To incentivize States to draw up comprehensive agriculture development plans for ensuring more **inclusive and integrated development of agriculture** and allied sectors.
- **Components**: Soil Health Management, Rainfed Area Development, Agro Forestry, Paramparagat Krishi Vikas Yojana, Agricultural Mechanization including Crop Residue Management, Per Drop More Crop, Crop Diversification Programme, RKVY DPR component, and Accelerator Fund for Agri Startups.

About the SHCS

- **Ministry:** Union Ministry of Agriculture and Farmers Welfare.
- **Objectives:**
  - To **issue soil health cards** every **three years** to all farmers.
  - To **develop and promote soil test based nutrient management** for enhancing nutrient use efficiency.
  - To find out the **type of particular soil** and provide **ways to improve** it.
- **Features of Scheme:**
  - **Soil Health Cards:** Provides information to farmers on key **nutrient status of the soil** along with recommendations on **appropriate dosage of nutrients** to be applied for improving soil health.
    - > Card contains **status of soil with respect to 12 parameters** (see infographic)
  - Setting up of **Village level Soil Testing Labs** to test the soils.
  - **Soil Health Card Portal** to facilitate generation of SHCs in a uniform and standardized format across country in all major languages and 5 dialects.



- **Implementation:** By Department of Agriculture of respective State /UTs.
- **Technological Advancements:**
  - **Integration of portal with a Geographic Information System (GIS)** system to capture and show test results on a map.
  - **Creation of Mobile app** for obtaining a Soil Health Card with enhanced accessibility, efficiency, and transparency.



Key Achievements of the Scheme

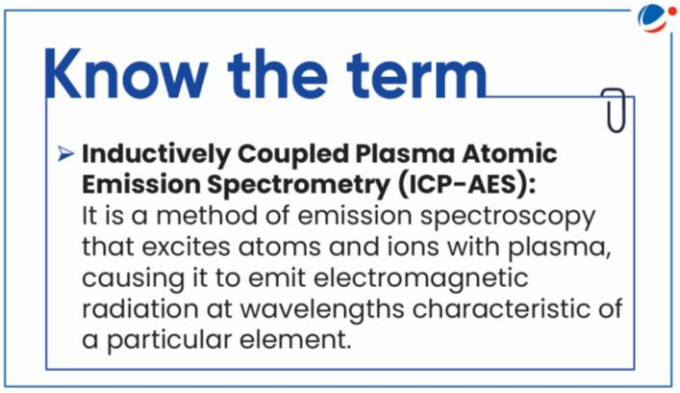
- **Coverage:** 24.74 crore Soil Health Cards (SHC) generated (as of February, 2025).
- **Increased Coverage:** Number of SHC issued to farmers increased from 16 lakh (2020-21) to 53 lakh (2024-25).
- **Mapping:** Soil and Land Use Survey of India generated 1,987 village-level soil fertility maps for 21 States and Union Territories.
- **Labs:** 8272 Soil Testing Labs have been set up.
- **Funding:** ₹1706.18 crore have been released to various States/UTs.

Constraints with the Scheme

- **Quality and accuracy issues:** Soil samples are sometimes collected improperly, leading to **inaccurate test results**.
  - Many SHCs provide **broad, one-size-fits-all recommendations** instead of location-specific and crop-specific advice.
- **Lack of Understanding:** Many farmers are unable to understand the content, hence unable to follow the recommended practices.
- **Absence of physical and micro-biological indicators:** Such as soil texture, water holding capacity, and water quality and bacterial content affect the process.
- **Others:** Inadequate testing Infrastructure, lack of availability of recommended fertilisers and bio-fertilisers at village level, etc.

Way Forward

- **Sample Collection and Testing:** Identify best practices by examining across countries and different state governments practices.
- **Training and Development:** Appropriate training, easy to use sampling tools keeping in mind specialized and highly skill nature of job.
- **Modern Labs:** Soil testing labs at direct level should be equipped with Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) which is used to assess soil health by quantifying the elemental composition.
- **Creation of Specialized body**: At central as well as at state level for the management of soils with responsibility of monitoring the quality of delivery service.
- **Others:** Coordination among agricultural extension officers and farmers, development of Soil Health Index; reduction in subsidy for NPK to rationalize fertilizer usage, etc.



5.3. STUBBLE BURNING

Why in the news?

A parliamentary standing committee has recommended introducing **a minimum support price (MSP)** for paddy residue to **discourage stubble burning**, one of the main causes of air pollution in Delhi.

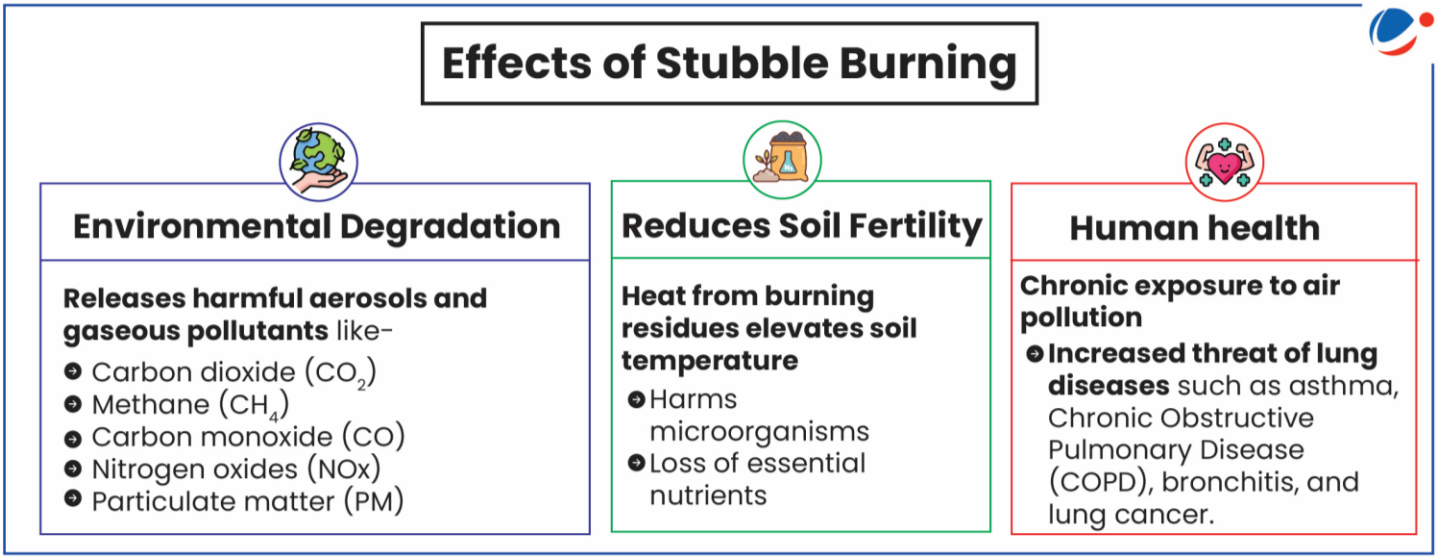
More on the news

- The recommendations were made by the **Committee on Subordinate Legislation** which examined the **Commission for Air Quality Management (CAQM) in National Capital Region and Adjoining Areas** (Imposition, Collection and Utilization of Environmental Compensation for Stubble Burning) Rules, 2023.
- The rules were notified under the **CAQM Act, 2021** to deal with the problem of stubble burning and fulfil the provision of Section 15 of the Act.

About Stubble Burning

- **A stubble burn refers** to the act of setting on fire straw that has been left **over after the harvest of grains, such as paddy, wheat, etc.**

- Stubble burning (parali) is used to remove **Paddy crop residues from fields** in preparation for sowing wheat, which is done around the **end of September and the beginning of November.**
  - **Punjab, Haryana, and Uttar Pradesh** are the primary states where this **practice is prevalent during this time of year.**
- **Reasons for stubble burning:** Cheaper than alternative disposal methods, weed management, pest control etc.



Challenges in controlling stubble burning

- **Technical and Infrastructural Challenges**
  - **Inadequate harvesting technology:** Current combine harvesters leave **10-15 cm stubble that cannot be easily removed.**
  - **Limited storage infrastructure:** Lack of **large land parcels for safe storage of paddy** straw as well as limited availability of **custom hiring centers, especially for small farmers.**
  - **Inadequate supply chain support:** From companies collecting stubble
  - **Wear and tear on machinery:** Technical difficulties in using 100% paddy straw as feedstock due to high silica content **causing wear and tear on machinery**
  - **Short window (15-20 days):** between harvesting rice and sowing **wheat crops**.
- **Regulatory and Administrative Challenges**
  - **Ambiguity in definitions:** Of key terms like "**stubble burning**" and "**environmental compensation".**
  - **Unclear procedures:** For the "**RED ENTRY**" system **marking non-compliance with the rules related to stubble burning.**
    - **Lack of exit provisions for** removing red entries from farmers' records
  - **Insufficient coordination:** Between multiple ministries and state governments.
- **Financial and Economic Barriers**
  - **Insufficient subsidies** for widespread adoption of machinery
  - **Lack of proper utilization frameworks:** For environmental compensation fund.
- **Socioeconomic and Awareness Issues**
  - **Insufficient education and training programs** on alternative methods and sustainable farming
  - **Imbalance between** punitive measures and positive incentives.

Steps taken by government to reduce stubble burning

- **Framework by the CAQM:**
  - **In-situ Crop Residue Management:** It involves **machines procurement, setting up of Custom Hiring Centers (CHCs), high yield and short duration paddy varieties**, staggering of harvesting schedule, extensive use of bio-decomposer.

- **Ex-situ Crop Residue Management:** Alternative usage of paddy straw viz. Biomass Power Projects, Co-firing in Thermal Power Plants, Feed stock for 2G Ethanol plants, Feed stock in Compressed Biogas plant, packaging materials etc.
- **Prohibition of stubble residue burning**: Through **effective monitoring, enforcement Schemes to reduce the generation of paddy straw as well as imposition of environmental compensation** from the farmers causing air pollution by stubble burning.

- **Financial support mechanisms**: Sub-Mission on Agriculture Mechanization (SMAM) provides financial assistance for procurement of agricultural machinery and equipment to small and marginal farmers.
- **Promotion of alternatives:** Like Bio Enzyme-PUSA, Palletization, Happy Seeder machine, utilization of biomass for Biofuel Production etc.
- **State level Initiatives:**
  - **Uttar Pradesh: "Parali Ke Badle Govansh Khaad"** (cow manure in exchange for stubble) aimed **at curbing stubble burning and promoting sustainable farming practices.**
  - **Punjab:** Mobile apps like **i-Khet (for facilitating farmers to have access to the agriculture machinery/ equipment for In-situ management of crop residue), and "Cooperative Machinery Tracker**" are in place to ensure availability of **Crop Residue Management (CRM) machines.**

Way Forward: Recommendations made by Parliamentary standing committee

- **Financial Framework and Support Systems: Create a price system similar to Minimum Support Price (MSP**) to guarantee returns when farmers sell stubble
  - **Review and notify benchmark prices** annually before the Kharif harvest season.
  - **Ensure prices reflect farmers'** actual costs for residue collection, including labor and machinery.
- **Technical and Infrastructure Development**
  - **Establish a Real-time Mapping** of Crop Acreage and Forecasting of **Crop Maturity to assess district-wise crop yields for better planning.**
  - **Create interim storage facilities** in districts where industries or end users are unavailable within 20-50 km.
  - **Support local entrepreneurs and aggregators** and **develop supply chain infrastructure.**
- **Regulatory and Administrative Improvements**
  - **Designate a specific authority** to address **farmers' grievances** in a time-bound manner
  - **Provide clarity** through necessary amendments in existing rules.
  - **Introduce an incentive-based Red Entry removal system** for farmers participating in sustainable practices
  - **Incorporate a new sub-rule** for proper utilization of **Environmental Compensation Fund for stubble burning.**
- **Agricultural Practice Improvements**
  - **Incentivize adoption of short-duration paddy varieties** as alternatives to long-duration varieties like **PUSA 44**
  - **Standardize procurement processes** for alternative crop varieties and **enforce seed certification bans** for problematic varieties
- **Coordination and Policy Integration: Unified National Policy** for integrating agricultural residue into bioenergy generation which
  - **Prioritize adoption of technologies like** bioethanol, compressed biogas, and biomass pellet.

5.4. NEWS IN SHORTS

5.4.1. WETLAND ACCREDITED CITIES

Indore and **Udaipur** have become the **first two Indian cities** to make it to the **global list of accredited wetland cities under Ramsar Convention on Wetlands.**

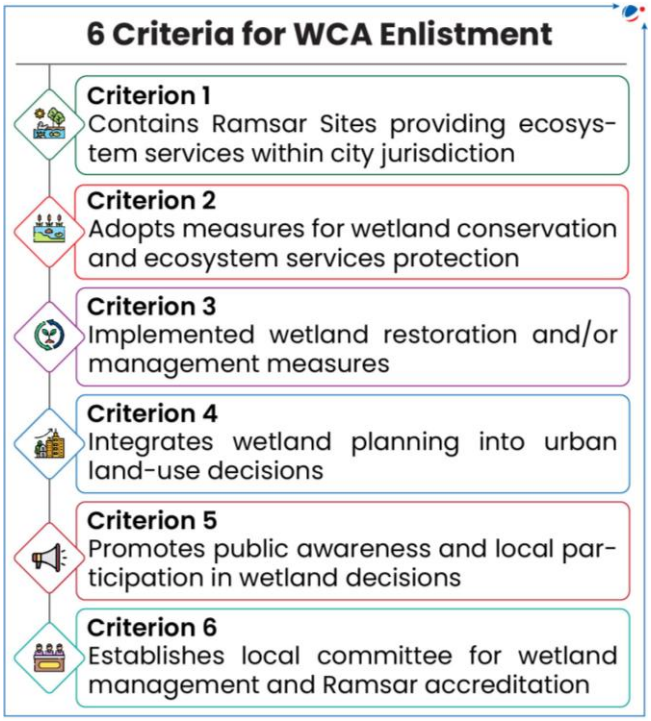
- **Indore**: **Sirpur Lake** (Ramsar Site) **recognised for water bird congregation** and is being **developed as a bird sanctuary**.
- **Udaipur**: Surrounded by **five major wetlands,** namely**, Pichola, Fateh Sagar, Rang Sagar, Swaroop Sagar,** and **Doodh Talai.**

About Wetland City Accreditation (WCA)

- It is a **voluntary Accreditation system** that provides an opportunity for cities that value their **natural or human-made wetlands** to gain international recognition and positive publicity for their efforts.
- It was **approved at Uruguay** in **COP12** of **Ramsar Convention** (2015).
- It is **valid for 6 years,** after which it must be renewed, providing that it continues to **fill each of the 6 criteria** (refer image).

Significance of WCA

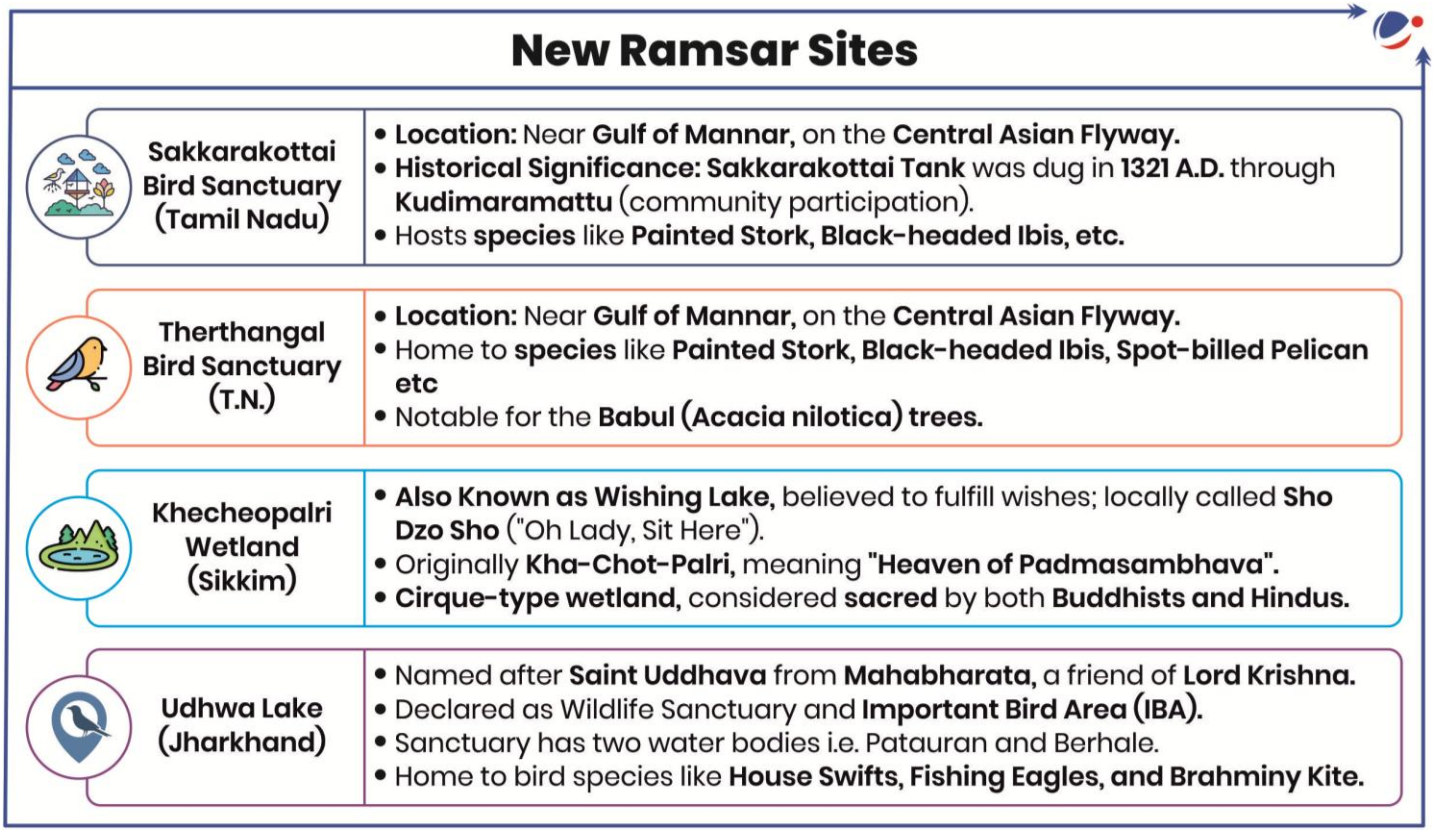
- **Promote conservation** and **wise use of urban** and **peri-urban wetlands**, as well as sustainable socio-economic benefits for local populations.
- Help in **implementation of Amrit Dharohar initiative** of MoEF&CC.



5.4.2. FOUR MORE WETLANDS INCLUDED UNDER THE RAMSAR CONVENTION

This has increased wetlands tally from 85 to **89**, highest in **Asia**, **third globally**. Wetlands have been added from **Tamil Nadu, Sikkim** and **Jharkhand.**

- **Tamil Nadu** leads with **20 Ramsar sites**, the highest among Indian states.
- **Sikkim** and **Jharkhand** have added their first Ramsar sites.



Ramsar Convention on Wetlands

- **Intergovernmental treaty** adopted in **Ramsar (Iran)** in 1971 (**came into force in 1975).**
- **Objective**: Provides a **framework for national and international efforts** to conserve and **wisely use wetlands**.
- **World Wetlands Day** is celebrated on 2nd February.

5.4.3. INLAND MANGROVE OF GUNERI

Gujarat has notified "**Inland Mangrove of Guneri**" in the District of Kutch as a **Biodiversity Heritage Site (BHS)**.

- It is Gujarat's **first Biodiversity Heritage Site.**
- Notified in accordance with **the Biodiversity Act, 2002**.

About Inland Mangrove of Guneri

- Guneri mangroves grow **45km from Arabian Sea and 4km from Kori Creek**, representing a rare inland ecosystem.
  - **Unlike conventional mangrove ecosystems,** this site does not receive tidal water inflow and lacks muddy or swampy conditions.
- It is reportedly **one of only eight of its kind across the world**.
- Area houses around 20 migratory and 25 resident migratory avifaunal species.

5.4.4. UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME (UN-HABITAT)

C40 Cities & **UN-Habitat** have announced a landmark partnership to transform urban planning.

- It will launch an **Urban Planning Accelerator** to **cut city emissions by 25% by 2050** while promoting safer, fairer, & inclusive urban spaces.

About UN Habitat

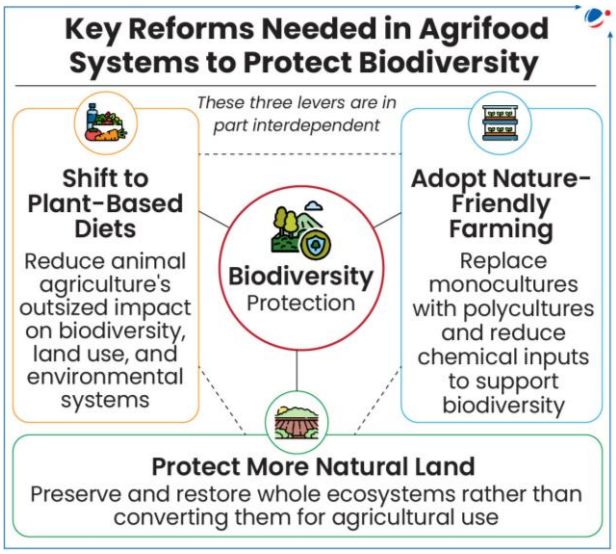
- **Launch:** 1978
- **Mission:** To promote **socially & environmentally sustainable towns and cities**, ensuring adequate shelter for all.
- Role: Through initiatives like **New Urban Agenda**, it seeks to make cities inclusive, safe, resilient, & sustainable.

About C40

- C40 is a **global network of nearly 100 mayors of world's leading cities** that are united in action to confront climate crisis.
- Six Indian cities are currently members of C40: **Bengaluru; Chennai; Delhi NCT; Jaipur; Kolkata and Mumbai**.

5.4.5. AGRI-NBSAPS

UN Biodiversity Conference (CBD COP 16.2) in Rome builds on **COP16 momentum** in Colombia, where FAO launched **Agri-NBSAPs with the Colombian government and the Convention on Biological Diversity (CBD).**



About Agri-NBSAPs

- Agri-NBSAP aims to assist governments in **integrating agrifood systems (AFS) into National Biodiversity Strategies and Action Plans (NBSAPs)** and their implementation.
  - An agrifood system encompasses **all stages of food production**, from farm to fork.
  - NBSAP provides a **framework for biodiversity conservation**, enables sustainable use of biological resources.
    - Countries frame NBSAP under the **Kunming-Montreal Global Biodiversity Framework (KM-GBF)** which aims to **halt and reverse biodiversity loss by 2030.**
- It provides a collective mechanism to **help governments build capacity, identify and implement strategic levers** across AFS to achieve their NBSAP targets.

Why should AFS be Integrated into NBSAPs?

- **Meeting KM-GBF Goals:** Over half of 23 targets of **Kunming-Montreal Global Biodiversity Framework (KM-GBF) are directly or indirectly related** to agriculture.
- **Cutting Emissions:** Agrifood systems **produce nearly 1/3 of global greenhouse gases** driving climate change, which further degrades habitats and causes biodiversity loss.
- **Protecting Food Security:** Biodiversity supports pollination, soil fertility, and pest control.
    - Biodiversity decline **threatens 3 billion lives** with **75% of food crops depend on pollinators.**

5.4.6. CHAMPIONS OF ANIMAL PROTECTION

AWBI will honour **Champions of Animal Protection** under two major categories **Prani Mitra and Jeev Daya Award.**

- This initiative aims to recognize **outstanding individuals and organizations f**or their remarkable contributions to animal welfare and protection.

About AWBI

- **Prevention of Cruelty to Animal Act (PCAA) 1960** established the AWBI in 1962 **as a statutory advisory body** on Animal Welfare Laws and promotes animal welfare.
- It was **started under the stewardship of Rukmini Devi Arundale**, well known humanitarian.
- It **consists of 28 Members including 6 Members of Parliament** (2 from Rajya Sabha and 4 from Lok Sabha).

5.4.7. F11 BACTERIA

A recent study **discovered F11 bacteria (Labrys portucalensis)** that degrades at least 3 types of **per- and polyfluoroalkyl substances (PFAS).**

About F11 Bacteria

- It is an **aerobic** bacteria from the **Xanthobacteraceae family.**
- It may aid **Bioaugmentation** in wastewater treatment etc.
    - **Bioaugmentation** is the addition of **microorganisms** that can **biodegrade** recalcitrant molecules in a **polluted environment.**

About PFAS

- PFAS are **toxic chemicals** that **resist grease, oil, water, and heat**. They are called **'forever chemicals'** due to their almost **indestructible nature**.
- **Uses**: Nonstick cookware, grease-resistant food packaging, and waterproof and firefighting clothing etc.

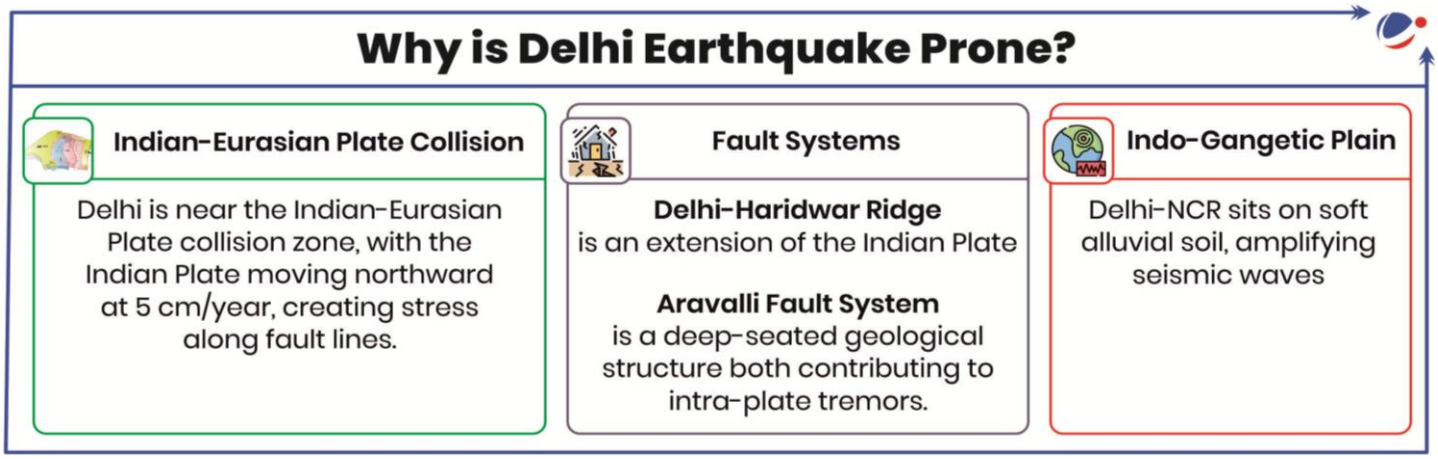
5.4.8. SHALLOW-DEPTH EARTHQUAKE

Earthquake Measuring 4.0 in richter scale shakes Delhi-National Capital Region (NCR).

- Unlike **Himalayan quakes caused by plate tectonics**, this earthquake was **an intra-plate event**, resulting from "**in situ material heterogeneity".**
- Tremors were more intense due to the **epicentre (point on the Earth's surface directly above the focus of an earthquake) located** within Delhi and the earthquake's **shallow depth of 5 km (See box).**

Earthquakes Due to In-Situ Material Heterogeneity

- **Definition:** It refers to seismic activity caused by the inherent variability in the **physical properties of the Earth's crust**. **E.g.,** Rock type, presence of fluids in rock pores, etc.
- **Formation:** Variations in physical properties (heterogeneities) can cause **stress concentration**, which eventually increase the likelihood of earthquakes.
- **Influence on Faults**: 'In-situ heterogeneity' **creates stress buildup in fault zones**, increasing the chances of earthquakes.
    - Delhi is placed in **seismic zone IV** in the **seismic zoning map of India**, the **second highest in the country.**



About Shallow Earthquake

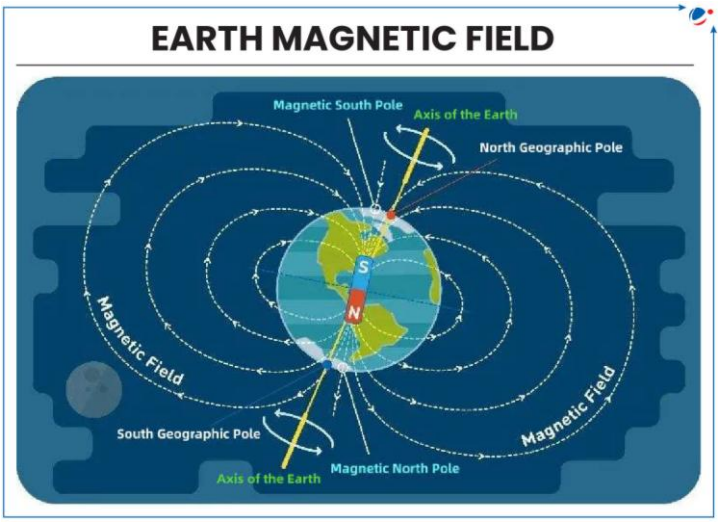
- An earthquake is a **sudden, rapid shaking of the ground** caused by the shifting of rocks deep underneath the earth's surface.
  - **A shallow earthquake** occurs at a **relatively shallow depth (0 to 70 km)** within the Earth's crust.
  - Whereas, **intermediate earthquakes** occur in between **70 to 300 km** and **deep earthquakes** occur in between **300 to 700 km.**
- **Impact**: Shallow earthquakes tend to **cause more damage** due to their proximity to the surface.

5.4.9. SHIFT IN EARTH'S MAGNETIC NORTH

Earth's Magnetic North Pole is shifting toward Siberia, according to updated **World Magnetic Model (WMM).**

About WMM

- WMM is a standard model of the core and large-scale crustal magnetic field.
- New version of model is **updated every five years** to address changes in Earth's magnetic field.
- It is produced by the **United States' National Geospatial-Intelligence Agency (NGA)** and the **United Kingdom's Defence Geographic Centre (DGC)**.



Shift in Earth's Magnetic North Pole

- **Magnetic North** is where the **Earth's magnetic field lines enter Earth** in the North while **Geographic North** is where lines of longitude (meridians) **converge in the north**.
  - Earth **rotates on the geographic north and south poles**.
- Since Earth's Magnetic North Pole was **first discovered in 1831 by explorer James Clark Ross**, it has gradually shifted.
  - Over past century, its **movement from Canada toward Siberia (Russia) has accelerated** reaching a peak of 31 miles annually by 2000s but rate of movement has **slowed in last five years**.
- **Positions** of Earth's Magnetic North and South Poles **gradually change** due to **variations in Earth's magnetic** field over time.
  - **Magnetic declination** – the angle between magnetic North and Geographic North – at a given location also changes over time.
- Sometimes, Magnetic Poles also undergo **Pole Reversal** i.e. swapping of magnetic north and south poles.
  - According to **Paleomagnetic records**, Earth's magnetic poles have **reversed 183 times** in the last 83 million years.
  - **Potential Implications:** Errors in navigation systems, impact on migratory species, risks from solar storms to satellites and power grids etc.

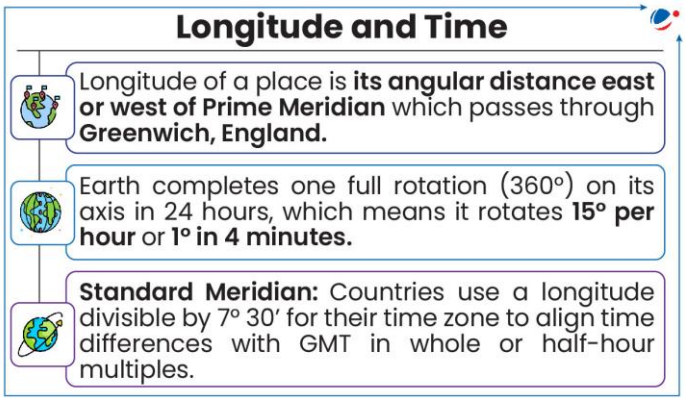
5.4.10. DRAFT RULES FOR 'ONE NATION, ONE TIME'

Department of Consumer Affairs notifies **Draft Legal Metrology (Indian Standard Time) Rules, 2025.**

- These landmark rules aim to **standardize and mandate use of Indian Standard Time (IST)** across all sectors in India.

About Draft Legal Metrology (Indian Standard Time) Rules, 2025

- **Mandatory time reference: Would be IST** across all sectors, including commerce, transport, public administration, legal contracts, and financial operations.
- **Prohibition:** No person/entity shall use, display, or record time other than IST for official/commercial purposes.
  - Provided that any law/government direction/guidelines permits same.
- **Adoption of Time Synchronization Protocols:** Such as Network Time Protocol and Precision Time Protocol etc. by government offices is required.
- **Cybersecurity:** To ensure resilience**, cybersecurity measures and alternative reference mechanisms** are prescribed.
- **Authorized Deviations:** Use of alternative timescales (GMT, etc.) is permitted for specific purposes e.g. astronomy, navigation, scientific research, etc. subject to prior permission.



Significance of New Draft Rules

- **Strengthens national security** by improving the synchronization of critical infrastructure
- Synchronization of digital devices and public services **ensures reliable and efficient services**
- Will ensure **accurate financial transactions** and **consistency in record-keeping**

About IST

- **Central meridian** of country (i.e**. 82°30'E meridian** passing through Mirzapur) is taken as Standard Meridian or **IST (Maintained by CSIR-NPL).**
- It is **5 hours 30 minutes** ahead of **Greenwich Mean Time (GMT) (**now Universal Coordinated Time (UTC)).
  - Local time at Prime Meridian (0° longitude) is **known as GMT.**
- Several tea gardens in Assam follow an informal '**Chaibagan' or 'Bagan time**' ('Tea Garden Time'), which is **one hour ahead of IST.**
  - It was introduced by the British tea companies to **increase daylight work hours and productivity.**

5.4.11. STRATOVOLCANO

In a rare event, **massive methane plumes** emitted from volcano **Mount Fentale (Ethiopia).**

- **Mount Fentale** is a **stratovolcano** which last erupted in **1820**.

About Stratovolcano

- **A stratovolcano** is a large, steep-sided volcano built up by alternating layers of lava flows and volcanic ash, often associated with explosive eruptions.
- E.g., Mount Fuji (Japan), Mount Vesuvius (Italy), Mount Etna (Italy), Mount Rainier (USA), Krakatoa (Indonesia), etc.

About Methane Plumes

- **It's the release of large quantities of methane** from **super-emitter sites** like gas drilling sites.
- Methane is a **potent greenhouse gas**, with **80 times** the **Global Warming Potential (GWP)** of carbon dioxide over a 20-year period.

5.4.12. MOUNT DUKONO

Recently, a **volcano erupted at Mount Dukono in Indonesia.**

About Mount Dukono

- **About:** With a **height of 1,087 metres above sea level**, it is one of Indonesia's 127 active volcanoes.
- **Location:** on **Halmahera Island**

Other major volcanoes erupted recently in Indonesia

- **Mount Merapi:** Located near the city of **Yogyakarta**.
- **Mount Ruang:** It is a **stratovolcano** located in the **Sulawesi Islands.**
- **Mount Lewotobi Laki-Laki:** Located in Flores island

5.4.13. CASPIAN SEA

Environmental activists raised concerns over the rapidly **declining water levels in the Caspian Sea**.

- It has already lost nearly 31,000 square km since 2005.

About Caspian Sea

- It is the **largest enclosed water bod**y in the world.
- **The sea is bordered by five countries:** Kazakhstan, Azerbaijan, Russia, Turkmenistan, and Iran.
  - **Kazakhstan has the longest coastline** along the Caspian Sea.
- Its **oil reserves** are estimated at **48 billion barrels**.
- **Reasons for declining water level:** The climate crisis, excessive water use for agriculture, and pollution from nuclear waste, industry and poor urban planning, etc.

6. SOCIAL ISSUES

6.1. MIDDLE-INCOME CLASS

Why in the News?

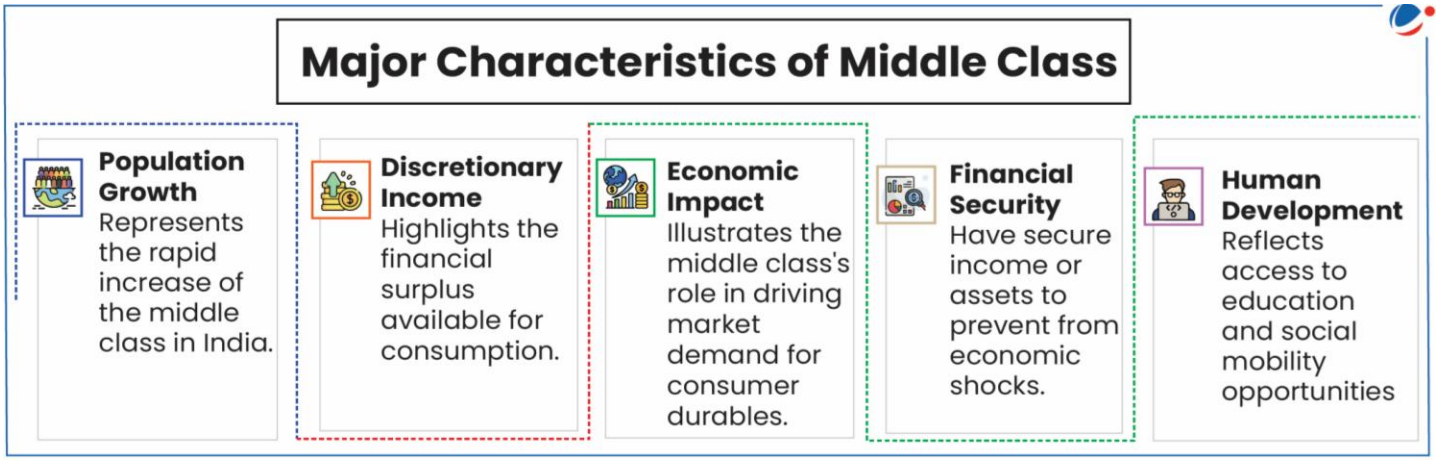
The new income tax structure offering income tax relief to the annual income of **₹12 lakh** provides the much-needed tax relief to the **middle-income class** in India.

More on the news

- The nil tax slabs has **increased** from INR 7 lakhs to INR12 lakhs under the new tax regime, with salaried taxpayers effectively benefiting up to INR 12.75 lakhs due to the INR 75,000 standard deduction.
- The tax relief to the middle class seeks to **uplift disposable incomes** and **stimulate consumption** thereby driving growth in the economy.

About Middle Income Class (MIC)

- **Definition**
  - Though, there is **no specific definition** of the middle-income class, yet **different approaches** have been used to define them. Some of them being:
    - **Organisation of Economic Cooperation and Development (OECD**) considers those whose earnings are in the range of **US $10 to US $100 per day** to be the middle-income class.
    - The **People Research on India's Consumer Economy (PRICE)** defines the middle-income class household with an annual income of **Rs. 5 lakhs to Rs. 30 lakhs (**at 2020-21 prices).
  - Therefore, they can be regarded as the **socio-cultural group**s which are **economically secure** with **little chance of falling into poverty or vulnerability.**
- Within the MIC, there are notable variations
  - **Lower Middle Class:** Spend much of their income on **private healthcare, education, non-essential consumer** durables and assets like vehicles, basic household appliances, etc.
  - **Upper Middle Class:** Along with spending on the above areas, also **spend on discretionary goods** and are likely to own luxury assets like computers, air conditioners, etc.



Growth of Indian Middle-Income Class

- **Pre-Independence:** The MIC initially comprised a small group of educated, upper-caste, English-speaking elites, shaped by British colonial education policies.
- **Post-Liberalization Expansion:** The Liberalization, Privatization, and Globalization (LPG) reforms of the 1990s marked a turning point. It opened the Indian economy to multinational corporations, creating new job opportunities in services and IT sectors. This expanded the MIC significantly, especially in urban areas.
- **Current and Future Projections:** According to PRICE, India's middle class is projected to grow **from 31% in 2021 to 38% by 2031** and further to 60% by 2047.

Impact of the Changing Nature of Middle Class on various domains

Economy

- **Driving Consumption:** Rising incomes and the expansion of middle-class will reshape future consumption driving **incremental consumption** on apparel, communication, personal care, etc.
  - Middle-class and rich households will drive nearly **$2.7 trillion of incremental consumption spend by 2030-31 (PRICE).**
- **Emergence of New Market:** The urban middle-income acts as a **huge market and a revenue source** for local and global companies, with brands designing policies to effectively target them.
  - The MIC also promotes a dynamic entrepreneurial environment by creating demand for startups and new services.
- **Inclusive Growth:** Strong and prosperous middle class support **healthy societies** with investment in education, health, intolerance of corruption, etc., offering the basis for inclusive growth.

City Infrastructure

- **Making Tier II Cities attractive:** Rising affluence and higher purchasing power of the middle class would make the Tier II and III cities attractive on the **demand side.**
- **Emerging Growth Centres:** The new middle-income consumption patterns are **aspirational** leading to the rise of various entertainment centres in the cities like coffee shops, shopping malls, recreation centres, etc.
- **Emergence of Residential Societies:** While earlier gated residential societies were looked up as the **preferred housing model** for the upper classes, with the emergence of the middle class, it has percolated even to the tier II cities.

Social

- **Better Socio-Economic Outcomes:** Researches have established that higher share of middle class creates better institutions which in turn lead to better socioeconomic outcomes.
- **Foster Social Values:** There exists a **positive feedback relationship between values and economic growth** as when the wealth increases, individuals tend to be more likely to hold democratic values, emphasize free speech, de-emphasize religion, and care more about the environment.

Challenges faced by the Middle-Income Classes in India

- **Rising Inflation:** The privatization of healthcare and education has made quality services expensive, straining middle-class finances.
- **Unemployment:** The high levels of unemployment or underemployment leads to **financial insecurity** and a lack of **stable income.**
- **Stagnant Wage Growth:** Despite economic growth, middle-class salaries are not rising proportionately, affecting their purchasing power.
- **Technology Threat:** The automation of jobs is displacing many middle-class professionals, particularly in banking, IT, and manufacturing sectors.
- **Taxation and Insufficient Social Security:** Despite being the primary taxpayer group, the MIC receives limited tax incentives and social benefits compared to lower-income groups.
- **Debt Burden:** To meet lifestyle aspirations, the MIC often resorts to consumer loans and credit card debts, increasing their financial vulnerability.
  - In FY23, India's **household debt has reached 38% of GDP**, reflecting a growing trend in household leverage (CareEdge report).
- **Social Constructs:** Like patriarchal attitudes often affect middle-class women in professional settings, limiting their career growth.

Reasons for the Neglect of Middle Class in India

- **Self-Sustaining Trait:** There is a misconception that the middle class is self-sustaining and not require government support, despite facing increasing pressure from indirect taxes, inflation, etc.

- **Heterogenous Composition:** This segment comprises of populace from various sections like public sector employees, unorganised workers like carpenters, gig workers, etc., making it difficult to design a particular incentive for them.
    - Middle class usually do not organize into pressure group and are less ideologically driven, even political leaders emerging amongst them have lack of focus on them.
- **Lower Political Participation:** Lower voter turnout among the middle class is the primary reason for them being politically and economically overlooked.
- **Limited Representation in Policy-Making:** Middle-class concerns are underrepresented in policymaking bodies, which are often dominated by business lobbies or rural-centric agendas.

Conclusion

Empowering the middle class requires a multifaceted approach, including tax benefits, affordable housing, and strengthened labour market policies. A comprehensive, stakeholder-driven action plan is essential to address their vulnerabilities, enhance financial security, and promote sustainable growth, ensuring their continued contribution to the economy and society.

6.2. THREE-LANGUAGE FORMULA

Why in the news?

In some states there have been opposition of National Education Policy (NEP) 2020's three-language formula.

About NEP and Three Language Formula

- **NEP 2020 Policy:** Requires students **to learn three languages, with at least two being Indian.**
- **Changes from Past Policies:** Unlike the NEP 1968, which mandated Hindi, English, and a regional language, NEP 2020 allows flexibility in language selection.
- **Regional Flexibility:** States and students can choose languages, promoting multilingualism while respecting cultural and regional diversity.

Evolution of Three Language Formula Policy

- **Article 351 of the Constitution:** Makes the **Union duty bound to promote** the spread of the **Hindi language.**
- **Kothari Commission (1964-66):** It first proposed the **three-language formula, which** was later adopted in the National Policy on Education (1968).
- **National Education Policy (NEP), 1968:** Observed use of regional languages at the primary and secondary stages, and called to adopt the same at the university stage as well.
- **1992 Programme of Action:** Mother tongue/ regional language should be the medium of communication at the pre-school level
- **Right to Education Act, 2009:** As far as possible, the medium of instruction in school should be the child's mother tongue.
- **National Education Policy (NEP),2020:** Advocates for utilising the home language, mother tongue, local language, or regional language as the medium of instruction at least until Grade 5, but preferably extending till Grade 8 and beyond.

Advantages of Three Language Formula

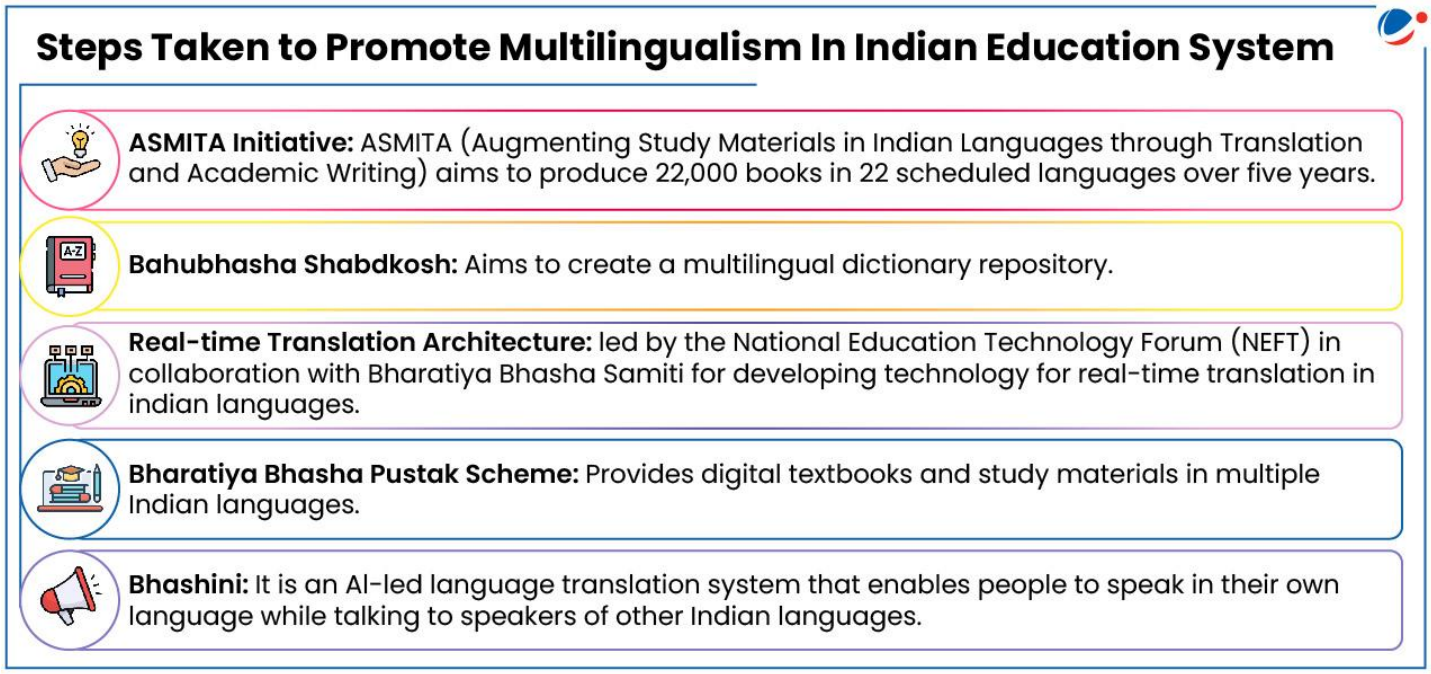
According to **UNESCO's latest report Languages Matter: Global Guidance on Multilingual Education**, multilingual education

- **Enhances Access and Inclusion**
    - **Wider educational access**: Helps children from diverse linguistic backgrounds learn in a language they understand.
    - **Parental engagement**: Learning in native languages boosts parental involvement in education.
    - **Inclusion of marginalized groups**: Respects and integrates linguistic and cultural diversity in education.

- **Improves Learning Outcomes**
  - **Nurturing Socio-emotional growth:** Multilingual education helps children express themselves better and understand diverse perspectives.
  - **Better academic performance:** Research shows multilingual students excel in other subjects due to enhanced cognitive abilities.
- **Supports Sustainable Development**
  - **Cultural preservation**: Protects languages and traditions for future generations.
  - **Economic benefits**: E.g. Switzerland attributes 10% of its GDP to its multilingual heritage.
  - **Social harmony**: Encourages understanding and tolerance between linguistic and cultural groups.
  - **Environmental protection**: Indigenous languages preserve traditional knowledge and sustainable practices.
- **Facilitates National Integration**
  - **Effective communication**: Helps students interact across regions.
  - **Unity in diversity**: Promotes respect for different cultures and languages, strengthening national identity.

Arguments Against Three-Language Formula

- **Politicisation:** Language is a politically sensitive issues in many part of the world. Multilingual education could be used as a tool to **mobilise people in spirit of the 'sons of the soil'** which may hamper national integrity.
  - **Sons of the soil** are **culturally dominant in their region** but a **minority in the country**. They feel **threatened by migrants** from the majority culture settling in their homeland.
- **Language Learning Should be a Choice**: Adults can learn languages based on their profession and other needs, making compulsory school language policies unnecessary.
- **Struggles in Primary Education:** Many students in India lack basic literacy. Adding a third language could overburden an already strained education system.
  - Additionally, Children from monolingual homes may find multilingual education confusing and stressful.
- **Shortage of Qualified Teachers**: Shortage of teachers for 2nd and 3rd language could divert funds from more pressing educational needs like infrastructure for faculty training.
- **Challenges for Linguistically Diverse States**: States like Nagaland, with multiple languages and limited resources, may struggle to implement a three language formula.
- **Execution difficulties**: For example, Haryana introduced Tamil but faced difficulties.
- **Technology Reduces Barrier:** AI tools like Google Gemini provide instant translations, **making language proficiency less necessary.**



Way Forward for Effective Implementation of Three Language Formula

- **Prioritizing Education Quality**: Focus on improving teaching quality and learning outcomes rather than adding more languages.
- **Strengthening Cooperative Federalism**: Encourage dialogue between the Centre and States to ensure smooth NEP 2020 implementation and avoid funding delays.
- **Aligning with UNESCO's Multilingual Education Guidance**
  - **Data-Driven Policy**: Collect sociolinguistic and educational data for effective planning.
  - **Learning Materials & Assessments**: Develop resources in learners' languages and adapt assessments.
  - **Qualified Teachers**: Train educators fluent in both the mother tongue and official language.
  - **Community Engagement**: Involve parents, caregivers, and Indigenous groups in designing effective multilingual programs.

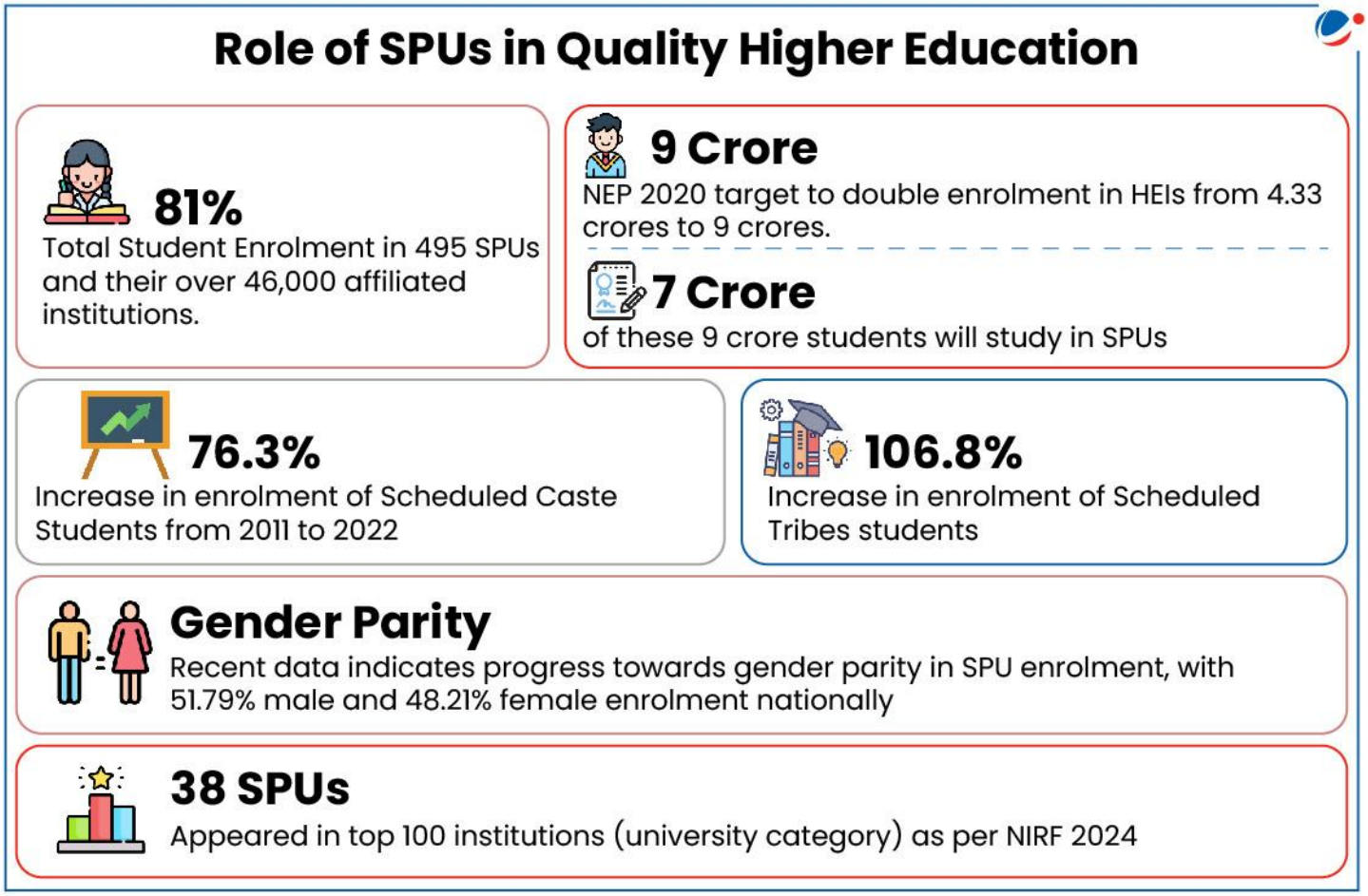
6.3. QUALITY HIGHER EDUCATION IN INDIA

Why in the News?

NITI Aayog launched a policy report titled 'Expanding Quality Higher Education through States and State Public Universities'.

State Public Universities

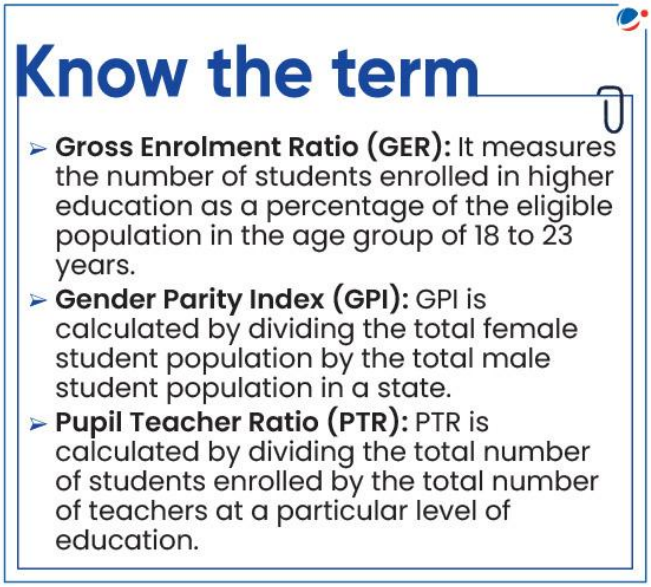
Universities established or incorporated by a Provincial Act or by a State Act, and funded by the State Government are called State Public Universities (SPUs).



Scenario of Higher Education in India

According to AISHE Report 2021-2022

- **Access & Enrolment**
  - **Institutions:** There were **1,168 universities**, 45,473 colleges and 12,002 stand-alone institutions in the country.
  - **Student Enrolment**: Over 4 crore students, making India the second-largest after China.
  - **Gross Enrolment Ratio (GER)**: Increased 71 times from **0.4 (1950-51)** to **28.4 (2021-22)**; National Education Policy (NEP) 2020 aims for **50% by 2035**.
  - **Gender Parity Index (GPI)**: Improved from **0.87 (2011-12)** to **1.01 (2021-22)** (improvement of 16%).
- **Quality & Research**
  - **Pupil-Teacher Ratio (PTR)**: Steady at **23:1** for the last five years.
  - **Research**: India's **global research share** grew from **3.5% (2017)** to **5.2% (2024)**, but higher education contributes only **10%** of total research output.
- **Funding:** Combined expenditure by the Centre and States (as % of GDP)**-**
  - **University & Higher Education**: 0.62%
  - **Technical Education**: 0.95%
  - **Overall Tertiary Education**: **1.57%** (outperformed most European nations, slightly behind the US & UK).



Key Challenges to Quality Higher Education in India

- **Inefficient Accreditation System:** After almost 35 years of the introduction of the NAAC accreditation system, **less than 39% of universities nationwide** have been accredited partly due to high costs of accreditation.
- **Financing Gap:** While India is **fourth globally in terms of overall tertiary education budget**, its **per capita government expenditure on tertiary education is only about US$30.**
  - This is lower than many emerging countries like Brazil (**2.6 times higher**) and most developed countries like the USA (**35 times higher)**.
- **Suboptimal Research**
  - There is **low expenditure on R&D by Government** (around 0.7% of GDP), and by HEIs resulting in lower innovation outcomes.
  - Researchers lack incentives such as funding, recognition, commercialisation of prototypes and career advancement opportunities. This results in **lack of quality PhD students** leading to faculty shortage.
- **Policy & Governance Issues**
  - **Multidisciplinary Education Gaps**: No strong framework for **MERUs** (Multidisciplinary Education & Research Universities) and lack of dedicated policies in areas such as technology implementation, AI, data privacy etc.
  - **University Tax Burden**: It impacts taxation on revenue of public universities, including CSR grants, and commercial rates for utilities, impacts their financial sustainability.
  - **Limited Autonomy**: HEIs face lack of administrative autonomy including the freedom to decide fee or curriculum, impacting decision-making and hindering innovation.
- **Regional Disparities:** According to AISHE Report 2021-2022-
  - **University Density (per 1 lakh eligible students)**: **Highest** in Sikkim (**10.3**), Arunachal Pradesh (**5.6**), Ladakh (**5.2**), etc.
    - In Bihar (**0.2**), UP (**0.3**), West Bengal & Maharashtra (**0.6**) the **density is below national average**
  - **GER: Southern states** including **Tamil Nadu** (highest at 47) Kerala, Telangana, Andhra Pradesh have **higher GER** while **Northern States** of Bihar, Jharkhand, Odisha and Uttar Pradesh have **low GERs.**
  - **GPI: Kerala has highest GPI of 1.44**, followed by Himachal Pradesh and Meghalaya, while **Odisha and Tripura have lowest** GPIs at 0.88 and 0.89 respectively.
  - **PTR**: **Better** in Tamil Nadu (**14**), Goa, Karnataka, Kerala leads with a higher PTR than national average whereas Bihar (**64**), Jharkhand, MP, Chhattisgarh have a lower PTR.

Key Initiatives for Quality Higher Education

- **Budget 2025-26 Announcements**
  - **10,000 Prime Minister's Research Fellows (PMRF)** selected
    - **PMRF Scheme** aimed to support India's brightest talents in doctoral research.
  - Addition of 6,500 seats **in second-generation IITs.**
  - **Bharatiya Bhasha textbook** scheme for regional language education
- **Assessment and Ranking:**
  - **National Assessment and Accreditation Council (NAAC):** NAAC was established in 1994 as an autonomous institution under the UGC and has established seven criteria for assessing HEIs and accrediting them.
  - **National Institutional Ranking Framework (NIRF):** NIRF, launched in 2015, provides a standardized methodology to rank HEIs across India.
- **Infrastructure Development**
  - **Higher Education Financing Agency (HEFA):** To **provide financing** for the creation of capital assets and state-of-the art infrastructure such as research labs, sports facilities in premier educational institutions.
  - **National Digital Education Architecture (NDEAR):** Launched in 2021, NDEAR established a comprehensive digital infrastructure for educational innovation.
  - **Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA):** Aimed at funding **specific state government universities and colleges**, so as to improve its quality.
- **R&D**
  - **Anusandhan National Research Foundation (ANRF):** To seed, grow and promote R&D throughout India's universities, colleges, research institutions, and R&D laboratories.
  - **Scheme for Promotion of Academic and Research Collaboration (SPARC):** To promote high-quality research by facilitating **partnerships between top-ranked Indian HEIs and globally recognized foreign institutions.**
  - **One Nation One Subscription (ONOS) Scheme:** To democratize access to high-quality scholarly research in India.
  - **Partnerships for Accelerated Innovation and Research (PAIR) Programme:** Launched by ANRF, institutions with **high NIRF ranking** (**Hubs) will guide emerging institutions (spokes) in** research activities, provide access to harness their resources and expertise.
- **Employability Facilitation**
  - **National Credit Framework (NCrF):** A comprehensive system introduced under NEP 2020 to **integrated academic learning with vocational and experiential education.**
  - **PM Internship Scheme:** Aims to **provide 1 crore internships over five years** to enhance employability and skill development.

Way Forward for Quality Higher Education

- **Funding and Financing:** Ensure **NEP-recommended budget allocation.** Use **Public-Private Partnerships (PPP) for infrastructure**, research & skill development.
  - For instance, **Telangana Academy for Skill and Knowledge (TASK)** was started as not-for-profit organization to bridge the industry-academia gap by offering quality human resources and services.
- **Improving Governance**: Shift to a **'regulatory-facilitator' model** for Public Universities and grant greater autonomy in areas like curriculum development, faculty recruitment, etc.
- **Improving infrastructure:** For Instance, **Odisha Higher Education Programme for Excellence and Equity (OHEPEE)** covered 850 colleges focusing on uplifting educational standards and infrastructure.
- **Improving Pedagogy:** Develop a framework for **evaluating teaching effectiveness and establish curriculum review committees** within each university.
- **Digitalization of Higher Education:** Establish dedicated digital learning centres, adopt digital platforms for student lifecycle management.
  - **Kerala's 'Let's Go Digital' Initiative** initiated digital learning initiatives through ICT-based teaching methods and digital course content.

- **Improving Research Quality**
  - **Policy Framework:** Develop and implement a National Research Policy framework in alignment with the ANRF.
  - **Capacity Building:** Develop capacity building programmes for faculty members and administrators.
    - For instance, **Maharashtra State Faculty Development Academy** was established to enhance faculty capabilities.
  - **Internationalization of Higher Education:** For instance, **GIFT City** in Gujarat allowed **world-class foreign universities** to establish campuses within its boundaries.
  - **Industry Academia Collaboration:** Establish **Industry Relations Cell (IRC)** in universities and utilize existing industry association platforms like CII, FICCI, ASSOCHAM, NASSCOM etc.
    - Establish **incubation centers or co-working spaces** to support student-led startups.

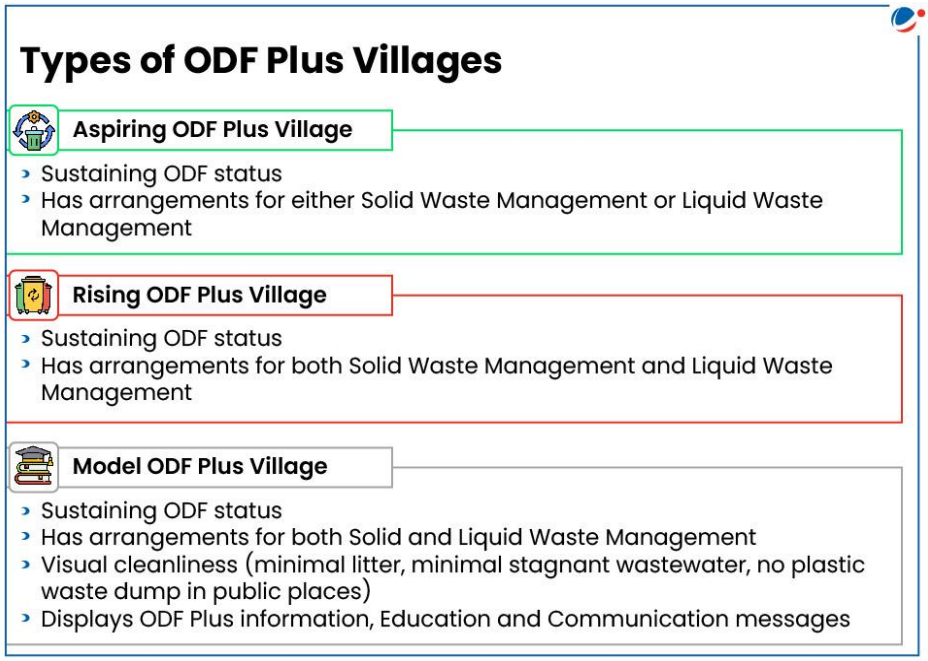
6.4. SWACHH BHARAT MISSION-GRAMEEN (SBM-G)

Why in the News?

The **Standing Committee on Water Resources** published a report analysing the implementation of Swachh Bharat Mission-Grameen.

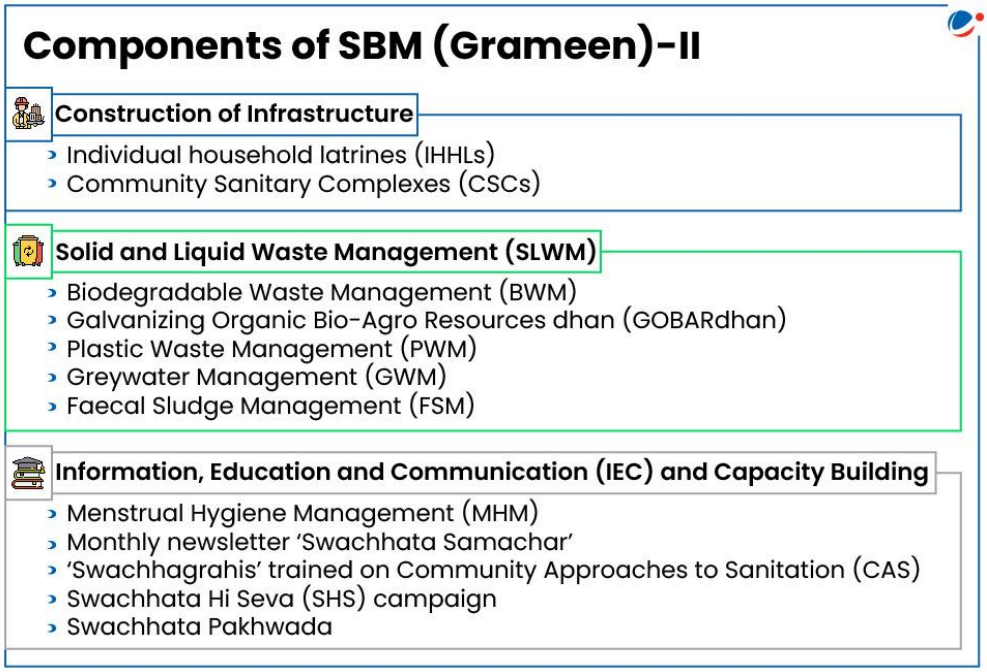
About Swachh Bharat Mission- Grameen

- A **centrally sponsored scheme,** launched in **2014** to achieve **comprehensive sanitation coverage in rural areas.**
- **Objectives of SBM-G:**
  - **Phase-I (2014-2019):** To make the country **Open Defecation Free (ODF)** by October 2, 2019, the 150th birth anniversary of **Mahatma Gandhi,** by providing **access to toilets** to all the **rural households**.
  - **Phase-II (2019-2025):** Launched in **2020** to ensure **Sampoorn Swachhata,** that is, no one is left behind in their pursuit for having **Individual Household Toilets** and proper **waste management systems,** making villages **ODF Plus Model.**
    - **ODF Plus Model** includes: -
      - ✓ ODF Sustainability
      - ✓ Solid Waste Management
      - ✓ Liquid Waste Management
      - ✓ Visual Cleanliness



- **Key features**
  - **Funding pattern:**
    - **60:40** between Centre and States for all components
    - **90:10** in case of North Eastern States and Himachal Pradesh, Uttarakhand and UT of Jammu & Kashmir
    - **Other UTs:** 100% share is borne by Centre.
  - **Incentive of Rs.12000/-:** For construction of individual household latrine (IHHL) for all BPL households and identified Above Poverty Line (APL) household (SC/ST households, households with physically disabled person, landless labourers with homestead, small and marginal farmers and women headed households)
  - **Jan Aandolan model:** It is considered as the **largest mass movement** and **behavioral change programme** in the world.
  - **Swachh Survekshan Grammen (SSG)**: A **yearly** survey conducted through a **third-party survey agency.**
  - **Swachhata Hi Seva (SHS) 2024 campaign**: To reignite the spirit of collective action and citizen participation in cleanliness efforts across India.

Progress and Achievements



- **Impact of Phase-I**
  - By October **2019**, **all villages** across the country in **all 36 States/UTs** declared themselves **ODF**.
  - **Rural sanitation coverage**: Increased from **39% in 2014 to 100% in 2019.**
  - **Health: SBM helped avoid 3 lakh** diarrheal deaths in 2019 compared to 2014. (WHO)
  - **Nutrition and productivity:** Cases of wasting among children are 58% higher in non-ODF areas (The Bill & Melinda Gates Foundation).
  - **Safety and dignity of women:** 93% women feel safer after getting a toilet at home. (UNICEF)
  - **Savings in health expenditure:** An average of ₹50,000 was being saved every year by families in ODF villages, due to health costs avoided. (UNICEF)
- **Achievements of Phase-II**
  - **5,57,468** villages out of **5,87,529** villages **(~95%)** have been declared **ODF Plus**.
  - According to the **SBM-G Dashboard** (March, 2025):
    - **ODF-Plus Model States / UTs**: Sikkim and Lakshadweep
    - **ODF-Plus States / UTs**: Ladakh
    - More than **5 lakh villages** have arrangements for both **Solid and Liquid Waste Management.**

Challenges in Implementation (Standing Committee on Water Resources)

- **Underperformance**: Slow Progress during last 5 years hinders achieving targets-
  - Only **35%** and **57%** targets were achieved in **SWM (Solid Waste Management) and LWM (Liquid Waste Management)** respectively.
  - Only **56%** targets in respect of **ODF Plus (Model) villages** achieved.
  - Only **31%** and **8%** targets were achieved in **Individual Household Latrines (IHHLs)** and **Community Sanitary Complexes (CSCs)** respectively.
- **Underutilization of allocated funds**: Only **19.61%** of the allocated budget is utilized in the current FY 2024-25.
- **Reliance on Extra Budgetary Resources (EBR):** Substantial portion of the budgetary allocation (9-17%) had been spent on **payment of interest on EBR** during the last 5 years thereby reducing the availability of funds for **effective utilization**.
- **Inadequate incentive**: The BPL section is given an incentive of **₹12,000** for construction of IHHL which is found to be **inadequate** as it is based on 2014 assessment.
- **Functional Assessment:** SSG-2023 has issues like- inadequate scale (small sampling), doubtful credibility of the third-party survey agency and the methodology used etc.
- **Regional disparity**: States/UTs like Manipur, Meghalaya, Jharkhand, Punjab and Nagaland are **lagging** behind in achieving SWM saturation.
- **Others**: Insufficient availability of **vehicles for Sanitation services** in States/UTs; Low coverage of blocks with Plastic Waste Management Units (PWMUs); Lack of a new baseline survey to identify the leftout households etc.

Recommendations (Standing Committee on Water Resources)

- **Fast-track implementation through coordinated efforts** with States/UTs needed to identify and address issues faced in achieving Mission goals.

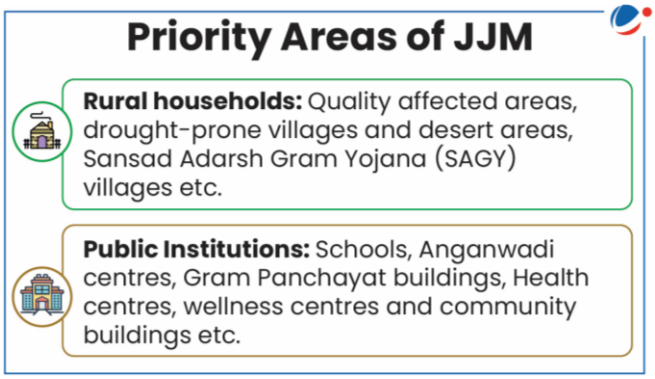
- **Fully utilize the allocated budget** in a time-bound manner and prepare a **road map for prudent utilization/release of funds.**
  - **Avoid raising funds through EBR** as it leads to payment of substantial interest.
- **Reviewing and revising the incentive for IHHLs** based on present rate of inflation.
- **Devise Comprehensive monitoring mechanism** to accurately assess the functionality of key ODF Plus parameters.
- **Improve Solid and Plastic Waste Management** by augmenting activities like increasing number of sanitation vehicles, development of forward linkage for plastic waste management and increasing number of functional PWMUs.

6.5. JAL JEEVAN MISSION

Why in the News?

Jal Jeevan Mission (JJM) was extended **till 2028** with an **enhanced outlay** during the Union **Budget 2025**.

About Jal Jeevan Mission (JJM)



- Launched in **2019** by restructuring and subsuming **National Rural Drinking Water Programme (NRDWP)**.
  - At inception, it aimed at providing **additional ~16 crore** rural households with tap water **by 2024**.
- **Aim**: **'Har Ghar Jal (HGJ)'** i.e. to provide-
  - **Functional Household Tap Connection (FHTC)** to every **rural household**
  - **ensuring adequate quantity** (minimum service level of 55 litres per capita per day (lpcd)) of prescribed **quality** (as per Bureau of Indian Standards)
  - on **regular and long-term basis**
  - at **affordable charges.**
- **Nodal Ministry:** Department of Drinking Water and Sanitation, Ministry of Jal Shakti.
- **Funding pattern**: Centrally Sponsored Scheme (Centre and State)
  - 90:10 for Himalayan and North-Eastern States.
  - 100% for UTs.
  - 50:50 for rest of the States.
- **Key Features of the scheme:**
  - **Shift of focus for water supply:** From **'habitations to households'.**
  - **Decentralized, demand-driven, community-managed water supply programme.**
    - **Gram Panchayat or its sub-committee** comprising of user groups plays the role of a **'public utility'**.
    - At least 5 persons in every village, preferably women, are **trained on using Field Test Kits (FTKs)** for testing of water quality at village level.
  - **Jal Jeevan Survekshan (JJS)**: Launched in **2022** to assess districts and States/UTs on their performance in achieving the objectives of the JJM.
  - **Central role of women and weaker sections**: **Minimum 50%** members of Village Water & Sanitation Committee (VWSC)/ Pani Samitis are to be **women** and proportionate representation of weaker sections of society.
  - **Technological interventions**: **JJM–IMIS,** real-time Dashboard, geo-tagging of assets, sensor-based IoT solutions for water supply measurement, **JJM - Water Quality Management Information System (JJM - WQMIS)** etc.
  - **Awareness generation and involvement of stakeholders: Janandolan** for water, and encouraging contribution in cash, kind and/or labour and voluntary labour **(shramdaan).**

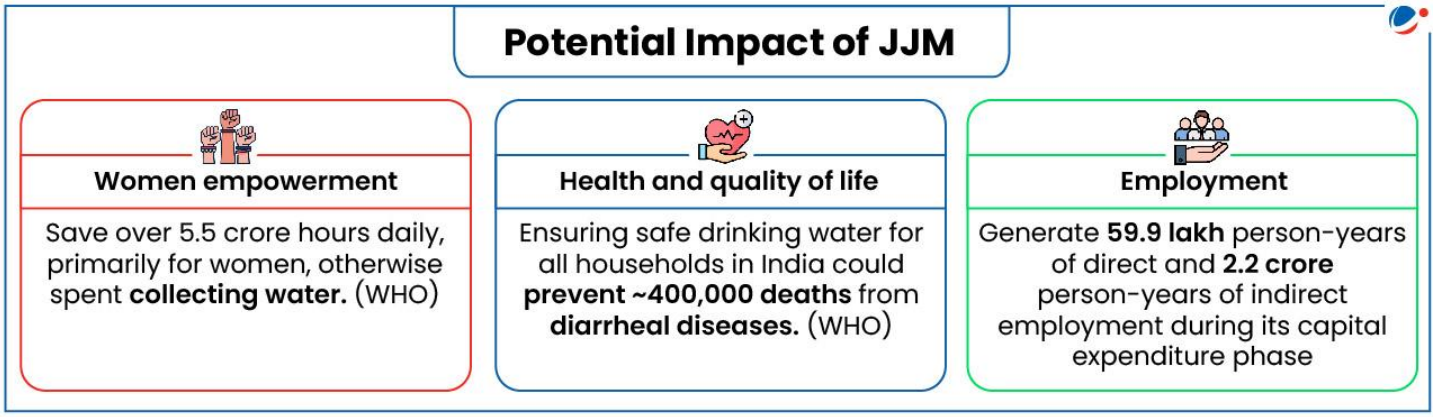
To know more about importance of community participation in water conservation, refer to Article 5.1. Jal Hi Amrit in October 2024 2024 Monthly Current Affairs Magazine.

Progress and Achievements

- **11 States/UTs** have provided tap water connection to all rural households **(100%).**
  - **HGJ Reported States/ UTs** (confirmed by State/UT Water Supply Department): **Mizoram, Himachal Pradesh, Gujarat, Telangana.**

- **HGJ Certified States/ UTs** (Resolution passed by Gram
- Sabha ascertaining claims of Water Supply Department): **Goa, Puducherry, Arunachal Pradesh, Punjab, Haryana, A &N Islands, Dadra Nagar Haveli & Daman Diu**

- **Addition of 75.89% connections** since the launch of the mission.
  - Households with tap water connections increased from **3.23 crore (17%) of rural households** in 2019 to **15.44 crore (79.74%)** in February 2025.
- **9,32,440 schools and 9,69,585 Anganwadi centres** have tap water supply.



Challenges in Implementation (Standing Committee on Water Resources (2024-25) Report)

- **Under-utilization of Funds**: Only **30.72%** of the funds allocated for the current **FY 2024-25** have been **utilized**.
- **Slow rate of saturation in achieving HGJ Status**: Only **11 States/UTs** have achieved **HGJ status** due to **issues** like-
  - **Long gestation period** of Multi Village Schemes.
  - **Lack of dependable groundwater sources** in drought-prone & desert areas, geogenic contamination.
  - **Terrain challenges** in hilly & forested areas.
  - **Lack of financial and technical capabilities** in the States.
  - **Delay in clearances** from nodal agencies, etc.
- **Lack of a comprehensive operation and maintenance (O&M) Policy**: The **responsibility** for O&M policies is shifted to the **states**; only **12 State/UTs** have notified **O&M Policies** for sustainability of rural water infrastructure.
  - Issues faced by States include lack of institutional and technical capacity, financial constraints and coordination challenges.
- **Insufficient Water Quality Testing Laboratories (WQTL):** Presently, only **2160 WQTLs present for ~5.86 lakh villages**.
  - Further not all labs have accreditation by NABL (National Accreditation Board for Testing and Calibration Laboratories).
- **Low focus on water sustainability**: Presently, major sources for water under JJM are **52% Ground water and 48% Surface water.**

Recommendations (Standing Committee on Water Resources (2024-25) Report)

- **Expediting the utilization of funds for implementation of JJM** in a time-bound manner with centre-state coordination.
- **Provide pro-active assistance to under-performing States**.
- **Involve local elected representatives** in the **Apex Committee of the State Water and Sanitation Mission.**
- **Provide assistance to States/UTs in notifying their O&M policy** at the earliest.
- **Increase number of WQTLs in rural areas** and prepare time-bound Plan for NABL accreditation of existing labs.
  - Further, **2% allocation** to States/UTs can be made mandatory for **Water Quality Monitoring and Surveillance (WQM&S)** by revising operational guidelines of JJM.
- **Formulate schemes/strategy for Water conservation** in rural areas.
  - E.g. revival and rejuvenation of traditional water bodies, desilting, rainwater harvesting and educating masses.

6.6. NEWS IN SHORTS

6.6.1. "IMAGINE A WORLD WITH MORE WOMEN IN SCIENCE" CAMPAIGN

UNESCO launched "Imagine A World With More Women In Science'' campaign.

- The campaign marks the 10th **anniversary** of **International Day of Women and Girls in Science** and highlights positive impact of diverse perspectives by using hashtag ***#EveryVoiceInScience***.
- **UNGA has in 2015 declared 11th February as International Day of Women and Girls in Science.**

Gender Gap in Science

- **Global:**
  - **Low Representation**: Women make up only **one-third** of the global scientific community
  - **Leadership Gap**: Just **1 in 10** STEM leadership roles are held by women.
- **India:**
  - Women constitute **43% enrolment in STEMM** (Science, Technology, Engineering, Mathematics & Medicine)
  - The number of **women scientists** is **18.6%, R&D projects** run by Women are **~25%.**

Challenges

- **Social & Cultural Norms** (restrictive gender roles), **Lack of role models (**few visible female leaders in science limits aspirations), **workplace inequality** (biased work cultures) etc.

Steps to be Taken

Parameters	Recommended actions
Dismantle Gender Stereotypes and biases in Science	Enhance visibility of women role models by: • Including more discoveries and stories from female scientists, with images in school textbooks • Ensure an **equitable representation of women on relevant boards, committees and panel**
Opening Educational Pathways for Girls in Science	Use of innovative and inspiring educational strategies and initiatives:- • Remove **gender bias and stereotypes from teaching and learning materials** • Encourage businesses to **implement corporate social responsibility** initiatives supporting women and girls in science
Creating Workplace Environments that Attracts, Retain and Advance Women Scientists	Adopt policies to **promote inclusion,diversity and equity at workplace:-** • Take **action against gender-based violence, including sexism and sexual harassment** • Promote women in leadership positions

6.5.2. SWAVALAMBINI

The Ministry of Skill Development and Entrepreneurship (MSDE), in collaboration with NITI Aayog launched Swavalambini.

About Swavalambini

- A Women Entrepreneurship Programme, initially introduced across Higher Education Institutions (HEIs) in Eastern regions has been now expanded to other regions of the country.

- **Implementation**: By National Institute for Entrepreneurship and Small Business Development (NIESBUD) in joint partnership with NITI Ayog.
- **Aim:** To establish a **structured and stage-wise entrepreneurial journey for young women**. The programme will take participants through various stages, including awareness-building, skill development, training, mentorship, policy support and funding support.
- It also provides **six months of mentorship and handholding support** to help participants translate their ideas into sustainable prospects.

6.6.3. ASER 2024 RELEASED BY NGO PRATHAM FOUNDATION

The Annual Status of Education Report (ASER) is a **nationwide rural household-based survey of children's schooling and learning status.**

- It tests the **schooling status** for children in the age group of **3-16,** and the **ability to read simple text** & **do basic arithmetic** in the age group of **5-16.**
- The ASER survey was conducted **annually** from 2005 till 2014. Thereafter, an **alternate-year cycle** was introduced.

Key Findings

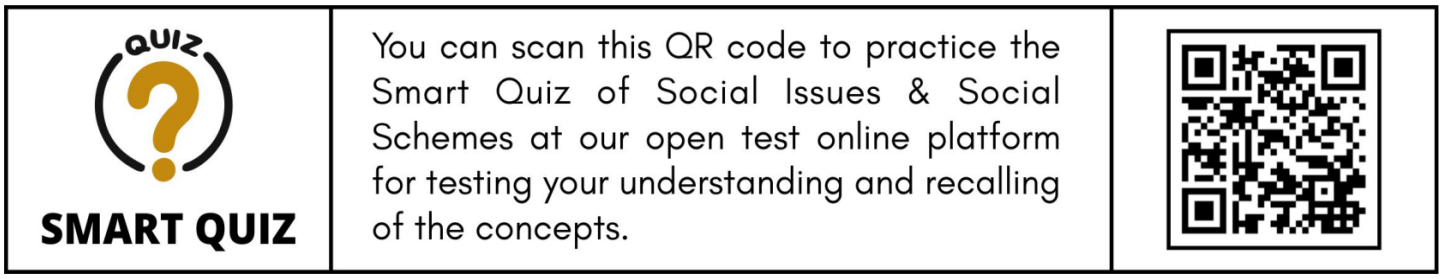
- **Reversing the Learning Gap: Improvements in basic reading and arithmetic** among students of classes 3 and 5 in rural areas **reverting back from the post-pandemic damage**.
  - **Improvement** in both **reading** & **arithmetic levels** for all elementary grades **(Std I-VIII)** since 2022 with **arithmetic** levels being **highest** over the decade.
- **Digital Literacy:** In 2024, for the **first time,** it includes a component of **'Digital Literacy'** among the age group **14-16.**
  - **Access to smartphones is close to universal**: Almost **90%** of both girls and boys report having a smartphone at home.
  - **Gender Gap in Smartphone Ownership:** 36.2% of boys own a smartphone compared to just 26.9% of girls.
  - **Smartphone Usage More for Social Media than Education:** Only 57% of teenagers use smart devices for educational purposes, while approximately 76% use them for social media.
- **School Infrastructure:** All Right to Education indicators in ASER show slight improvements, including **functional girls' toilets, drinking water facilities** etc.

6.6.4. WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL (WHO FCTC)

WHO marked 20 years of its first global treaty, the WHO FCTC.

About WHO FCTC

- **Genesis:** Adopted in **2003**, enforced in **2005**.
- **Purpose:** Provides a **legal framework for tobacco control** which includes **large pictorial health warnings, smoke-free laws, and higher taxes**.
- **India's Role**: Ratified in **2004**, served as **South-East Asia's regional coordinator**.
- **Impact**: **5.6 billion people** covered by at least one policy, contributing to **declining global smoking rates.**



7. SCIENCE AND TECHNOLOGY

7.1. NUCLEAR ENERGY MISSION

Why in the News?

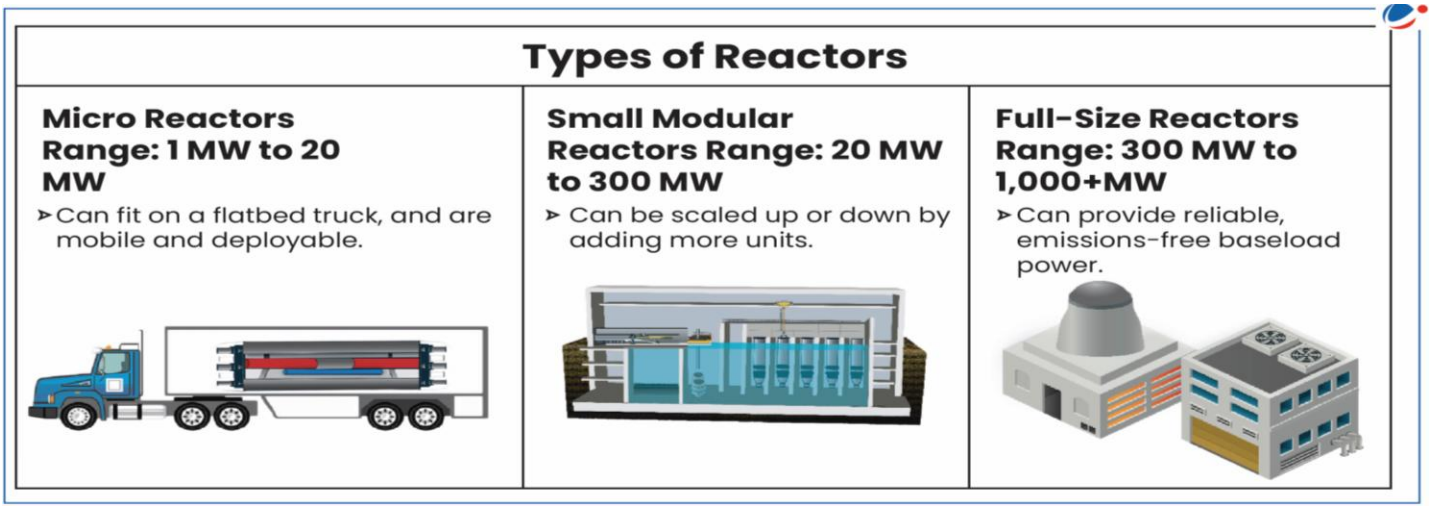
Union Finance Minister announced a dedicated Nuclear Energy Mission; one of the biggest moves to expand nuclear energy sector with an allocation of a 20,000 crore in the Union Budget 2025-26.

About the Nuclear Energy Mission

- **Target: To achieve 100 GW of nuclear power capacity by 2047,** aligning with its long-term energy transition strategy and broader **"Viksit Bharat"** vision.
  - India's installed nuclear energy capacity is **8180 MW as of January 30, 2025.** The government plans to increase this to **22,480 MW by 2031-32.**
- **Aim:** For research and development of **small modular reactors (SMRs),** and setting up of at least five SMRs by 2033.
- **Private Sector Participation:** Proposed changes to **the Atomic Energy Act, 1962,** and the **Civil Liability for Nuclear Damage Act, 2010**, aim to encourage private sector involvement in nuclear energy projects.
  - **Partnerships with the private sector with the motive of:** Setting up **Bharat Small Reactors (BSRs),** Research & development of **Bharat Small Modular Reactor**, and Research & development of **newer technologies** for nuclear energy.
  - In addition to BSRs, the **Bhabha Atomic Research Centre (BARC)** is developing **Small Modular Reactors (SMRs)** for **repurposing retiring coal-based power plants** and meeting power needs in **remote locations**.
- **Indigenous Technology Development**: The mission emphasizes the development of BSRs, which are compact 220 MW Pressurized Heavy Water Reactors (PHWRs) designed **for captive use.**
  - The **Department of Atomic Energy (DAE)** also plans to introduce **new nuclear reactors**, including high-temperature gas-cooled reactors for hydrogen co-generation and molten salt reactors aimed at utilizing India's abundant **thorium resources.**
- **Help in energy transition**: India's commitment to achieving **500 GW** of non-fossil fuel-based energy generation by **2030** and meeting **50%** of its energy requirements from **renewable energy** by **2030**, as pledged at the **COP26 Summit** in **Glasgow** in **2021**.

What are Small Modular Reactors (SMRs)?

- **Definition:** Small modular reactors (SMRs) are advanced nuclear reactors that have a power capacity of **up to 300 MW (e) per unit,** which is about one-third of the generating capacity of traditional nuclear power reactors. SMRs, which can produce a large amount of low-carbon electricity, are:
  - **Small**: Physically a fraction of the size of a conventional nuclear power reactor.
  - **Modular:** Making it possible for systems and components to be factory-assembled and transported as a unit to a location for installation.
  - **Reactors: Harnessing** nuclear fission to generate heat to produce energy.



Significance of SMR Nuclear Energy

- **Compact Architecture and Passive Safety**: There is less reliance on active safety systems and additional pumps, as well as AC power for accident mitigation.
  - **US based NuScale's SMR** design includes passive cooling systems that eliminate the need for external electricity during emergencies.
- **Flexibility in Applications:** SMRs can be used for diverse applications such as electricity generation, industrial heat supply, and desalination.
  - **South Korea's SMART (System-integrated Modular Advanced Reactor)** is designed for generating electricity (up to 100 MWe) and/or thermal applications such as seawater desalination.
- **Modularity for Factory Fabrication**: Major components of SMRs are factory-built, enabling higher quality standards and reducing construction time and costs.
  - **NuScale's SMR plant** can be assembled in modules at a factory and transported to the site, reducing overall space.
- **Potential for sub-grade (underground or underwater) location**: Reactor unit providing more protection from natural (*e.g.* seismic or tsunami according to the location) or man-made hazards.
  - For Example, Russia's **Akademik Lomonosov**, a floating nuclear power plant is designed to operate in remote Arctic regions.
- **Scalability:** The modular design and small size lends itself to having multiple units on the same site.
- **Portability:** Ability to remove reactor module or in-situ decommissioning at the end of the lifetime.

India's Civil Nuclear Deals

- **In September 2008, the Nuclear Suppliers Group (NSG)** adopted a policy decision allowing civil nuclear cooperation between its members and India.
- **Russia: The 2008 Inter-Governmental Agreement** established a framework for collaboration on constructing additional nuclear reactors at the Kudankulam Nuclear Power Plant (KKNPP).
- **United States:** 123 Agreement (2008) opened pathways for U.S. nuclear fuel and technology exports to India.
- **France: 2008 Civil Nuclear Agreement,** project is under discussion is the Jaitapur Nuclear Power Project.
- **Other countries are: Canada, South Korea, Japan (2016), The United Kingdom (2015) and Namibia, Argentina, Kazakhstan, the Czech Republic, Sri Lanka, European Union, Australia, Bangladesh,** Mongolia, Vietnam, **UAE,** and Ghana.

Some of the issues with SMRs

- **Private sector and profit orientation:** Private sector can be tempted to lower costs by cutting corners compromising safety and security. The Fukushima accident review has already resulted in new safety requirements for operating and new reactors.
- **Unreliability of passive safety features:** SMRs has passive safety which may not always work, especially during extreme events such as large earthquakes, major flooding etc.
  - **As per U.S. Nuclear Regulatory Commission review** of the NuScale design revealed that passive emergency systems could deplete cooling water of boron, which is needed to keep the reactor safely shut down after an accident.
- **Economic Viability**: The cost per kilowatt-hour of the electricity produced by a small reactor will be higher than that of a large reactor, all other factors being equal.
  - **For example,** a 1,100 MWe plant would cost only about three times as much to build as a 180 MWe version, but would generate six times the power.
- **Problem of what to do with radioactive waste:** In terms of the quantity of highly radioactive isotopes, small reactors will produce just as much as large reactors per unit of heat generated and will require same disposal arrangements.
- **No fuel efficiency than large reactors:** On contrary some SMRs require fuel called "high-assay low enriched uranium (HALEU)," with higher concentrations of the isotope uranium-235 than conventional light-water reactor fuel requiring cumbersome enrichment process.

Way forward

- **Universal Regulatory Frameworks:** Standardization and Licensing by regulatory frameworks to facilitate the deployment of SMRs across different countries.

- **Addressing Safety Concerns:** Engaging with the public to address safety and environmental concerns can improve acceptance and support for SMR projects.
- A comprehensive safety assessment methodology is required to ensure that the Systems, Structures and Components (SSCs) of SMRs.
- **Construction of FOAK (First of a kind) SMR demonstration units and learning:** Government can support projects in many forms, ranging from specific long-term power purchase agreements to cost-sharing mechanisms that can minimize construction risks so as to attract more investors.
- **Project specific Techno-Economic Assessment (TEA)**: It needs to be performed against a set of pre-defined criteria such as potential of the SMR towards emission free generation of electricity etc.
- **Safeguards by Design (SBD):** Consideration of Safeguards requirements during early stages of SMR designs in close interaction with IAEA, such that the implementation of Safeguards can be effective throughout the life cycle of SMR plant.
- **Innovative Financing Framework:** Availability of low-cost finance, green finance and incorporation of nuclear into green taxonomy can improve the economics of SMR projects.

7.2. DEEP OCEAN MISSION

Why in the News?

Recently, the fourth-generation deep-ocean submersible named **Matsya 6000** successfully completed its wet testing.

About MATSYA 6000

- **MATSYA 6000** is an **indigenously** built **manned submersible**, under the **Samudrayaan project (a project under the Deep Ocean Mission)**.
  - **Objective of Samudrayan Project (Period 2020-2021 to 2025-2026):** To develop a **self-propelled manned submersible to carry 3 human beings to a water depth of 6000 meters** in ocean with scientific tools for deep ocean exploration.
- Developed by **National Institute of Ocean Technol**ogy (**NIOT)**, it is designed to carry **three humans** to a **depth of 6000 m**.
  - **National Institute of Ocean Technology (NIOT)** Chennai is an **autonomous institute** under Ministry of Earth Sciences.
- **Aim:** To comprehensively study **deep-sea resources** and **marine biodiversity** assessment up to 6000 meter depth.
- With its launch, India will become **sixth country** (after **US**, **Russia**, **Japan**, **France**, and **China**) to have crewed under-sea expedition.

About Deep Ocean Mission

- **Launched:** In 2021 by Ministry of Earth Sciences (MoES) as a **Central Sector Scheme** with Cabinet approval.
- **Purpose:** To develop technologies for exploring deep ocean resources, promoting sustainable marine development, supporting the Blue Economy initiative, and addressing climate change and pollution.
- **Alignment with Global Goals:** Mission aligns with **United Nations Sustainable Development Goal 14 (SDG-14),** which emphasizes the protection of **"Life below Water"** and highlights ocean's role in sustaining life and the environment.
  - Considering importance of oceans on sustainability, UN has declared decade, 2021-2030 as **Decade of Ocean Science for Sustainable Development.**
- **Budget and Timeline:** Mission has an estimated budget of Rs.4077 crore, to be implemented over 5 years (2021-2026) in a phase-wise manner.
  - The first phase (2021-2024) is allocated Rs.2823.4 crore.
- **Nodal Ministry:** Ministry of Earth Sciences (MoES) is nodal ministry overseeing this multi-institutional mission.

Know the term

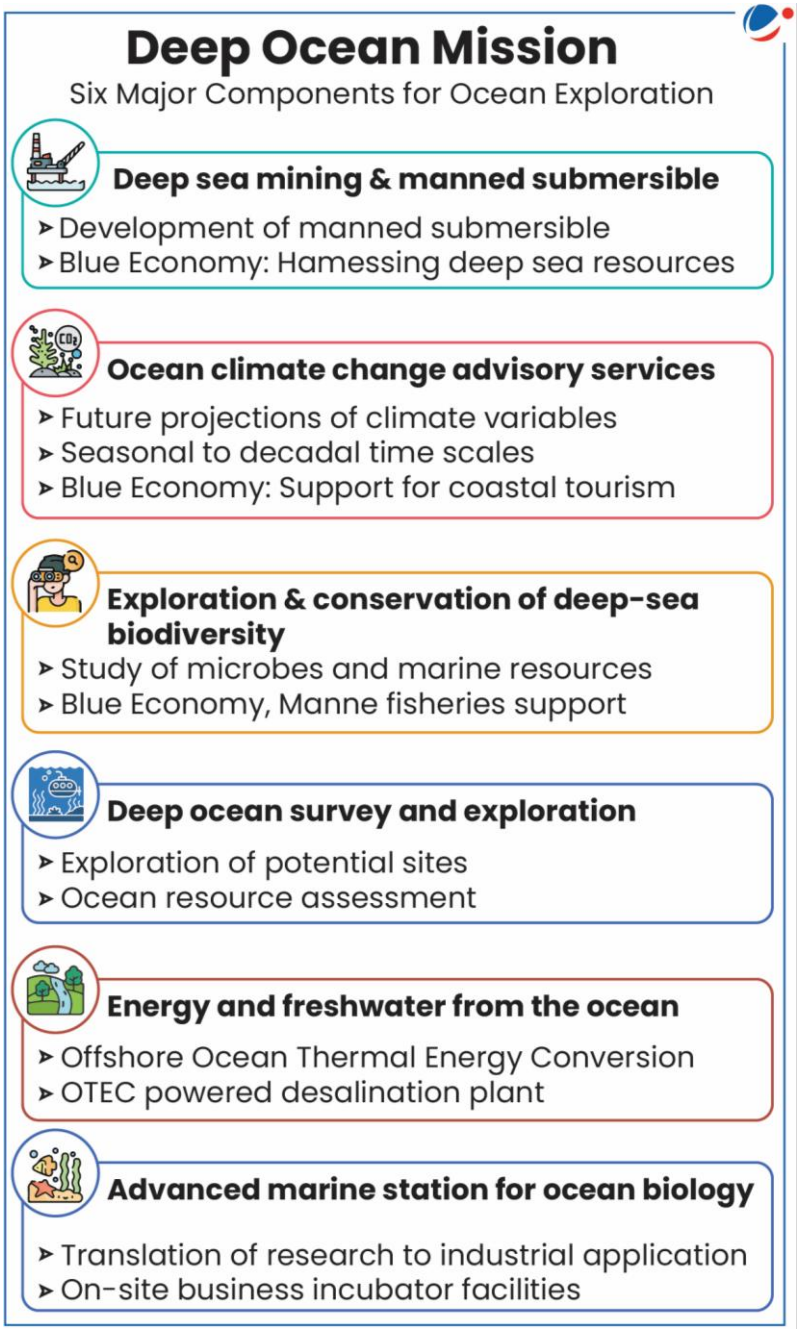
- **Exclusive Economic Zone (EEZ):** It can extend up to 200 nautical miles and coastal States do not have full sovereignty, but have sovereign rights and jurisdiction for exploitation, conservation and management of marine resources.

Significance of Deep Ocean Mission

- **Strategic Importance:** India's unique maritime position with a 7517 km coastline, nine coastal states, and 1,382 islands offers significant potential for marine resource utilization.
  - India has an **Exclusive Economic Zone** allocated nearly 23, 72,298 sq. km which is unexplored and unutilised.
  - Mission **supports the government's 'New India' vision**, which identifies **Blue Economy** as one of ten core dimensions of growth.
- **Economic Impact:** Aims to ensure the **sustainable utilization of ocean resources** for long-term economic benefits. It will contribute to GDP growth, improved livelihoods, and job creation.
  - Focuses on exploring resources like **nickel, cobalt,** and other minerals, including **polymetallic nodules.**
- **Science and Technology:** Facilitates **deep-sea exploration** through a manned submersible, enabling scientists to **observe and study unexplored deep-sea areas directly.**
  - **Underwater Engineering: Promotes innovation** in asset inspection, enhancing safety and maintenance in marine infrastructure.
- **Ocean Literacy and Tourism:** Encourages **public awareness** about marine ecosystems and **opens avenues for marine tourism.**

Do you know

- India has been allotted a site of 75,000 sq. km. in **Central Indian Ocean Basin (CIOB) by UN International Sea Bed Authority** for the exploitation of polymetallic nodules.
- Just utilizing 10% of the PMN reserve available in the area, country can meet its **energy requirements for the next 100 years.**



Challenges of Deep Ocean Mission

- **High Pressure: At a depth of 5,000 meters, pressure will be approximately 500 times greater than pressure at sea level.** Thus the mission requires specially designed, durable equipment to withstand immense pressure.
- **Technical Challenges:**
  - **Equipment Vulnerability:** Electronics and instruments struggle to function efficiently underwater.
  - **Material Extraction:** Requires significant power to pump materials from the ocean floor to the surface.
  - **Communication Limitation:** Communication systems face challenges due to waves backscattering, high attenuation etc.
- **Geopolitical and strategic challenge:** China's increased presence in deep-sea regions could restrict India's exploration efforts, especially in resource-rich zones like the Southwest Indian Ocean.

Way Forward

- **Accelerating Indigenous Capabilities:** Investing in additional ocean research vessels and acoustic research systems will boost India's self-reliance in deep-sea exploration.
- **Leveraging International Cooperation:** India should actively collaborate with technologically advanced nations such as **US**, **Japan**, and **Australia** to enhance expertise, resource-sharing, and technology transfer.
  - Platforms like **Quadrilateral Security Dialogue (Quad)** can facilitate coordinated efforts in deep-sea research and mining.
- **Utilizing Indo-Pacific Oceans' Initiative (IPOI):** India should focus on IPOI's four key pillars i.e., **Maritime Ecology, Maritime Resources, Capacity Building, and Science & Technology Cooperation** to strengthen deep-sea exploration strategies.

7.3. NON-COMMUNICABLE DISEASES (NCD)

Why in the News?

The Ministry of Health & Family Welfare launched the Intensified Special NCD Screening Drive.

About Screen Drive on NCD

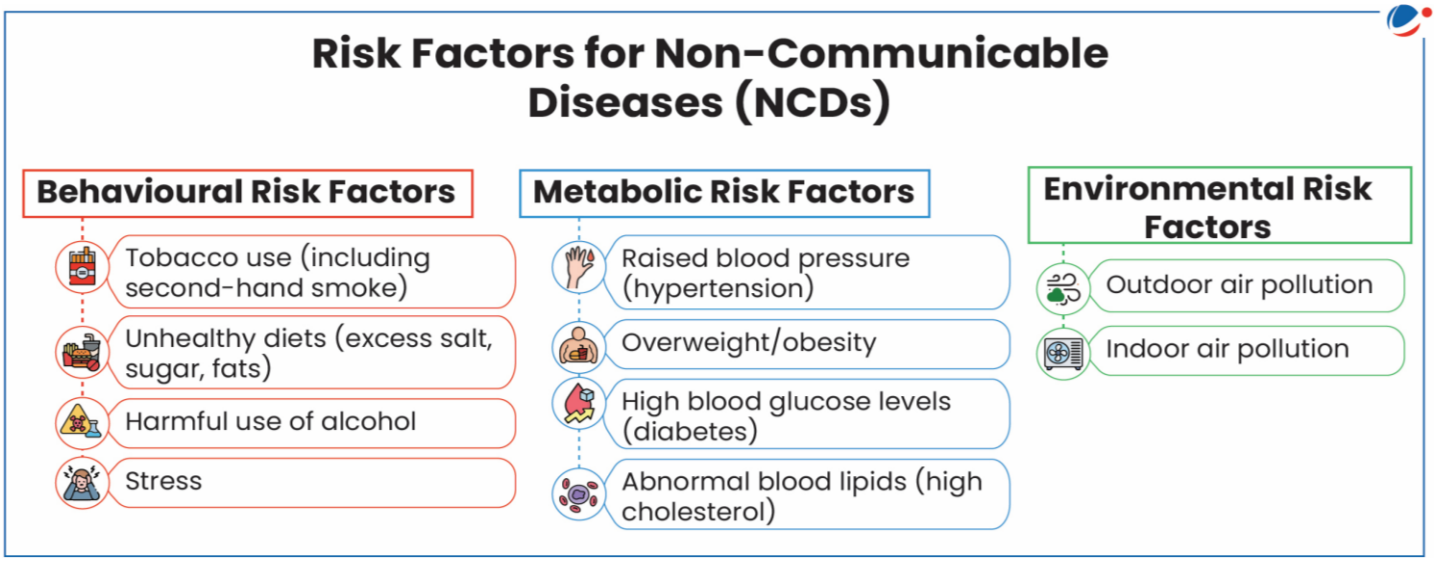
- **Aim:** To achieve **100% screening of all individuals aged 30 years and above** for prevalent NCDs and three common cancers—Oral, Breast, and Cervical.
- **Implementation:** Through **Ayushman Arogya Mandirs (AAMs)** and various healthcare facilities nationwide, under **National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD).**
  - **Ayushman Arogya Mandirs** are established under **Ayushman Bharat initiative** by upgrading existing Rural and Urban PHCs/Sub Centers.

About NP-NCD:

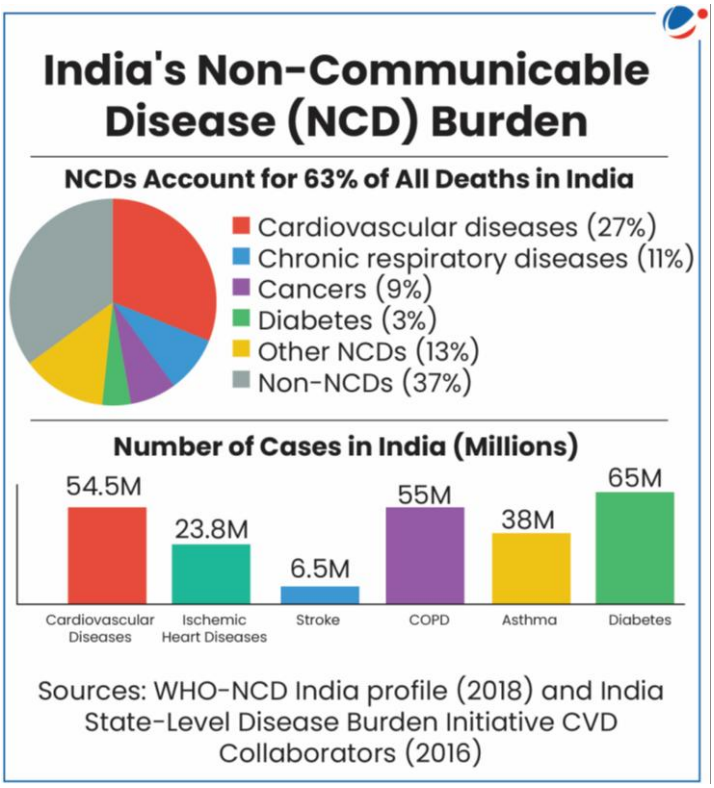
- **Background:**
  - **Launch:** NP-NCD, formerly known as **National Programme for Prevention and Control of Cancer, Diabetes, Cardio- vascular Diseases and Stroke (NPCDCS) was launched in 2010** across 100 districts in 21 states to combat NCDs as part of **11th Five Year Plan.**
  - **12th Five Year Plan:** Proposed phased expansion to cover all districts.
  - **2013-14:** Subsumed under **National Health Mission (NHM)** which is a **flagship centrally sponsored scheme** to achieve **universal access to affordable and quality health care services**?
- **Objectives of NP-NCD:**
  - **Health promotion through behavior change** with involvement of community, civil society, media etc.
  - **Screening, early diagnosis, management and follow-up** at each level to ensure continuum of care.
  - **Capacity building**, **Strengthening supply chain management** for drugs, equipment and logistics, Monitoring and evaluation through a uniform ICT application.

About Non Communicable Diseases (NCDs)

- **NCDs** are **chronic diseases that are not transmissible** from one person to another.
- Main types of NCDs are **Cardiovascular Diseases** (such as heart attacks and Stroke), **cancers, chronic respiratory diseases** (such as chronic obstructive pulmonary disease and asthma) and **diabetes.**
  - When these are caused by an unhealthy lifestyle, these diseases are also called **lifestyle diseases.**
- NCDs tend to be of **long duration** and are the result of a combination of **genetic, physiological, environmental and behavioral risk factors.**



- **Burden of NCDs**
  - **Global Scenario:**
    - > NCDs are number 1 cause of death and disability worldwide, accounting for **74% of all deaths** and more than **three out of four years lived with a disability.**
    - > **Burden is greatest within low- and middle-income countries,** where 77 percent of all NCD deaths occurred.
    - > **Four top killers** that together account for more than 80% of all premature NCD deaths annually **include cardiovascular diseases (17·9 million), cancers (9.3 million), chronic respiratory diseases (4.1 million), and diabetes (2.0 million).**
  - **Indian Scenario** (Please refer Infographic)



Impact of NCDs:

- **NCDs in childhood:** Causes about 1.2–4.2 fewer years of completed education.
- **Higher out of pocket medical expenditure:** Overall, travel costs are the primary out-of-pocket expense for many Indian patients with NCDs.
- **Life expectancy:** Life expectancy is lowest at the age of 15 among **lowest education groups** due to higher death rates during 30–69 years from NCDs.
- **Economic impact:** WHO projects the economic burden of NCDs (E.g. Household health expenditure, Budget expenditure etc.) in India to surpass ₹280 lakh crore by 2030.
- **Poverty:** The rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries, particularly by increasing household costs associated with health care.
- **Gendered Impact:** The prevalence of NCDs among women is 62 per 1,000, as compared to 36 per 1,000 men.
- **Other Impact:** Low human capital, unhealthy labor force, revenue loss, etc.

- **Initiatives for Controlling NCDs**
  - **Global**
    - > **2030 Agenda for Sustainable Development: SDG target 3.4** aims to reduce premature NCD mortality by **one-third by 2030.**

- **WHO Global Action Plan:** World Health Assembly extended the **WHO Global action plan** for the **prevention and control of NCDs 2013–2020** to 2030.
- **Global NCD Compact 2020–2030:** By WHO aims to accelerate progress on the prevention and control of NCDs.

- **Indian:**
  - **Affordable Medicines and Reliable Implants for Treatment (AMRIT)** aims to provide affordable medicines for the treatment of cancer, cardiovascular diseases etc.
  - **Eat Right India movement by FSSAI** promotes healthy eating.
  - **Fit India Movement:** Launched in 2019 aims to promote a physically active lifestyle and make fitness an integral part of daily life in India.
  - **National Oral Health Programme:** Launched to provide integrated, comprehensive oral health care in the existing healthcare facilities.
  - **National Mental Health Programme (NMHP):** Launched in **1982** to ensure **availability and accessibility of minimum mental healthcare for all** in the foreseeable future.
  - **National Programme for healthcare of Elderly (NPHCE):** It was launched in **2010** to **address various health related problems of elderly people.**
  - **National Tobacco Control Programme (NTCP):** Launched in **2007-08** for creating awareness about tharmful effects of tobacco consumption; reduce production and supply of tobacco products etc.

Recommendations for Prevention and Control of NCDs:

- **Comprehensive Approach:** To lessen the impact of NCDs **collaboration across sectors like health, finance, transport, education, and agriculture is crucial.**
- **NCD Management:** Investing in better management of NCDs is critical. It includes **detection, screening, treatment, and palliative care, ideally through primary healthcare** for early intervention.
- **Digital Health Interventions (DHIs):** An additional US$0.24 per patient per year in DHIs, including telemedicine, mobile messaging, and chatbots, could Save over 2 million lives from NCDs over next decade.
- **Leveraging fiscal tools:** To reduce risk factors **e.g.** raising taxes on tobacco, Salt, sugar etc.
- **Life-course approach to NCDs:** Prevention and Management of NCDs along with other policy reforms like labor markets, social protection and long-term care.
- **Policy Efforts:** Increased government expenditure, encouraging private sector investments to address issue of regional imbalance in availability of human resources & infrastructure for treatment of chronic NCDs.

7.4. NEWS IN SHORTS

7.4.1. EU AI ACT BECOMES APPLICABLE

Rules on **AI Literacy and Prohibited Systems Under the European Union AI Act** became applicable.

- Under the new **AI literacy obligations**, providers and deployers will be required to ensure a **sufficient level of AI literacy for their staff** and other **persons working with AI systems.**

About European Union AI Act

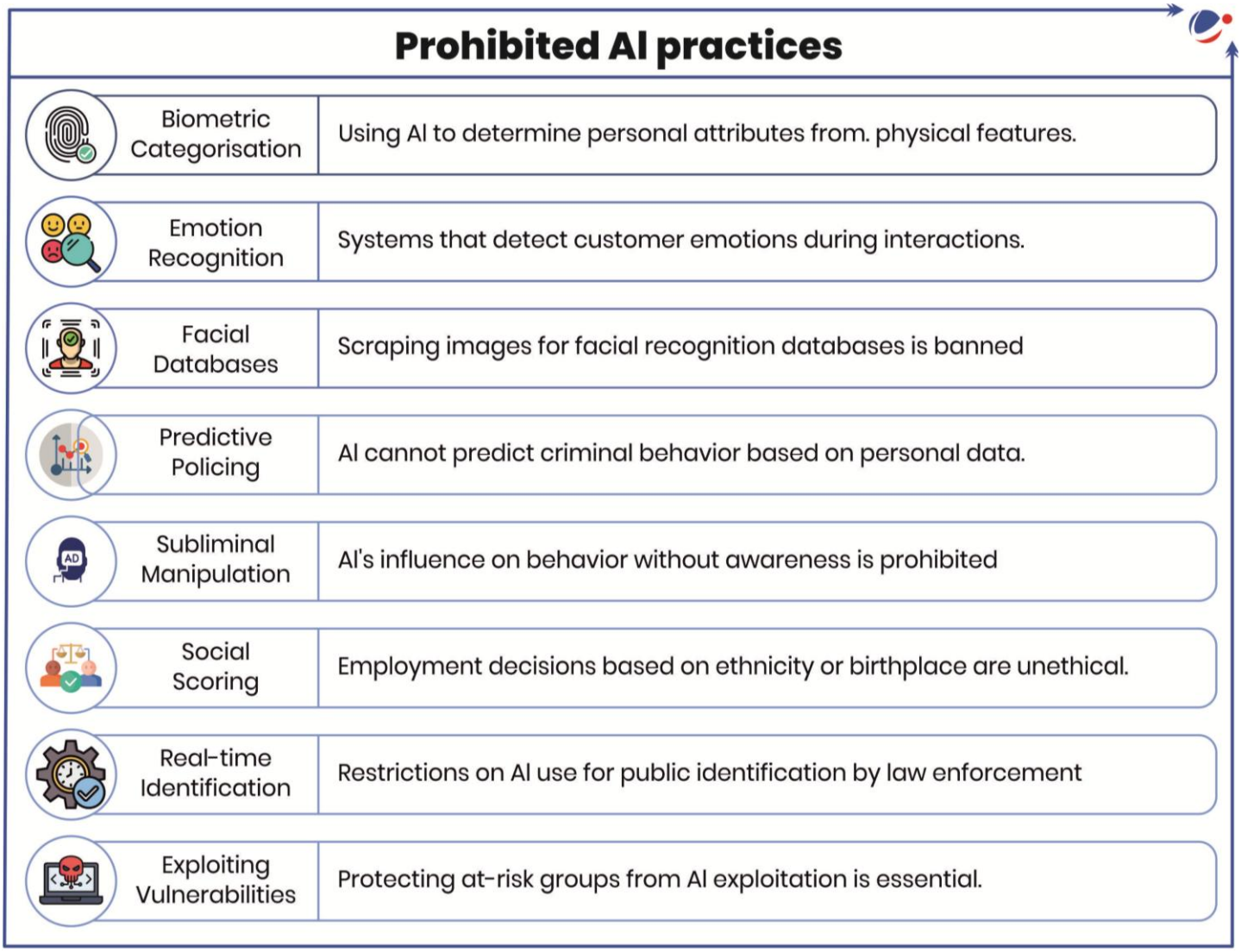
- **Genesis:** The AI Act is the first-ever legal framework on AI, which entered into force in 2024 (will be fully **implemented by 2026**).
- **Approach**: The act takes a risk-based approach to regulation, applying different rules to AI according to the risk they pose.
- **Prohibitions:** The Act list AI prohibited practices (see image), emphasizing the importance of ethics, safety and transparency.

Impact of the AI Act

- **Global Impacts:**
  - **Human-centric focus**: The Act safeguards fundamental rights, prevents discrimination, and promotes ethical AI, fostering global trust and responsible AI adoption.

- **Global Benchmark for AI Regulation**: Other countries may adopt similar frameworks, aligning their regulations with the EU's standards.
- **Increased Compliance Costs**: Non-EU companies may face additional costs to adapt their AI systems to comply with the Act.

- **Impact on India:**
  - **Risk-based regulation**: India's AI policy could benefit from a risk-based approach, categorising AI applications by their potential societal impact.
  - **Global alignment:** Aligning India's AI regulations with international standards can enhance global cooperation and help Indian companies stay competitive internationally.



7.4.2. GENE BANK FOR CROPS GERMPLASM

Union Budget 2025-26 announced setting up of **second National Gene Bank**, comprising a million germplasm lines for future food and nutritional security.

- A gene bank is a **repository of genetic material,** such as seeds, pollen or tissue samples **to protect them from potential extinction**.

About First National Gene Bank

- **First National Gene Bank** was set up in 1996 by the **Indian Council of Agricultural Research-National Bureau of Plant Genetic Resources** (ICAR-NBPGR) in New Delhi.

- This bank comprises **12 regional stations** across the country for collection and storage of vital crop germplasms.
    - These germplasms are the **genetic constituents of plants or animals** that are used in research, conservation and crop breeding.

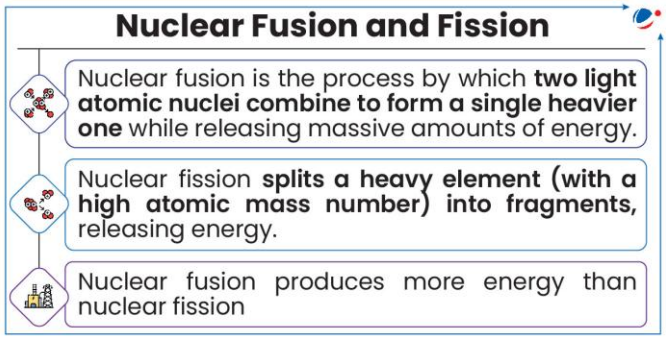
7.4.3. CHINA'S EAST CREATES NEW RECORD IN FUSION REACTION

China's Experimental Advanced Superconducting Tokamak (EAST) created new record in Fusion reaction.

- EAST, also known as **China's Artificial Sun**, maintained a **steady-state high-confinement plasma operation for 1000+ seconds** reaching a temperature of 100 million °C.
- A tokamak is a machine that confines a plasma using magnetic fields in a donut shape to harness the energy of fusion.

Significance of this achievement:

- **Step** towards **fusion-based nuclear reactors** which can act as **alternatives to other sources of clean energy** such as wind, solar etc.;
- can **address world energy crisis** & problem of **climate change**



Advantage of nuclear fusion

- **High Energy Output** – It produces greater amounts of energy than any other source.
- **Abundant & affordable fuel** –It uses cheap input materials, available in almost limitless supply. **E.g., deuterium, tritium, hydrogen, Lithium**
- **Environmentally friendly** – It has a zero-emission footprint and it does not contribute to greenhouse gas emissions or global warming
- **Safe and Clean Process** – Fusion reactors produce helium, an inert gas. They also generate and recycle tritium, a radioactive substance with a short half-life. As a result, fusion does not produce long-lived radioactive nuclear waste.

Challenges in nuclear fusion

- **Extreme Temperature Requirement:** Fusion requires temperatures of hundreds of millions of degrees Celsius, even higher than the Sun's core.
- **Plasma containment:** At such high temperatures, matter exists only in the plasma state (atoms get split into positively and negatively charged particles). Keeping plasmas stable in order to extract energy is difficult**.**
- **Magnetic Confinement**: The plasma must be suspended within a confined space using strong magnetic fields to prevent contact with reactor walls.

7.4.4. 100TH LAUNCH OF THE INDIAN SPACE RESEARCH ORGANISATION (ISRO) FROM SRIHARIKOTA

The ISRO successfully placed the **NVS-02 satellite** into **Geosynchronous Transfer Orbit** using **GSLV-F15** from **Satish Dhawan Space Centre, Sriharikota**, Andhra Pradesh

- GSLV-F15 Vehicle is a three **stage launch vehicle** with a third-stage **CUS 15 cryogenic engine.**
- The NVS-02 is the **second satellite in the NVS series**, and part of **India's Navigation with Indian Constellation (NavIC).**

What is NavIC?

- **About:** It is a **regional navigation satellite system** (erstwhile known as **Indian Regional Navigation Satellite System**) launched by ISRO.

- **NavIC Network:** NavIC is designed with a **constellation of 7 satellites** of which **3 satellites placed in geostationary orbit** & **4 satellites** are placed in inclined **geosynchronous orbit.**
- **NavIC Services: Standard Position Service (SPS)** for civilian users & **Restricted Service** for strategic users.
- **Coverage Area**: India and a **region up to 1500 km beyond Indian boundary**.
- **Accuracy:** NavIC's SPS offer **accuracy of better than 20 meters** and a **timing accuracy of better than 40 nanoseconds.**
- **Other:** NavIC SPS signals are interoperable with the other global navigation satellite system (GNSS) signals i.e., **GPS** (of USA), **GLONASS** (Russia), **Galileo** (European Union) & **BeiDou** (China).

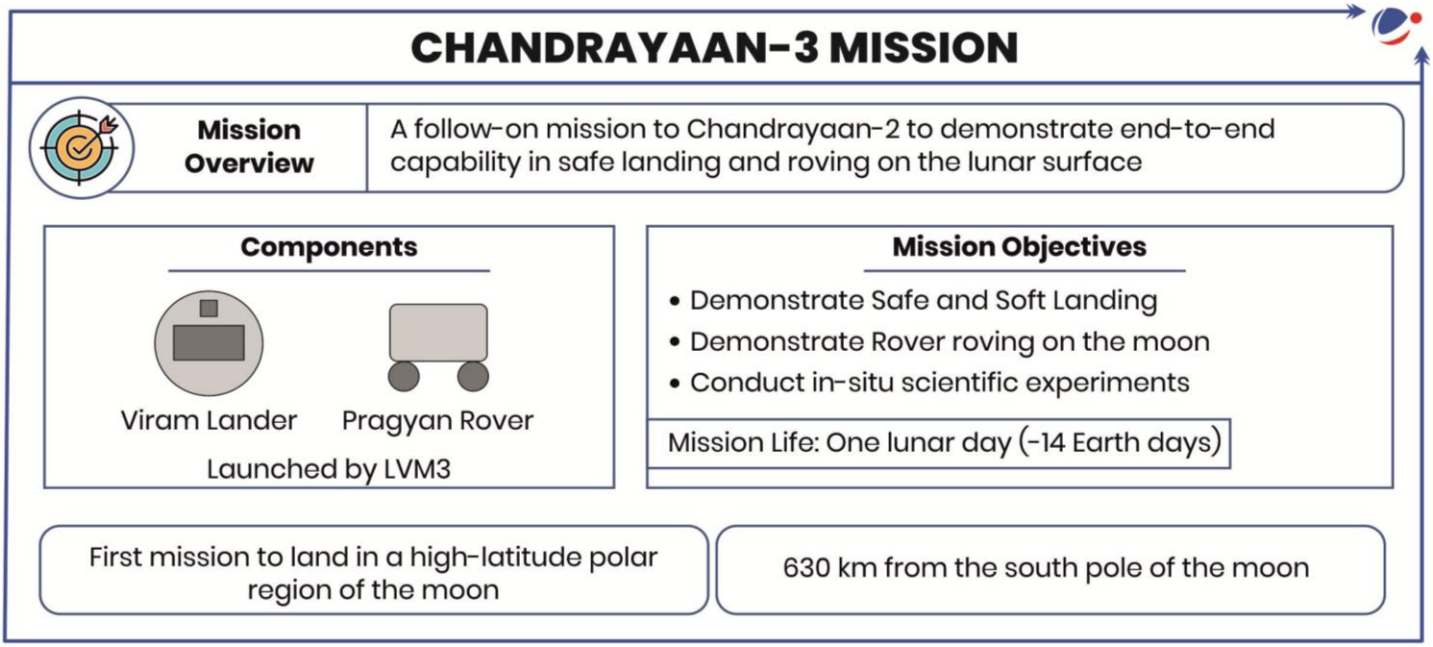
Scan the QR code to know more about **India's SpaceTech Industry**

Weekly Focus #112- SpaceTech Industry: From Curiosity to Reality

7.4.5. FIRST DETAILED MAPPING OF MOON'S SOUTH POLE

First detailed geological papping of Moon's south pole area made from Chandrayaan Data.

- Researchers from ISRO (among others) created **the first detailed lunar map** using data from **the Pragyan rover,** which was deployed by **Vikram** (lander of India's Chandrayaan-3) **on its nine-day mission.**
- **South Pole-Aitken Basin:** Vikram landed near this ancient, massive impact crater (one of the largest in the Solar System).



Key Findings from Chandrayaan-3's Lunar South Pole Exploration

- **Terrain Types:** Undulating landscape of highlands and low, flat plains.
- **Confirmation of Subsurface Magma Ocean**: Findings confirms ancient ocean of molten lava that extends **across the entire moon**.
- **Age of the Lunar South Polar region:** Calculated to be around **3.7 billion years**, around the time the first signs of microbial life emerged on the earth.
- **A Common Origin with Earth**: The Moon's **geochemical similarities** with Earth supports the theory that both **bodies originated from the same molten material.**
    - Possibly due to a massive collision between **Earth** and a **Mars-sized** body about **4.5 billion years ago.**

Significance of Lunar Craters

- **The Moon's craters** have been **preserved for billions** of years due to **no atmospheric erosion.**
- They **offer vital insights** into the solar system's **early history** and help **date geological features** on other planets.
- Lunar craters act **as time capsules**, preserving records of **space-rock impacts** shaping the **entire solar system.**

7.4.6. NASA LAUNCHES SATELLITE TO DETECT WATER ON THE MOON

A SpaceX Falcon 9 rocket launched **NASA's Lunar Trailblazer orbiter** as a **secondary payload**. The **primary payload** was **Intuitive Machines' lunar lander mission (IM-2).**

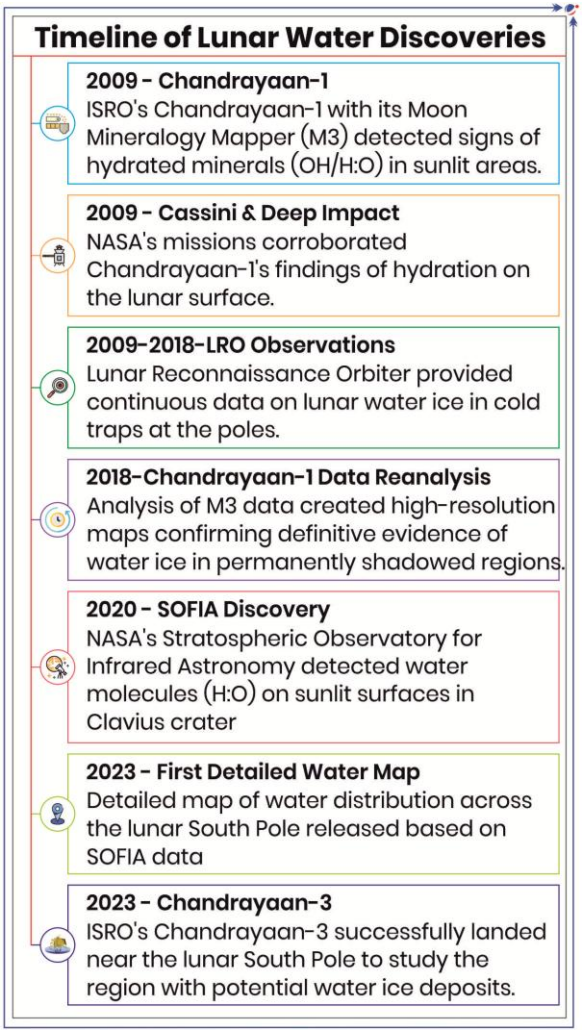
- **IM-2's Objective**: To settle on to the moon where it will drill beneath the surface in a bid to find water there.

About Lunar Trailblazer Mission

- **Objective:** It will orbit at an altitude of **roughly 100 km** and collect **high-resolution images** of **targeted areas** to determine:
  - The **form, distribution** and **abundance** of water and to **better understand** the **lunar water cycle.**
- **Significance:** Guide future human missions **to locate and extract water resources.**
- **Components:** Two Lunar Trailblazer instruments will take measurements from lunar Orbit:
  - **Lunar Thermal Mapper (LTM)**: will map and measure the lunar surface temperature.
  - **High-resolution Volatiles and Minerals Moon Mapper (HVM3):** It will search for light patterns indicating water on Moon.

Importance of Lunar Water

- **Drinking Supply**: Processed into drinkable water
- **Breathable Oxygen**: Converted into oxygen for breathing
- **Rocket Fuel**: Hydrogen fuel for rockets.
- **Exploration of the Solar System**: Lunar water enables deeper space exploration, including Mars.



7.4.7. RED COLOR OF MARS

A study published in Nature Communications challenges the long-held belief about Mars' red color.

Findings of the New study about Red Color of Mars (The Red Planet)

- Previous studies attributed Mars' red color to **anhydrous hematite formed through recent weathering.**
- New study finds **poorly crystalline ferrihydrite (Fe5O8H · nH2O)** is the main iron oxide in Martian dust.
  - It is formed during a **cold, wet period on early Mars under oxidative conditions**. It suggests Mars underwent aqueous alteration before becoming the dry desert seen today.

7.4.8. LOWER-SODIUM SALT SUBSTITUTES (LSSS)

The Department of Nutrition and Food Safety (NFS) of the World Health Organization (WHO) has launched its new guideline on the use of lower-sodium salt substitutes.

About the LSSS

- **Composition:** They contain less sodium than regular salt and often include potassium chloride, with or without other agents, to achieve a flavour similar to regular salt.
- **Advantages:** Help in limiting sodium intake to below 2 g/day to reduce noncommunicable diseases such as blood pressure and risk of cardiovascular diseases (CVDs).

- **Concerns:** LSSS with potassium can be harmful as too high a level of blood potassium (hyperkalaemia), can affect individuals with impaired kidney function.

7.4.9. SHATAVARI

The Ministry of AYUSH has launched a **campaign** titled **"Shatavari –For Better Health"** to increase **awareness** about Shatavari's **health benefits.**

About Shatavari (Asparagus racemosus)

- **Shatavari,** meaning **"curer of a hundred diseases"**
- It is a **medicinal woody climber** growing to **1-2 m in height.**
- **Uses: Dried roots, leaves** are used as a **drug in Ayurvedic medicine**
- **Habitat: Low altitudes in shade** and in **tropical climates.**
  - **It is spread across Asia, Australia and Africa**.
- **Health Benefits:** Improves **female reproductive health, hormonal balance, ulcer healing** effect, promotes **vitality and longevity**, imparts **immunity**, treating **nervous disorders** etc.

7.4.10. BHARAT TECH TRIUMPH PROGRAM

Bharat Tech Triumph Program has been launched to support digital and online gaming in India.

About Bharat Tech Triumph Program

- **Launched by: Interactive Entertainment and Innovation Council (IEIC), in partnership with the Ministry of Information and Broadcasting (MIB),**
- **Objective**: To identify and showcase India's gaming talent on the international stage.
- It will provide Indian innovators with a **global platform** to highlight their expertise and expand **India's presence in the international gaming industry.**

8. CULTURE

8.1. GYAN BHARATAM MISSION

Why in the News?

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

What are Manuscripts?

- A **manuscript** is a **handwritten composition** on paper, bark, palm leaf, etc., dating back at least 75 years that has significant scientific, historical or aesthetic value.
  - E.g., **Bakhshali manuscript (Third or fourth century BCE),** an ancient Indian mathematical text written on birch bark.
    - Some study highlighted that Bakhshali Manuscript Contains **Oldest Example of Mathematical Symbol 'Zero'.**
- **Lithographs** (A techniques involving drawing on a stone and then transferring the image to paper) and printed volumes are **not manuscripts.**
- **Themes can include** history, religion, literature, astrology, and agricultural practices.
- 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.

About Gyan Bharatam Mission

- **Key components:**
  - **Conservation:** To undertake the **survey, documentation and conservation** of more than **one crore manuscript** heritage lying with academic institutions, museums, libraries and private collectors.
  - **Creation of Digital Repository:** National Digital Repository of Indian knowledge systems for knowledge sharing to be created.
    - This platform will be **accessible to researchers, students, and institutions across the globe**.
- **Nodal Ministry:** Union Ministry of Culture.

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 on Jan. 15, 1784, by Sir William Jones, undertakes digitization of ancient manuscripts.
- **National Archives of India**: National Archives of India (NAI) is a repository of the non-current records of Government of India and possesses private papers of prominent personalities of India.
- **Indira Gandhi National Centre for the Arts**: It acts as a main resource Centre for the Indian art and culture.

Significance of the Mission

- **Fundamental Duty:** To fulfill the objective in **Article 51A (f)** to value and preserve the rich heritage of our composite culture.
- **Documentation:** Location of the unknown manuscript reserves in the country, reaching out to the grass root level for gathering information, and creation of the digital catalogue of manuscripts.
- **Manuscript Studies:** Create a resource pool of scholars and specialists in various aspects of manuscript studies
- **Conservation:** Safeguarding tangible cultural heritage while ensuring its accessibility to present and future generations.
- **Accessibility:** Allows wider access to rare and valuable texts keeping them for long times.
- **Collaboration:** Facilitates collaborative research and sharing of resources for knowledge systems.

Challenges in the Manuscript Conservation

- **Environmental**: India's diverse climate, especially high humidity in coastal and tropical regions, coupled with natural disasters accelerates the deterioration of manuscripts.
- **Lack of Awareness and Cultural Neglect**: Traditional knowledge stored in manuscripts is often **undervalued in the modern education system**, leading to a lack of urgency in preservation.

- **Infrastructure deficiencies**: Lack of adequately trained professionals, storage of manuscripts in poorly maintained libraries or private collections without climate control, etc.
- **Linguistic and script diversity**: Manuscripts exist in multiple ancient scripts (Brahmi, Kharosthi, etc.), making transcription and preservation difficult.

Way Forward

- **Digital preservation:** It refers to a series of managed activities, which are necessary to ensure continued access of digital materials for as long as they are necessary.
  - By harnessing **advanced imaging techniques and digital preservation strategies**, digitization ensures the longevity and accessibility of manuscripts, transcending geographical boundaries and facilitating global collaboration in scholarly research and education.
- **Use of 3D Printing Technology:** Tara Prakashana Vedic Library and Research Centre inaugurated a 3D printing laboratory for manuscript preservation and conservation.
- **Using Artificial Intelligence:** A process called inpainting AI algorithms has been used by the MACH laboratory in Cambridge to identify damage and reconstruct lost images in old manuscripts.
  - **Inpainting** is a technique for filling in missing or damaged parts of an image, can be achieved "via" various methods, including deep learning models, spatial projections, and iterative probabilistic modeling, among others.

Some important Manuscripts in India

Manuscripts	Author
Natyashastra	Bharata Muni
Mahabharata	Vyasa
Mahabhashya	Patanjali
Prayoga-Ratnamala Vyakarana	Purushottama Vidyavagish
Arthashastra	Chanakya
Aryabhatiya	Aryabhata
Brahmasphutasiddhanta	Brahmagupta
Sushruta Samhita	Sushruta
Ashtadhyayi	Panini
Rajatarangini	Kalhana
Gitagovinda	Jayadeva

8.2. NEWS IN SHORTS

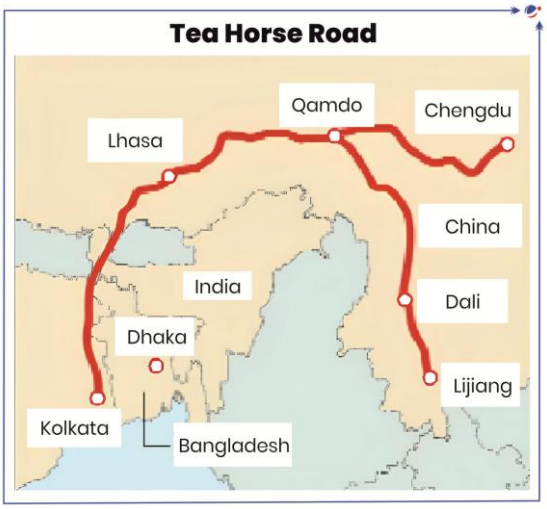
8.2.1. VIJAY DURG (FORT WILLIAM)

Fort William in Kolkata, the headquarters of the Eastern Army Command, recently renamed as Vijay Durg.

About Vijay Durg

- It was named after **King William III** of **England.**
  - "Renaming **to 'Vijay Durg'** pays **homage to the oldest fort on Maharashtra's Sindhudurg coast**, which served as naval base during Chhatrapati Shivaji Maharaj's reign"
- It is located on the banks of the **river Hoogly**.
- **Black Hole Tragedy** took place on June 20, 1756 in Fort William.
  - **Nawab Siraj-ud-Daula** imprisoned British captives in a tiny cell overnight, causing many deaths from suffocation and extreme heat, it is known as **Black Hole Tragedy.**

8.2.2. TEA HORSE ROAD (THR)



China's Ambassador to India recently posted on X about historic Tea Horse Road.

About THR

- It **connected India to China, through Tibet** (although not as well-known as **Silk Road,** which **linked China and Europe).**
- It does not refer to a single road but a **network of branching paths** that began in southwest China and ended in the Indian subcontinent.
- The means for transporting goods on these routes were **trains of horses (ponies and mules) and human porters,** and the network of trails and roads to Tibet became known as the Tea Horse Road.
- Two main pathways passed through **cities like Dali and Lijiang in Yunnan province,** and reached **Lhasa in Tibet,** before entering the Indian subcontinent where they branched into present-day India, Nepal, and Bangladesh.
- **Origin:** Tang dynasty in China (618-907 CE).
- It was a **crucial commercial pathway** for centuries.

8.2.3. TANTRIC BUDDHISM

A **1.4m Buddha head** and stupas (1,500+ years old) found in **Ratnagiri, Odisha**, confirm its role as a **Tantric Buddhism hub**.

- Buddhism has **three main schools**: **Theravāda** (orthodox), **Mahāyāna** (includes Zen & Pure Land), and **Vajrayāna** (includes Tibetan Buddhism).
  - **Guru Padmasambhava,** (Also known as Guru Rinpoche/Second Buddha) is an important figure in Buddhism who was instrumental in **establishing Vajrayana Buddhism in Tibet** around 8th century CE.

Evolution of Tantric Buddhism

- Tantric Buddhism was a **shift from abstract philosophy to sadhana (practical methods) for enlightenment.**
  - **Vajrayāna or Tantric Buddhism** believes in esoteric healing; deals with social activism and social transformation and is prevalent in **Bhutan, Mongolia, Nepal and Tibet.**
  - **Mahayana Buddhism** introduced **mantras & rituals**, leading to two branches: **Mantrayana (early Tantra) & Paramita-yana**.
  - The **mantra-yana may be regarded as the 'initial' stage of Tantric Buddhism** when yogic practices got added to it, it was full-fledged **Tantric Buddhism'.**

8.2.4. PADMA AWARDS

Ministry of Home Affairs has announced **Padma Awards 2025** on Republic day.

About Padma Awards

- **Instituted in 1954,** they are **one of the highest civilian Awards** of country.
- **Conferred by President** at Rashtrapati Bhawan in **three categories,** namely**:**
  - **Padma Vibhushan:** For **exceptional and distinguished service**.
  - **Padma Bhushan:** For **distinguished service of high order**.
  - **Padma Shri:** For **distinguished service in any field**.
- **Awards are given in various disciplines**/ fields of activities, viz. art, social work, public affairs, science and engineering, trade and industry, medicine, literature and education, sports, civil service, etc.
- Except for **interruptions in 1978, 1979 and between 1993 and 1997**, every year the names of the recipients are announced on **Republic Day eve.**
- Padma award is **just an honor.** No cash allowance or any **facility/benefit in terms of concession** etc. in rail/air travel is attached to these awards.

8.2.5. SAHITYA ACADEMY AWARD

Recently, Chaman Arora was awarded **Sahitya Akademi Award 2024 in Dogri** (Spoken in parts of Jammu and Kashmir, Himachal Pradesh and Punjab) for his book "**Ik Hor Ashwthama**".

About Sahitya Academy Awards

- **Genesis:** Inaugurated in **1954** and given by the Sahitya Academy (an autonomous body under **Union Ministry of Culture**).
  - First Awards were given in **1955**.
- Awarded to the **most outstanding books of literary merit** published **in any of the major Indian languages recognised by the Akademi.**
  - Languages recognized by the Academi include **22 Languages listed under the Schedule VIII of the Constitution** and **English** and **Rajasthani**
- Award is in the form of a casket containing **an engraved copper-plaque and a payment of ₹ 1,00,000/-**

8.2.6. BHARATIYA BHASHA PUSTAK SCHEME

Finance Minister has introduced **Bharatiya Bhasha Pustak Scheme** in Union Budget 2025-26.

About Bharatiya Bhasha Pustak Scheme

- **Aim:** To provide **digital form of Indian language** books **for schools and higher education** to help students understand their subjects better.
- It is aligned with **National Education Policy, 2020,** wherein students across schools and universities will get textbooks, learning materials in digital formats.
- It also **complements ASMITA** (Augmenting Study Materials in Indian Languages through Translation and Academic Writing) **initiative.**
  - It was launched by Ministry of Education and UGC in 2024 to develop 22,000 books in 22 Indian languages in next five years.

9. ETHICS

9.1. OBSCENITY ON DIGITAL PLATFORMS

Introduction

The Supreme Court, while hearing a case on obscene remarks in the INDIA'S GOT LATENT show on YouTube, urged the Solicitor General to propose **regulatory measures to curb vulgar content online** while balancing free speech.

Also, the Ministry of Information and Broadcasting (I&B) warned **OTT (Over-The-Top) platforms** against transmitting "any content that is prohibited by law", and urged them **to follow age-based classification** as per the Information Technology (Intermediary Liability and Digital Media Ethics Code) Rules, 2021. Platforms were also directed to **enforce age-gating requirements for mature content.**

About Obscenity

The term **'Obscene'** is used to describe those things which are either disgusting to the senses or **offensive to an individual in a sexual manner** whereby they aim to incite lust in a person.

Key Stakeholders for content Streaming on Digital Platforms.

Key Stakeholders	Associated interest
Content Creators & Artists	• **Maintain creative freedom and artistic expression**, **generate income** and build audience.
Digital Platform	• Ensure their **revenue model follows laws of the land** and protect users from harmful content without excessive censorship. • **Maintain advertiser trust to avoid revenue loss** as brands may withdraw if platform is associated with questionable content.
Government & Regulatory Bodies	• **Define and enforce laws** on online content, balancing free speech with public morality.
Society at large	• **Access desired content with minimal restriction**, Avoid exposure to unwanted obscene material particularly children for children. • **Maintain agency in content consumption choices.**

Need for Regulating Obscenity on Digital Platforms

- **Preserving Social and Cultural Values:** Allowing unchecked obscene content weakens moral character, fostering disrespect and moral decay.
  - **E.g.,** The 2021 **"Bulli Bai" app incident**, where images of women of a minority community were auctioned online, exposed the misuse of social media to target and humiliate women, prompting calls for stricter regulation.
- **Protecting Human Dignity: Kant** asserts that humans must never be treated as mere means to an end. Content that reduces people to **objects of prurient interest** violates the core principle of dignity and personal autonomy.
- **Avoiding Normalization of Obscenity**: **The Harm Principle (by John Stuart Mill)** suggests that freedom of expression should not cause harm to society.
  - Regular exposure to obscene content can desensitize individuals, eroding empathy and reinforcing harmful stereotypes.
- **Ethical Responsibility of Platforms: Utilitarianism** suggests that actions should promote the greatest good. Digital Platforms are thus, ethically mandated to ensure content balances free speech with societal well-being, fostering a safe digital environment.
- **Upholding Constitutional Morality:** Constitutional morality safeguards core values such as social justice and equality, ensuring that **digital content aligns with these principles.**
  - Article 19(2) establishes that the fundamental rights of freedom of speech and expression is not absolute and **reasonable restrictions** could be put on such rights on various grounds including **public order, decency, morality**, **incitement to an offense**, among others.

Ethical Issues in Regulating Obscene Digital Content

- **Vagueness and Subjectivity of Obscenity:** Senior Advocate Dushyant Dave highlighted that decency **and morality vary over time and across region**s. While the language in India's Got Latent was **inappropriate, it may not meet the legal definition of a crime**, as such speech is common in everyday discourse in society.
- **Censorship vs. Reasonable Restrictions:** While laws protect morality, over-regulation could stifle creativity. Since obscenity is **subjective and evolving**, excessive restrictions could limit diverse perspectives in media.
  - **E.g.,** The **2024 ban of 18 OTT platforms** by the Ministry of I&B for "obscene and vulgar" content was criticized as arbitrary, with some arguing it stifled creative expression.
- **Evolving Social Norms and Cultural Sensitivity: Obscenity is a cultural construct** that changes over time. Ancient **Khajuraho and Konark temples** feature erotic sculptures, yet today, such expressions might face censorship.
- **Power Dynamics:** Questions arise about **who decides what content is acceptable**, with the risk of censorship being weaponized against marginalized communities.
- **Agency and Paternalism (Interference with personal autonomy):** There's an ongoing tension between **protecting users from harmful content and respecting their autonomy to make their own content choices**.
  - Excessive regulation may infantilize users, assuming they cannot make informed decisions about the content they consume.
- **Regulating Obscene vs. Artistic Freedom:** Tension between censorship to **protect public morality and freedom of artists to express themselves** creatively.
  - E.g., **In Maqbool Fida Hussain v. Raj Kumar Pandey case**, court ruled that nudity alone does not constitute obscenity, highlighting ethical dilemma between artistic expression and societal norms.

Conflict between Ethics and Law of Banning Content with Obscenity

The conflict **between legal restrictions on obscenity and evolving ethical standards presents a complex challenge in** Indian jurisprudence. This conflict emerges from several key factors:

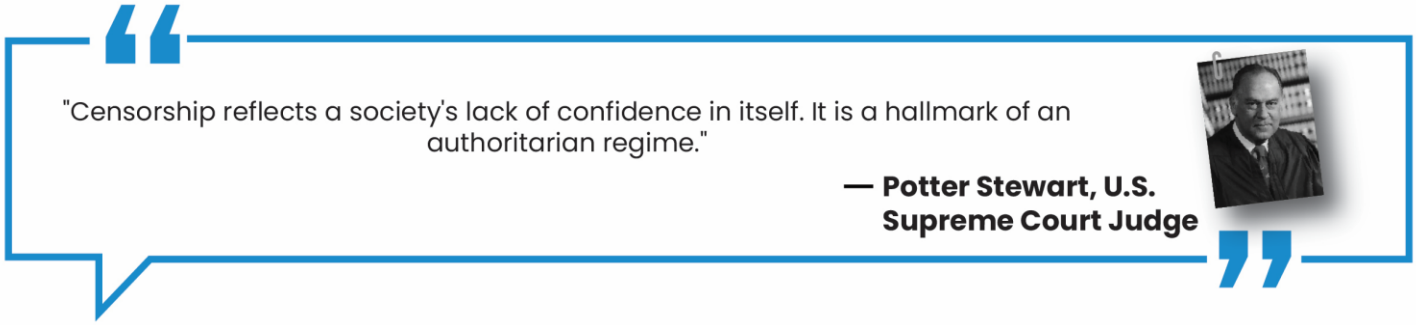
Legal Framework Without Clear Definition

- The **Bharatiya Nyaya Sanhita (BNS)** and Section 67 of the **IT Act 2000 both prohibit obscene content**.
- **Information Technology (Intermediary Liability and Digital Media Ethics Code) Rules, 2021** require films and shows featuring explicit content such as swearing, sex, nudity, substance abuse, and violence to have age-based ratings.
- Additionally, laws like the **Cinematograph Act (1952), Cable TV Act (1999), and Indecent Representation of Women Act (1986)** also regulate obscenity.
- However, obscenity is not explicitly defined in criminal law or the Constitution, leaving room for **subjective interpretation and inconsistent enforcement.**

Evolving Judicial Interpretation

- Judicial understanding of obscenity has evolved over time. In **Ranjit D. Udeshi v. State of Maharashtra (1964)**, the Supreme Court applied the **Hicklin test**, which considered any material with a "tendency to deprave and corrupt" as obscene.
- Decades later, in **Aveek Sarkar v. State of West Bengal (2014)**, the Court shifted to the **community standards test**, evaluating obscenity based on prevailing social and moral norms.
  - However, **defining community standards remains challenging** as they constantly evolve and vary across regions.
- **Justice (retired) Gautam Patel of the Bombay High Court** has stated that **profane language alone does not constitute obscenity**, further highlighting the subjective nature of the law.

Above all, the increasing trend of filing multiple **FIRs for the same offense** has been criticized as a form of harassment that unfairly **prejudices the accused and undermines their right to a fair defense**. While content that offends public sensibilities may invite criticism or boycotts, excessive legal action risks infringing on freedom of expression.



Way ahead

- **Justice & Objectivity:** Define **clear and consistent** obscenity guidelines that consider **India's cultural diversity** to avoid **bias or subjective judicial rulings**.
- **Accountability & Responsibility:** Introduce a **Broadcasting Bill** to regulate **OTT content, digital news, and emerging technologies**, ensuring **ethical and socially responsible media**.
- **Encouraging Ethical Content Creation:** To ensure social responsibility & cultural sensitivity, promote **self-regulation** and ethical storytelling that reflects **societal values and cultural respect**.
- **Empowerment & Informed Choice:** Implement **digital literacy programs** to **educate youth** on **media ethics, responsible viewing, and online safety**.

Conclusion

Obscenity is highly subjective, **varying across cultures and time**. Therefore, creating a responsible digital media space requires **legal clarity, self-regulation, public awareness, and global cooperation**. By upholding ethical values such as **justice, dignity, transparency, and accountability**, digital platforms can strike a balance between **creative freedom and social responsibility**.

Check Your Ethical Aptitude

With the rise of obscenity and profanity on digital platforms, the Supreme Court has directed the Solicitor General to propose measures to curb "filthy language" and "vulgarity" in online content, emphasizing the need to balance freedom of speech with societal moral standards.

In this context, answer the following questions:

1. What one society/country finds offensive and obscene may be part of daily discourse for another. What ethical issues arise from the increased use of obscenity on digital platforms?
2. How can the government ensure that freedom of speech is protected while maintaining public decency? What guidelines should be proposed to limit obscene content without stifling creativity and artistic expression?
3. What role should digital media platforms play in regulating content, and how can they balance their responsibility to society with the protection of free speech?

9.2. SURVEILLANCE CAPITALISM

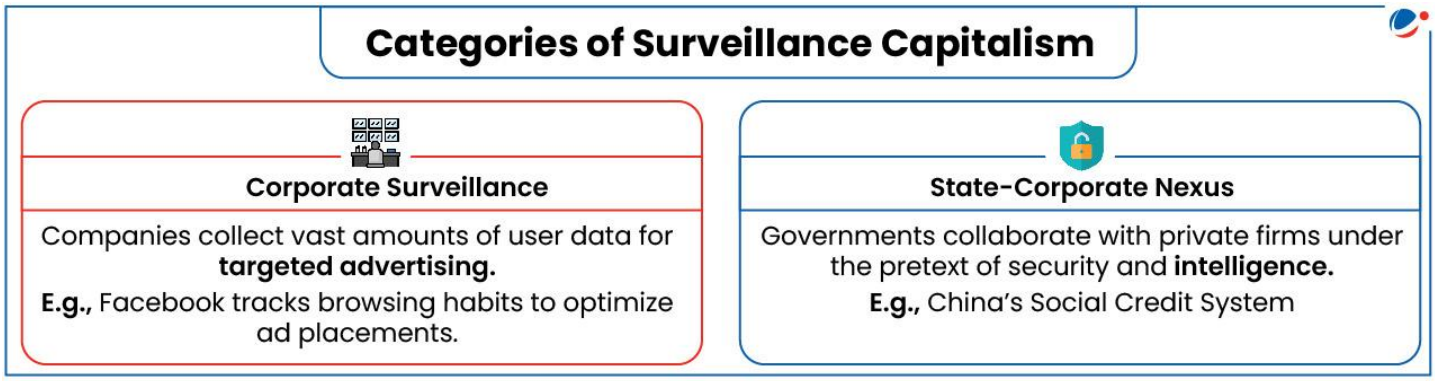
Introduction

With digital information growing exponentially—from just 1% in 1986 to 98% by 2013—personal data has emerged as the new gold of the 21st century. This transformation has fueled the rise of **Surveillance Capitalism**, a system where human experiences and behaviors are harvested as raw materials for profit. This shift, led by tech giants like **Google, Meta, and Amazon**, raises profound **ethical, social, and regulatory concerns** about privacy, autonomy, and democratic accountability.

What is Surveillance Capitalism?

- **Definition**: It is an economic system where **private corporations** (e.g., Amazon, Alphabet, Meta, etc.) **systematically collect, analyze, and monetize personal data to predict and influence human behavior for profit** (e.g., targeted ads, pricing, insurance decisions).

- **Mechanism**: It operates through –
  - **Data extraction**: Platforms like Google, Facebook, and Amazon track user activities, from search queries to purchase history.
  - **Predictive analytics**: AI and algorithms analyze behavioral patterns to anticipate user preferences.
  - **Influence techniques**: The insights gained are used to shape consumer choices, political opinions, and even emotions through targeted ads, dynamic pricing, and behavioral nudging.



Traditional Capitalism vs. Surveillance Capitalism

Feature	Traditional Capitalism	Surveillance Capitalism
Resource base	Labor and natural resources (coal, steel, etc.)	Personal data extracted from users
Value creation	Mass production of goods (e.g. Ford's assembly line)	Behavioral modification through digital nudging
Profit model	Selling physical products or services	Monetizing data via targeted advertising, AI-driven pricing
Example	Steel mills, automobile factories	Google Ads, Amazon recommendations

Ethical Implications of Surveillance Capitalism

- **Manipulation**: Algorithms exploit **cognitive biases** to shape user decisions unconsciously.
  - E.g., YouTube's recommendation system maximizes engagement by promoting emotionally charged content.
- **Privacy Erosion**: Data is often collected without proper consent, leading to mass surveillance.
  - E.g.: In 2021, Clearview AI was stopped in France from collecting Individual's data without legal basis.
- **Commodification of Personal Data**: Sensitive data, once private, is now **bought and sold** like a commodity.
  - E.g., In 2018, Sleep apnea machines in the U.S. secretly sent usage data to insurance firms, affecting coverage.
- **Unfair Commercial Practices**: Lack of transparency about data usage.
  - E.g., Italy fined Facebook €7 million in 2021 for misleading users about data collection.
- **Democratic Violations**: State and corporate surveillance weaken **citizen autonomy**.
  - E.g., India's IT Rules (2021) blur the line between national security and government control.
- **Mental Health Risks**: Exposure to curated content designed to maximize engagement can cause stress and anxiety.
  - E.g., Social media algorithms prioritize content that triggers anger and fear, amplifying political polarization

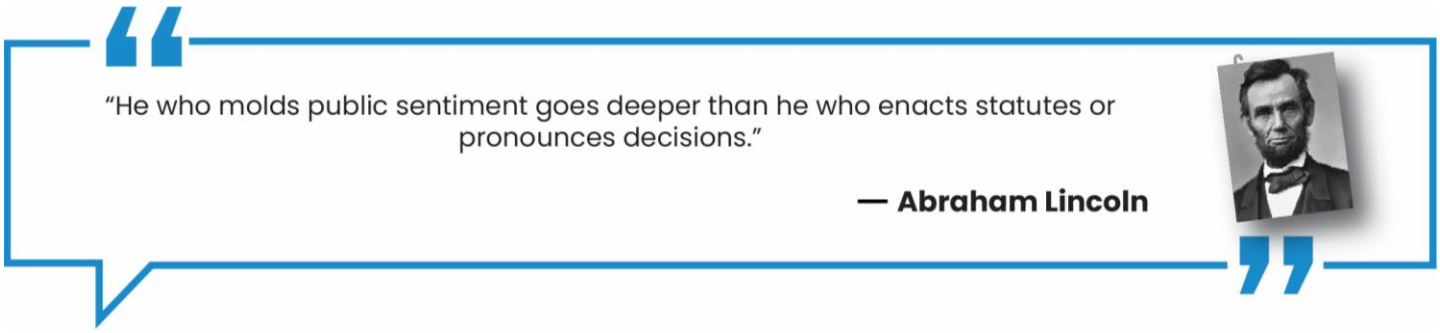
Challenges in controlling the Surveillance Capitalism

- **Regulation**: Existing laws have failed to dismantle the core practice of commodifying data. **Tech giants often lobby against stringent oversight**, as seen in their resistance to antitrust measures.
- **Technology**: The rapid evolution of AI and IoT (Internet of Things) **outpaces regulatory frameworks.**
- **Corporate-State Collusion**: The alignment of corporate and state interests, **e.g., data sharing with intelligence agencies** reduces public scrutiny, complicating accountability.

Efforts to regulate Surveillance Capitalism	
Global	**India**
• **EU's General Data Protection Regulation (2018):** Enforces **strict data consent and imposes fines** for breaches, enhancing user rights. • **California Consumer Privacy Act (2020):** Grants California residents **the right to know** what personal data companies collect, opt out of its sale, and request its deletion.	• **K.S. Puttaswamy Case (2017):** Supreme Court of India declared **privacy a fundamental right under Article 21** of the Indian Constitution. • **Digital Personal Data Protection (DPDP) Act (2023):** Requires **individual's consent** for data processing, allows individuals to access and erase their data, and **imposes penalties on companies for breaches.**

Way Forward

- **Stronger Regulatory Frameworks**: Enact adaptive laws with **clear accountability, regular audits, and severe penalties** to deter misuse. **E.g.,** India should **strengthen the DPDP Act** by limiting exemptions and ensuring judicial oversight.
- **User Empowerment**: Promote **data literacy campaigns** and **enforce transparent consent mechanisms**, enabling individuals to reclaim agency over their data.
- **Antitrust Measures**: **Break up tech monopolies** to reduce their unchecked power, as being discussed in the USA, ensuring fair competition and innovation.
- **Global Cooperation**: **Harmonize international standards** to prevent data exploitation in less-regulated regions, fostering a unified response to a borderless challenge.
- **Ethical Technology Design**: Encourage tech firms to prioritize **privacy-by-design**, reducing surveillance incentives at the development stage.



Check your Ethical Aptitude

You are the CEO of a mid-sized Indian tech startup that has developed an innovative mobile app designed to improve financial inclusion. The app uses AI algorithms to analyze users' online behavior, spending habits, and social media activity to offer personalized micro-loans and financial advice to underserved populations, such as rural farmers and small vendors. Since its launch, the app has gained popularity, serving over 500,000 users and attracting significant investment from venture capitalists. However, a recent exposé by a news outlet revealed that your company has been sharing anonymized user data with third-party advertisers and insurance firms to generate additional revenue, a practice buried in the app's lengthy terms of service that most users did not fully understand or consent to.

You are at a crossroads. Continuing the data-sharing could secure the company's financial stability and fuel expansion, but it risks legal action, loss of user trust, and employee morale. Stopping it might jeopardize the company's growth and investor confidence, potentially undermining your mission to serve marginalized communities.

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

- Identifying the stakeholders analyze the ethical issues at play in this scenario.
- What are your possible courses of action as the CEO? Evaluate the merits and demerits of each.
- What decision would you take, and how would you justify it to your stakeholders?

9.3. RAGGING IN INDIA

Introduction

Recently, Kerala High Court has directed state government to create a working group to draft rules for anti-ragging law enforcement amid rise in incidents of ragging.

What is Ragging?

Generally, ragging is a form of systematic and sustained physical, mental and sexual abuse of freshers or juniors students at the colleges, university and educational institutions at the hands of senior students and sometimes even by outsiders in campus and hostel.

> **Ragging** is neither a means of **familiarization** nor an **introduction** with **freshers,** but a **form of psychopathic behaviour** and a **reflection** of **deviant personalities.** Further**, ragging reproduces** the entrenched **power configurations** prevalent in civil society.
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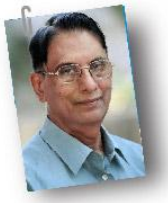
> 
>
> — R K Raghavan

Consequences of Ragging on various stakeholders

On Victims (Junior Students)	On Family
• **Low Self-Esteem and Confidence:** due to its degrading and dehumanizing nature. • **Post-Traumatic Stress Disorder (PTSD)**: Some students develop symptoms of anxiety, depression, PTSD, including flashbacks, nightmares, and emotional distress • **Decline in Academic Performance:** It can lead to loss of focus, absenteeism.	• **Emotional and Psychological Distress:** Families experience emotional distress and feel helpless, guilty, or angry. • **Financial Burden**: Incur additional expenses for counselling or medical treatment. • **Loss of Trust in Institutions**: Fear for the child's safety and future.
On Institutions	**On Perpetrators**
• **Loss of Reputation**: It may bring in negative publicity to the institution affecting funding and enrolment of students. • **Undermines Ethical Values**: It weakens the moral and ethical culture within educational institutions. • **Administrative Challenges:** Leads to issues such as lawsuits, disciplinary actions, and regulatory scrutiny.	• **Career Setbacks**: Expulsion from institutions, record of misconduct affects future employment and reputation. • Erodes **moral authority and credibility** among peers. • **Moral and Ethical Degradation:** Normalization of violence and lack of empathy.

Challenges in Eradication

- **Deep-Rooted Cultural & Traditional Acceptance:** Ragging is perceived as a tradition or rite of passage which prepares newcomers for the challenges of academic life and the real world.
- **Lack of Awareness**: Lack of awareness among fresher's about anti-ragging helplines and complaint portals.
- **Fear of Retaliation:** Victims often hesitate to report incidents due to fear of retaliation, further harassment or ridicule by others.
- **Lack of Strict Enforcement:** Weak enforcement of anti-ragging laws and the burden of proof on victims often allow perpetrators to go unpunished.
- **Role of Institutions:** Institutions often downplay enforcing anti-ragging laws to protect their reputations, rankings and funding.

Anti-Ragging Legal Frameworks in India

Raghavan Committee Recommendations (2007)

- **Accreditation**: National Assessment and Accreditation Council bodies should factor incident of ragging while accrediting institutions.
- Set up **Anti-Ragging Cells, Anti-Ragging Committee and an Anti-Ragging Squad.**
- **Setting up of 'Mentoring Cell'** in each institution to oversee and involve senior students as Mentors for the 'fresher'.
- **Advertisement:** Launch effective advertisement campaigns at the national and regional level regarding **`zero tolerance'** towards ragging.
- **National Council of Educational Research and Training (NCERT) and State Council of Educational Research and Training (SCERT)** should devise Human Rights education of which awareness against ragging should be a compulsory part.

UGC Regulations on Curbing Ragging (2009)

Ragging is a criminal offense and UGC has framed regulations on curbing the menace of ragging in higher educational institutions. These regulations are mandatory for all universities/ institutions.

- **During admission**: Institution shall organize **joint sensitization programmes** of 'freshers' and seniors.
- **Burden of Proof:** It shall lie on the perpetrator of ragging and not on the victim.
- **Role of police, local administration and Institution:** All of them should ensure vigil on incidents that may come within the definition of ragging.

Steps to be taken

- **Peer Support**: Student mentors, buddy systems, and life skills education should be continued into college to support youth in handling social pressures and relationships.
- **Safety of student over reputation of Institution: R**eporting of ragging incidents by institutions should be seen as a commitment to student safety and institutional integrity rather than damage to reputation of the institutions.
- **Follow 2009 Supreme Court Directives on Anti-Ragging Measures**
    - **Display Contact Details**: Institutions must prominently display the email addresses and contact details of nodal officers from anti-ragging committees.
    - **Inform Parents/Guardians:** Annually, institutions must inform parents/guardians about anti-ragging regulations and their legal consequences.
    - **Install CCTV**: Set up CCTV cameras at critical locations to identify potential trouble spots and respond promptly.
    - **Conduct Surprise Inspections:** Regularly inspect hostels, student accommodations, canteens, recreation areas, restrooms, bus stops, and other key locations to deter ragging incidents.

Case Study

"A prestigious engineering college in a state recently witnessed a disturbing incident of ragging. A first-year student, Rahul, was subjected to severe physical and psychological harassment by a group of senior students. This included verbal abuse, forced physical exercises, and humiliating acts, leading to significant emotional distress and a decline in Rahul's academic performance. Despite the college having an anti-ragging committee and clear guidelines against ragging, the incident occurred, and initial attempts to address the issue were met with resistance from some faculty members who downplayed the severity of the situation, fearing damage to the college's reputation. Rahul's parents,

deeply concerned about their son's well-being, have approached the college administration and threatened to escalate the matter to the media and legal authorities.

As the newly appointed head of the college's anti-ragging committee, you are tasked with handling this situation. You are aware of the Supreme Court guidelines, Raghavan Committee recommendations, and UGC regulations concerning ragging. However, you also recognize the deep-rooted cultural acceptance of ragging in some quarters and the challenges in ensuring strict enforcement.

Questions:

a) Identify the ethical dilemmas involved in this case. Discuss the responsibilities and obligations of the institution, faculty members, senior students, and the victim in addressing the issue of ragging.

b) What steps would you take to address the immediate situation concerning Rahul, ensuring his safety and well-being? Discuss the measures you would implement to prevent future incidents of ragging, focusing on fostering a culture of inclusion and respect within the college.

10. SCHEMES IN NEWS

10.1. PRADHAN MANTRI ANNADATA AAY SANRAKSHAN ABHIYAN (PM-AASHA)

Why in the News?

Government approves continuation of the integrated Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) Scheme **till 2025-26** during the 15th Finance Commission cycle.

Objectives	Features
To provide **price assurance** for **pulses, oilseeds and copra**, ensuring **financial stability** for farmers, reduce **post-harvest distress selling** & promote **crop diversification** towards pulses and oilseeds.	• An **umbrella scheme** launched in **2018**. • **Ministry**: Ministry of Agriculture & Farmers Welfare. • **Type**: Central Sector Scheme • **Fund allocated**: Rs. 35,000 crores during 15th Finance Commission Cycle up to 2025-26. • **Components of PM-AASHA:** ○ **Price Support Scheme (PSS): Notified Pulses, Oilseeds and Copra** are procured at the **Minimum Support Price (MSP)** directly from the pre-registered farmers by the **Central Nodal Agencies (CNAs)** (through the State level agencies) given they conform to the prescribed Fair Average Quality (FAQ). Its key features are: > **Provision Government Guarantee to lender banks by the Central Government:** To extend **cash credit facilities** to **CNAs** for undertaking procurement operations. ✓ The existing government guarantee has been **renewed and enhanced** to **Rs. 45,000 crores.** > **Implemented on the request of the States/ UTs**: that agree to **exempt** from **levy of Mandi tax** in the interest of farmers. > **Procurement ceiling: 25%** of national Production of notified crops from 2024-25 season onwards. ✓ Ceiling will **not be applicable** in case of **Tur, Urad & Masur** for 2024-25 season (**100 % procurement** during in 2024-25 season). ○ **Price Stabilization Fund (PSF):** It aims to provide working capital and other incidental expenses for procurement and distribution of agri-horticultural commodities. E.g. Tomato, subsidized retail sale of Bharat Dals, Bharat Atta and Bharat Rice. > **Department of Consumer Affairs (DoCA)** will procure pulses at market price when prices exceed MSP on- ✓ **eSamridhi portal** of National Agricultural Cooperative Marketing Federation of India **(NAFED)** and ✓ **eSamyukti portal** of National Cooperative Consumers' Federation of India **(NCCF)**. ○ **Price Deficiency Payment Scheme (PDPS):** Envisages direct payment of the difference between the MSP and the selling/ modal price to pre-registered farmers selling oilseeds **upto 15% of MSP value** by the Central Government. Its key features are: > **Beneficiaries**: Pre-registered farmers selling the **oilseeds up to 40%** of its production through a transparent auction process. > **Option with States/UTs**: To implement **either PSS or PDPS** for the particular **oilseeds** for the particular year/season. ○ **Market intervention Scheme (MIS):** Aimed at **bridging the price gap** and countering the effect of **price volatility** in case of perishable

	agriculture/horticulture commodities such as **Tomato, Onion and Potato (TOP)** etc. **not covered under MSP**. Its key features are: > **No need of physical procurement**: States have an option to make **differential payment between Market Intervention price (MIP) and selling price**. ✓ This is subject to coverage of 25% of production of crops and maximum price difference up to 25% of MIP. > **Implemented on the request of the States/UTs**: When there is a **reduction of prices** in the market **by at least 10%** over the rates of previous normal season in the States/UTs.

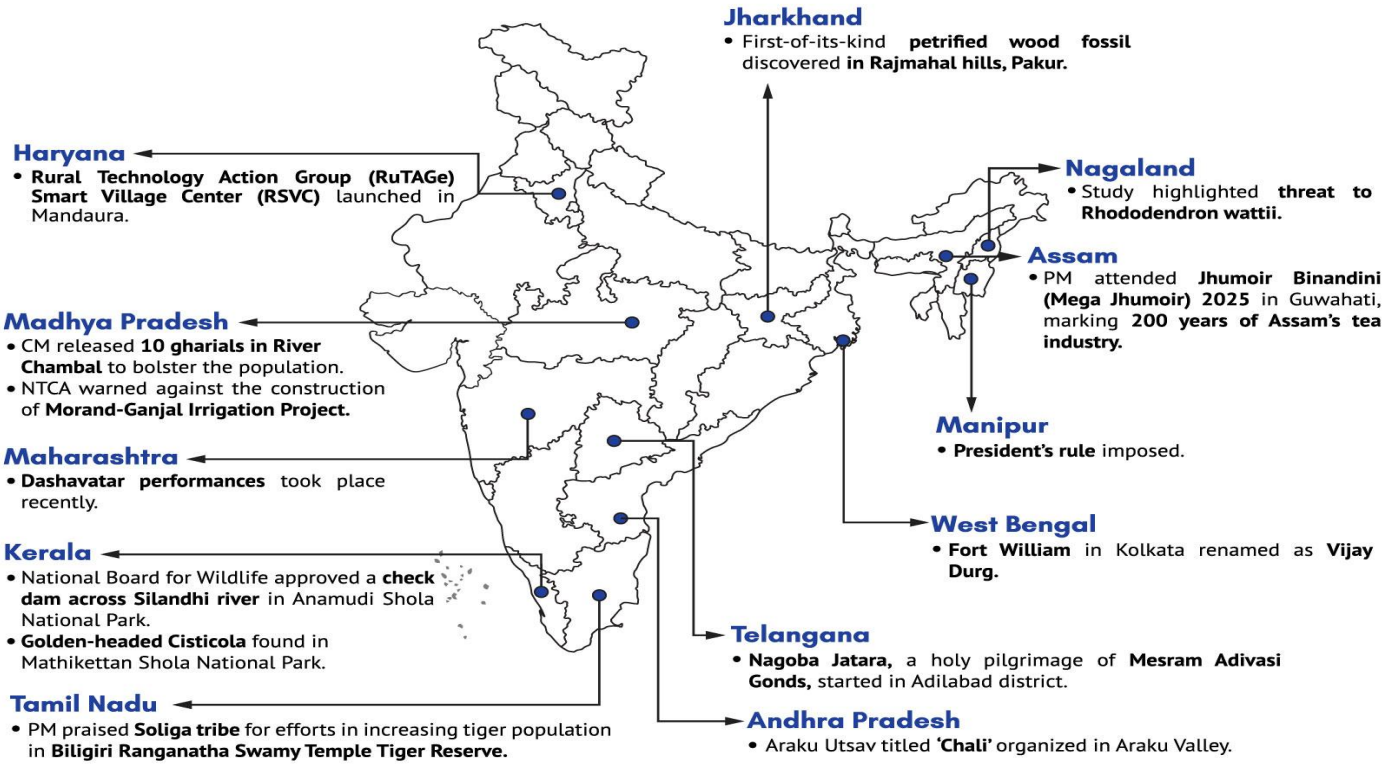
11. APPENDIX: CRITICAL MINERALS

Critical Minerals	Key Applications	India's Status/Reserve	Other detail
Lithium 	⊙ Used in batteries for electric vehicles (EVs) and electricity storage systems.	⊙ Reserves have been identified in **Jammu & Kashmir.**	⊙ The **lithium triangle (Chile, Argentina and Bolivia)** caters to approximately 60 per cent of the world's lithium needs. ⊙ **Major Producer:** China, Australia, etc.
Cobalt 	⊙ Used in lithium-ion batteries, superalloys, and catalysts.	⊙ Dependent over import from countries like China. ⊙ **Odisha has the largest reserve.**	⊙ **Major Producer:** Democratic Republic of the Congo (DRC)
Copper 	⊙ Graphite (plumbago or blacklead)	⊙ More than 50% India's Copper Reserves are concentrated in **Rajasthan.** ⊙ **Key Mines:** Khetri (Rajasthan), Malanjkhand (Madhya Pradesh), etc.	⊙ Second largest non-ferrous metal by usage after Aluminium. ⊙ **Major producers:** China and Peru.
Graphite (plumbago or blacklead) 	⊙ Used in battery anodes, lubricants, and fuel cells. ⊙ Used as **moderator** in nuclear reactors.	⊙ It's reserve found in Arunachal Pradesh, Jharkhand, and Tamil Nadu.	⊙ Stable form of naturally occurring **Carbon.** ⊙ **Major Producer:** China
Nickel 	⊙ Used in stainless steel, as an electroplating material, and aerospace industries.	⊙ Entire demand is met through imports.	⊙ **Major Producers:** Indonesia and Philippines
Tantalum 	⊙ Used in electronics, aerospace, and medical implants	⊙ Entire demand is met through imports.	⊙ **Major Producer:** DRC
Tungsten 	⊙ Used in cutting tools, electronics, and alloy steels.	⊙ Resources of tungsten-bearing minerals are mainly distributed in **Karnataka, Rajasthan, Andhra Pradesh and Maharashtra.**	⊙ Also known as '**wolfram**' is a very dense lustrous greyish white to steel-grey metal. ⊙ **Major Producer:** China
Rare Earth Elements (REE) 	⊙ Used in high-tech electronics (Permanent magnets for electricity generators), defense, and renewable energy	⊙ India has reserves in Odisha, Kerala, and Andhra Pradesh.	⊙ REE are a collection of 17 elements including **scandium, yttrium, lanthanides, etc.** ⊙ **Major Producer**: China

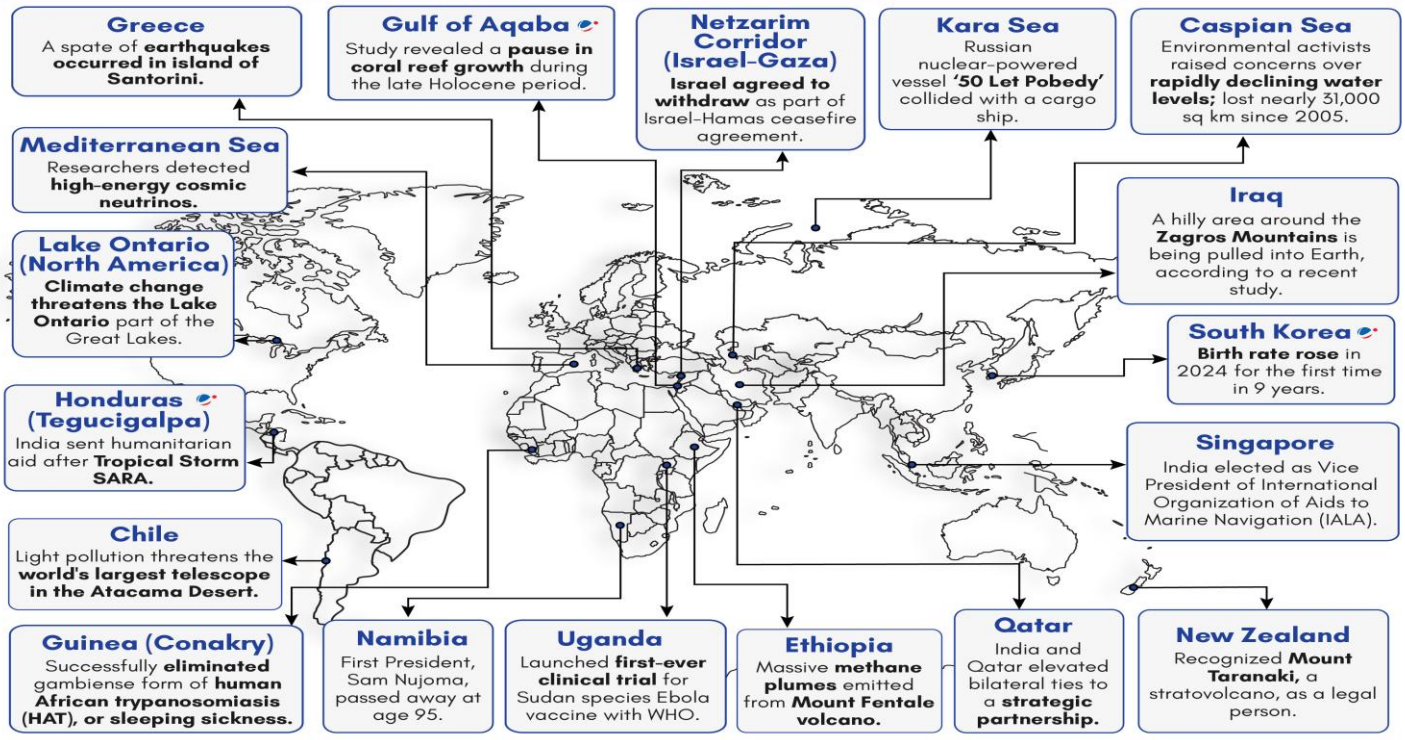
Critical Minerals	Key Applications	India's Status/Reserve	Other detail
Tin 	⊙ Used in soldering, coatings, and alloys (e.g. solders).	⊙ **Haryana and Chhattisgarh** holds majority of reserves.	⊙ **Major Producer:** China
Titanium 	⊙ Used in missiles and rockets, medical implants, and white titanium dioxide pigment.	⊙ Key reserves are found in **Kerala, Tamil Nadu, Andhra Pradesh etc.**	⊙ **Ilmenite** and **rutile** are the two chief minerals of titanium. ⊙ **Major producer:** China and Japan.
Cadmium 	⊙ Used in batteries, coatings, and critical and has safe-ty-related applications in the defence, etc.	⊙ Found as a **by-product of zinc mining** in India.	⊙ **Major Producer:** China and South Korea

12. PLACES IN NEWS

India



World



13. PERSONALITIES IN NEWS

Personality	About	Ethical Values exhibited by the Personality


Sant Guru Ravidas
	About Sant Guru Ravidas
	• Born in **14th Century in Varanasi,** he was Bhakti Saint of the **Nirguna bhakti movement.**
	• His teachings **rejected temple-based rituals** and advocated **devotion to nirankar (the formless God)** while continuing one's livelihood.
	• **Key contributions:**
	  ▸ He opposed system of **untouchability** and **caste discrimination.**
	  ▸ In his works, he presented a **vision of Begumpura -** a society free from fear, rulers, taxes, caste-based hierarchies, and spatial restrictions.
	  ▸ His devotional **songs & poems** are included in the **Guru Granth Sahib.**
		Social Justice
		• Moved by the dire conditions of people living at the lower end of the social ladder, he decided to devote his life to eradicating caste barriers by its spiritual and social critique.


Chhatrapati Shivaji Maharaj (1630 - 1680)
	Recently, Chhatrapati Shivaji Maharaj was remembered on his birth anniversary.
	About Chhatrapati Shivaji Maharaj
	• Chhatrapati Shivaji Maharaj was born **at Shivneri Fort.**
	• **Raised by his mother Jijabai and mentor Dadoji Konddeo,** he was deeply influenced by Hindu and Sufi teachings.
	Key Contributions
	• **Military Achievements and Guerrilla Warfare**
	  ▸ Began his conquests at 16 by capturing **Torna Fort.**
	  ▸ Developed guerrilla warfare tactics, **defeating Afzal Khan in 1659.**
	• **Administration and Governance**
	  ▸ Implemented **progressive governance, focusing on revenue reforms,** a disciplined military and religious tolerance.
	  ▸ His **coronation as Chhatrapati in 1674** formalized the Maratha Empire's independence.
		Valour and Integrity
		• He upheld the principles of just rule, emphasizing administrative efficiency and military strategy.
		• His commitment to religious tolerance and governance reforms showcased his integrity as a leader.

	• **Legacy**
	  ▸ Shivaji Maharaj's vision of **"Hindavi Swarajya" (self-rule)** continued to inspire generations.
	  ▸ Remembered as a **visionary leader, just ruler, and symbol of bravery** and independence.	

 **Veer Narayan Singh (1795-1858)**	Eminent Freedom Fighter during 1857 Revolt Veer Narayan Singh was remembered on his punyatithi (February 25). **About Veer Narayan Singh** • He was a landlord from **Sonakhan, Chhattisgarh.** • His ancestors were from the **Gond tribe** and were residing in Sarangarh. **Later on, they** changed their affiliation from the Gond to the **Binjhwar tribe** and moved to Raipur district. **Key Contributions** • **During the severe famine of 1856,** he took out grains from the grain warehouse and distributed them among the poor to save them from hunger. ▸ British arrested him in 1856 for looting a trader's grain stocks. • In 1857, he escaped **from prison and formed an army of 500 men at Sonakhan.** • **He spearheaded the 1857 Revolt** in Chhattisgarh and is considered as **"1st Chhattisgarhi freedom fighter".**	**Courage and Empathy** • He demonstrated immense courage by revolting against British rule and standing up for the oppressed. • His act of distributing grain to the poor during a famine reflected his deep empathy for the underprivileged.
 **Maharishi Dayanand Saraswati (1824 - 1883)**	**Maharishi Dayanand Saraswati** was remembered on his birth anniversary. **About Maharishi Dayanand Saraswati** • He was born at Kathiawar (Gujarat). **Key-Contribution** • **Religious Reforms:** He established **Arya Samaj** in Bombay in **1875.** He was **against idol worship and** ritualism. • **Social Reforms: He opposed caste system,** and denounced untouchability as inhuman.	**Equality and Rationalism:** • His strong stance against the caste system and his emphasis on gender equality underline his commitment to seeing all humans as fundamentally equal.

	• **Women Empowerment:** He also stood for Women's education. He **opposed infanticide** and evil practices of **child marriage** and **enforced widowhood.** • **Literary:** Satyartha Prakash, Veda Bhashya Bhumika, Sanskar Vidhi.	• Advocating a return to the Vedas and challenging prevalent superstitions, he emphasized the importance of logical reasoning and critical thinking in religious and social practices.


Jagadish Chandra Bose (1858 - 1937)
	Anusandhan National Research Foundation (ANRF) has announced the launch of the **J. C. Bose Grant (JBG)**, a new scheme, to recognize contributions of senior Indian scientists.
	About Jagadish Chandra Bose
	• He was the **first Asian to be awarded a** US patent in 1904.
	• He investigated of **radio microwave optics** and considred as the father of radio and wire-less communication.
	Key contributions
	• He was the first person to prove that plants also have the ability to feel pain and affection.
	• **Key Inventions:**
	  ▸ Cresco graph, used for measuring the growth in trees.
	  ▸ Invented **first wireless detection devices.**
	• He founded the **Bose Institute,** a premier research institute in 1917.
	• **He** is **considered the father of** Bengali science fiction.
	• **Key Literary work:** science paper "On the Similarity of Responses in Inorganic and Living Matter", "The Nervous Mechanism of Plants", and Niruddesher Kahini (The Story of the Missing One).
		Pioneering spirit and Dedication to Knowledge
		• He made pioneering contributions to radio waves, microwave optics, and plant physiology, emphasizing the interconnectedness of life.
		• His research and inventions, such as the crescograph, reflected his unwavering commitment to scientific exploration and truth.

Gopal Krishna Gokhale (1866-1915)

India remembers the visionary leader **Gopal Krishna Gokhale** on his **death anniversary**

About Gopal Krishna Gokhale

- **Birth:** Ratnagiri district, Maharashtra

Key Contributions

- He **became Secretary of the Sarvajanik Sabha** and was also associated with **the journal 'Sudharak'.**
- Founded: **Servants of India Society** in **1905.**
- **The Indian National Congress session of 1905 was held under his leadership.**
- **Mahatma Gandhi** referred to Gokhale as his mentor and guide.

Public service and selflessness in public life

- He founded a group 'the Servants of India Society', which trained people to be selfless workers so they could work for the common good of the people.
- He made a great effort to convince the Britishers in order to bring reforms in social and political life of the country.

Sarojini Naidu (1879 – 1949)

National Women's Day was observed on **February 13** to honour Sarojini Naidu's legacy in independence, women's rights, and empowerment.

About Sarojini Naidu

- Also known as the **'Nightingale of India'** or **'Bharat Kokila',** she was a prominent leader and poet in India's freedom struggle.
- In 1947, she became the **first woman** to serve as the **Governor of the United Provinces** in independent India.

Key Contributions

- Joined the **independence movement** after the 1905 partition of Bengal.
- Co-founded the **Women's Indian Association in 1917.**
- She was part of the **All India Home Rule League** in 1919.
- In 1925, she became the **first Indian woman president of Indian National Congress.**
- Naidu was a significant leader in both the **Civil Disobedience and Quit India Movements.**
- In 1931, she accompanied Gandhi to the **Second Round Table Conference in London.**
- **Literary work:** The Golden Threshold, The Bird of Time (1912), The Broken Wing, etc.

Justice and Leadership

- She was a fearless advocate for women's rights and freedom, promoting justice through active participation in the independence movement.
- Her leadership in the Indian National Congress and advocacy for equality showcased her unwavering commitment to social reform.

Field Marshal K.M. Cariappa (1899-1993)

Field Marshal K.M. Cariappa was remembered on his **birth anniversary.**

Key Contributions:

- **He was** independent **India's first Commander-in-Chief** of the **Indian Army**—a role **previously** reserved for the **British.**
  - **Army Day,** celebrated every **January 15,** marks the day he took over as Commander-in-Chief, replacing General Sir Francis Roy Bucher.
- **Military Career: 1919-1953**
  - He is the **first Indian to command a battalion in the Indian Army.**
  - During **World War II,** he served in the **Middle East and Burma.**
- Following his **retirement,** he served as **Indian high commissioner to Australia & New Zealand.**
- The Government conferred the **rank of Field Marshal on Cariappa in 1986.**

Leadership and Integrity

- His exemplary leadership in transitioning the Indian Army from a colonial force to a national institution highlights his vision and capability to inspire others towards a common goal.
- He showed commitment to building a national army based on merit reflecting his dedication to equality and fairness.

Shri Nanaji Deshmukh (1916 – 2010)

Union Home Minister addressed the Remembrance Day ceremony on the 15th death anniversary of Bharat Ratna Nanaji Deshmukh.

Shri Nanaji Deshmukh

- Nanaji Deshmukh was born in **the Hingoli district of Maharashtra.**
- Nanaji founded **Deendayal Research Institute (DRI) in 1972** to validate the philosophy of **Integral Humanism propounded by Pandit Deendayal Upadhyaya.**

Key Contributions

- He was the initiator of the **sampooran kranti (total revolution) a** call of Loknayak Jayaprakash Narayan and waged a crusade against the Emergency in 1975.
- He actively participated in **Bhoodan Movement** started by Acharya Vinoba Bhave.
- He established **Chitrakoot Gramodya Vishwavidyalaya** (India's first rural university) in Chitrakoot and went on to become its first Chancellor).

Selfless Service and Social Upliftment

- He dedicated his life to rural development and nation-building, promoting integral humanism and empowering communities.
- His focus on education, self-reliance, and rural welfare reflected his commitment to selfless service.

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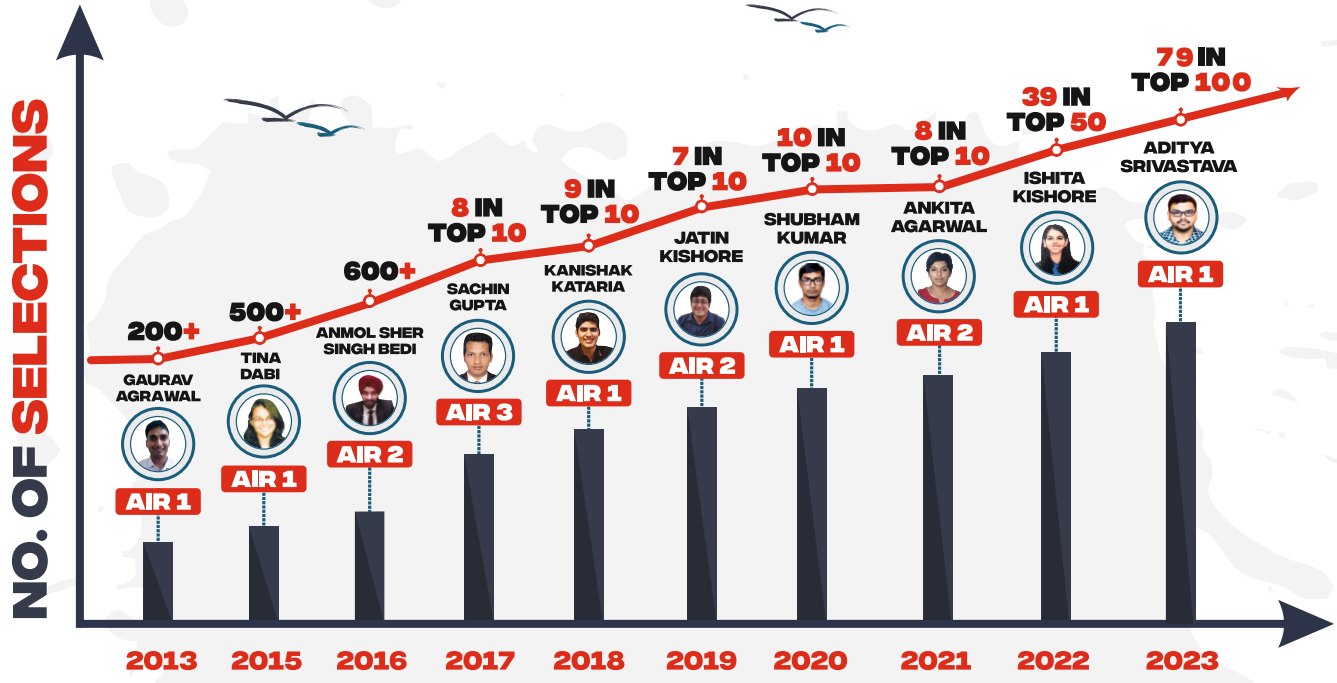

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AHMEDABAD: 4 JAN | BENGALURU: 1 APR | BHOPAL: 25 MAR | CHANDIARH: 18 JUN

HYDERABAD: 2 APR | JAIPUR: 5 APR | JODHPUR: 17 MAR | LUCKNOW: 9 APR | PUNE: 4 MAR

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▸ प्रारंभिक, मुख्य परीक्षा और निबंध के लिए महत्वपूर्ण सभी टॉपिक का विस्तृत कवरेज

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JODHPUR 17 MARCH	LUCKNOW 9 APRIL	PUNE 4 MARCH

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NOTE-Students can watch LIVE video classes of our COURSE on their ONLINE PLATFORM at their homes. The students can ask their doubts and subject queries during the class through LIVE Chat Option. They can also note down their doubts & questions and convey to our classroom mentor at Delhi center and we will respond to the queries through phone/mall.

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Heartiest Congratulations

to all Successful Candidates

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