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2027, 2028 & 2029

**DELHI : 12 NOVEMBER, 8 AM | 25 NOVEMBER, 5 PM**

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## NOTE:

Dear Students,

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



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



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



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



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

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# 1. POLITY AND GOVERNANCE

## 1.1. PRISON REFORMS

### Why in the News?

Recently, National Crime Records Bureau (NCRB) has released Prison Statistics India (PSI) 2023 Report.

#### Governance of Prisons in India

- **Prisons/ Persons detained therein** is a 'State' subject (**Entry 4**) under **Schedule VII of the Constitution**. Therefore, administration and management of prisons and prisoners is the **responsibility of respective State Governments/ UT administrations**.
  - **Union Ministry of Home Affairs** has also been providing regular guidance and support to States and UTs on various issues relating to prison administration.
- Earlier, prison was governed by Prison Act, 1894 and Prison manuals of respective state governments.
  - MHA has prepared **Model Prisons and Correctional Services Act, 2023** which may serve as a "guiding document" for States to reform British era laws.
  - **Model Prisons Act, 2023 assimilates** relevant provisions of the **Prisoners Act, 1900** and the **Transfer of Prisoners Act, 1950**.

### Need for Prison Reforms (PSI, 2023)

	<b>High Undertrials</b> 73.5% of jail inmates.
	<b>Overcrowding</b> National occupancy: 120.8%; Delhi: 200.2%.
	<b>Staff Vacancies</b> 32.78% of prison staff posts.
	<b>Poor Staff Training</b> Only 20.6% jail staff got refresher/specialise/re-orientation training (2023).
	<b>Inadequate Women's Facilities</b> Only 35 women's jails for 21,500+ inmates; No separate jails in 20 States/UTs.
	<b>Weak Rehabilitation Efforts</b> Only 2,245 convicted inmates rehabilitated.

#### Judicial Pronouncements related to Prisons

- **Suhas Chakma v. Union of India & Others (2024)**: Supreme Court observed that **establishing open prisons** is one of the solutions for overcrowding and also promote rehabilitation.
  - An **open prison is penal establishment** in which prisoners serve their sentence with **minimal supervision and perimeter security**, and are **not locked up** in prison cells. Open prison model was adopted in Rajasthan.
- **Hussainara Khatoon v. State of Bihar (1979)**: Supreme Court held that **right to a speedy trial** is a fundamental right under **Article 21**, resulting in the release of thousands of undertrial prisoners.

#### Measures taken for Prison Reforms

- **MHA amended Model Prison Manual, 2016 rules and Model Prisons and Correctional Services Act, 2023**: To address caste-based discrimination within prisons across country.
  - The amendments have been made in compliance with Supreme Court order on caste-based discrimination of prisoners in **Sukanya Santha vs. UoI & Others Case**.
  - **Model Prison Manual 2016** aims at bringing in basic **uniformity in laws, rules, and regulations** governing administration of prisons and management of prisoners all over the country.
- **Support to Poor Prisoners Scheme**: It provides **financial assistance to States/UTs for extending relief to poor prisoners** who are unable to secure bail or release from prison due to non-payment of fine, on account of financial constraints.
- **E-Prison Project**: It supplements Prisoner Information Management system, developed by National Informatics Centre, which provides a **centralized approach for recording and managing prisoner information** and generating different kinds of reports.
- **Modernization of Prison Project**: It aims to **fill existing gaps in security infrastructure** of jails and **provide new security equipments to jails** in line with modern day technologies.
- **FASTER (Fast and Secured Transmission of Electronic Records) system of Supreme Court**: To resolve delays in communication of bail orders from courts to prison authorities.

## Way Forward/ Recommendations

- **Follow Supreme Court's three Principles regarding imprisonment and custody:**
  - First, a person in prison does not become a non-person.
  - Second, a person in prison is entitled to all human rights within the limitations of imprisonment.
  - Third, there is no justification for aggravating the suffering already inherent in the process of incarceration.
- **Recommendations of Parliamentary Committee on Home Affairs:**
  - Utilise technology like **trackable bracelets** to keep **track of prisoners on bail**.
  - **Renovate colonial-era prisons** to preserve their heritage and earn revenue by **encouraging tourism**.
  - **State Governments may create a Prison Development Fund** for the welfare activities of the prisoners.
- **Recommendations of Justice A.N. Mulla Committee:**
  - Setting up an **All India Service** called **Indian Prisons & Correctional Service**.
  - **After-care, rehabilitation and probation** to be an integral part of prison service.
  - **Press and public to be allowed** inside prisons and allied correctional institutions periodically.
  - **Undertrials in jails to be reduced to bare minimum** and they be kept away from convicts.
- **Recommendations of Justice Amitava Roy Committee:**
  - **Establishment of special fast-track courts** to handle petty offenses and cases pending for over 5 years.
  - **Use of Video Conferencing** for the production of senior citizens and sick prisoners in courts.
  - **Establishment of exclusive women's prisons**, and medical wards for female inmates; formulation of welfare schemes for transgender prisoners etc.
  - **Mandatory segregation of undertrials, convicts, and first-time offenders** within prisons to reduce violence.

## Conclusion

The Model Prisons and Correctional Services Act, 2023, and recent judicial pronouncements reflect a growing national consciousness that justice must extend beyond punishment to encompass dignity, reform, and rehabilitation. By harnessing technology, strengthening human resources, and fostering empathy-driven correctional practices, prisons can evolve into true reformatory institutions that prepare individuals for constructive re-entry into society.



**NCRB**



**New Delhi**

 **Origin:** 1986 (based on recommendations of the **Tandon Committee**, National Police Commission (1977-1981) and the **MHA's Task force** (1985)).

 **Ministry:** Ministry of Home Affairs (MHA)

 **Key functions:**

- **Data Repository:** Acts as repository of information on crime and criminals to assist investigators e.g., National Database of Sexual Offenders (NDSO)
- **National Warehouse:** For the **fingerprint records** of Indian and foreign criminals. **National Automated Fingerprint Identification System (NAFIS)** was integrated into the NCRB, providing a searchable database
- **Coordination:** It is central nodal agency for Crime and Criminal Tracking Network & Systems.
- **Publication:** It publishes annual National **Crime Statistics, including 'Crime in India', 'Accidental Deaths & Suicides in India', and 'Prison Statistics'**.

### 1.1.1. CRIME IN INDIA REPORT: 2023

Recently, the **National Crime Records Bureau (NCRB)** published the **Annual Crime in India report 2023**.

#### Key Highlights of the report

- **Overall cases registered:** **Cognizable crimes** (where an arrest can be made without warrant) saw an increase of 7.2% over 2022.

- This equates to a crime occurring every 5 seconds.
- **Cyber Crime:** Registered cases **surged by 31.2%** over 2022. The predominant motive behind these crimes was **fraud**, followed by sexual exploitation.
- **Crimes Against Scheduled Tribes (STs):** Saw a **28.8% increase** in cases registered. This is largely attributed to the **ethnic violence in Manipur**.
- **Crimes Against Children:** Cases **increased** by 9.2% over 2022. The highest number of cases were registered under Kidnapping and abduction, followed by the Protection of Children from Sexual Offences (POCSO) Act.
- **Crimes Against Women:** Saw a **marginal increase** of 0.7% over 2022.

### 1.1.2. ACCIDENTAL DEATHS & SUICIDES IN INDIA 2023 REPORT

Recently, the **National Crime Records Bureau (NCRB)** published **the Accidental Deaths & Suicides in India 2023 Report**.

#### Key Highlights of Report

- **Increase in Suicides:** Total reported suicides showed an increase of 0.3% (2023) as compared to 2022.
  - However, rate of suicides has decreased by 0.8% during 2023 over 2022.
- **Rate of Suicide rate: A & N Islands (Highest) > Sikkim > Kerala.**
  - Cities have higher suicide rate as compared to all-India suicide rate.
- **States with higher Percentage Share of Suicides: Maharashtra (Highest) > Tamil Nadu > Madhya Pradesh > Karnataka > West Bengal**
- **Male : Female Ratio:** 72.8 : 27.2
- **Major Causes:** Family Problems (31.9%, other than marriage related problems) > Illness (19.0%) > Drug Abuse/Alcoholic Addiction (7.0%) > Marriage Related Issues (5.3%) > Love Affairs (4.7%) > Bankruptcy or Indebtedness (3.8%) > Unemployment (1.8%) > Failure in Examination (1.4%)
- **Farmer Suicide:** A total of 10,786 persons accounting for 6.3% of total suicides victims
  - **Zero suicides of Farmers/Cultivators/Agricultural Labourers:** West Bengal, Bihar, Odisha, Jharkhand, Himachal Pradesh, Arunachal Pradesh, Goa.

#### Initiatives taken to prevent Suicides

- **National Suicide Prevention Strategy (2022):** Aims to reduce suicide mortality by 10% by 2030.
- **Tele-MANAS (Tele Mental Health Assistance and Networking Across States):** It provides 24/7, free, tele-mental health support.
- **National Mental Health Programme (NMHP):** To provide accessible, decentralized mental healthcare.
- **Manodarpan:** Ministry of Education project to provide psychosocial support for the mental health and well-being of students, teachers, and families.

### 1.2. IT (AMENDMENT) RULES, 2025

#### Why in the news?

Union Ministry of Electronics and Information Technology (MeitY) proposed **amendments to Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** (IT Rules 2021) to check misuse of Synthetically Generated Information, including Deepfakes.

#### More on the News

- The amended Rules shall come into effect from November 15, 2025 and be called as **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2025**.



**Read our previous coverage on rising suicides among students**



**Read our previous coverage on Deepfakes**

- Proposed amendments aim to **strengthen due diligence obligations of intermediaries'** particularly Social Media Intermediaries (SMIs) and Significant Social Media Intermediaries (SSMIs).

#### About Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

- Originally notified in 2021 and subsequently amended in 2022 and 2023. They prescribe-
  - Framework for **regulation of content by online publishers** of news and current affairs content, and curated audio-visual content.
  - **Due diligence obligations on intermediaries**, including SMIs with objective of ensuring online safety, security and accountability.
- **Defines SMIs and SSMIs as:**
  - **SMI** means an intermediary which primarily or solely **enables online interaction between two or more users** and allows them to create, upload, share, disseminate, modify or access information using its services.
  - **SSMIs** mean a social media intermediary having number of registered users in India above such threshold as notified by Central Government.

#### Key Features of the proposed Amendments

Aspect	Details
<b>Defines Synthetically Generated Information (SGI)</b>	<ul style="list-style-type: none"> <li>● Information that is artificially or algorithmically created, generated, modified or altered using a computer resource, in a manner that appears reasonably authentic or true.</li> </ul>
<b>Due Diligence in Relation to SGI</b>	<ul style="list-style-type: none"> <li>● Mandates that intermediaries offering computer resources enabling creation or modification of SGI must ensure such <b>information is labelled or embedded with a permanent unique metadata</b> or identifier.</li> <li>● In <b>case of visual content</b>, label should <b>cover at least 10 percent of the total surface area</b>, and in <b>case of audio content</b>, it should cover the <b>initial 10 percent of the total duration</b>.</li> <li>● Label or identifier must <b>enable immediate identification of content as SGI</b>.</li> <li>● <b>Prohibits intermediaries</b> from modifying, suppressing, or removing such labels or identifiers.</li> </ul>
<b>Enhanced Obligations for SSMIs</b>	<p>It requires SSMIs to-</p> <ul style="list-style-type: none"> <li>● obtain a <b>user declaration on whether uploaded information is synthetically generated</b>;</li> <li>● deploy <b>reasonable and proportionate technical measures</b> including automated tools or other suitable mechanisms to verify such declarations;</li> <li>● ensure that <b>SGI is clearly and prominently displayed</b> with an appropriate <b>label or notice</b>.</li> </ul> <p><i>If they fail to comply, the platforms may lose the legal immunity they enjoy from third-party content.</i></p>
<b>Senior-level Authorisation</b>	<p>Any intimation to intermediaries for <b>removal of unlawful information</b> can now only be issued by-</p> <ul style="list-style-type: none"> <li>● Senior officer at <b>joint secretary rank or above</b> in central ministries, their equivalents in states,</li> <li>● <b>Deputy Inspector General (DIG) or higher</b> in police forces.</li> </ul>

#### Challenges in identifying AI Generated Content

- **Lack of benchmarks:** Existing AI detectors have **high error rates** due to lack of standardized benchmarks, thus often leads to False Positives (flagging human content as AI) or False Negatives (failure to identify AI-generated text in document).

- **Lack of capacity:** The sheer volume of AI-generated content **exceeds the processing and storage capabilities of most detection systems**. Further, scaling up detection system will pose financial challenges.
- **Anonymity:** AI-generated content/deepfakes can be made anonymously or housed on foreign servers. Further, lack of unified laws or regulatory mechanism hinders cross-border verification and traceability.
- **Imperceptibility:** GenAI (Generative AI) generated content **blend seamlessly with human created content**, making it challenging for detection systems to identify.
  - E.g., Tools like Midjourney, DALL-E, and Stable Diffusion can generate hyper-realistic images that are often difficult to detect as AI-generated.
- **Balancing Innovation and Privacy:** Detection mechanisms often **raise privacy concerns due to metadata tracking**. Over-regulation could constrain AI innovation while under-regulation risks unchecked spread of misinformation.

## Need to Label AI Generated Content



-  Protect Intellectual Property (IP).
-  Prevent misinformation and deepfakes.
-  Strengthen accountability through traceability and liability assessment
-  Educational and Research Integrity to help uphold academic honesty.
-  To ensure authenticity and credibility of information used in sectors like healthcare, financial services, etc.

### Initiatives taken to tackle Deepfake

#### India

- **Election Commission of India (ECI) issued advisory on disclosure of SGI and AI-generated content during elections:** All political parties shall ensure that
  - Any synthetically generated or AI-altered image, audio, or video used or disseminated for campaigning purposes shall bear a **clear, prominent, and legible label such as "AI-Generated", "Digitally Enhanced", or "Synthetic Content"**, covering **at least 10% of the visible display area (or initial 10% duration for audio content)**.
    - > The label in the case of video content shall be carried as part of the top hand of the screen.
  - Any instance of AI-altered image, audio, or video, misinformation, or manipulated content detected on official party handles shall be **taken down within 3 hours of being noticed** or reported.
- **Digital Personal Data Protection Act, 2023:** Ensures that **personal data is processed lawfully by Data Fiduciaries (including AI companies)** with user consent and reasonable security safeguards. Deepfakes using personal data without consent can attract penalties under this Act.
- **Indian Cyber Crime Coordination Centre (I4C):** Empowers agencies to issue notices for removal or disabling access to unlawful content including deepfakes under IT Act read with IT Rules, 2021.
- **Others:** SAHYOG Portal by I4C, National Cyber Crime Reporting Portal, CERT-In, etc.

#### Global

- **EU's AI Act** mandates watermarking of synthetic content.
- **Denmark proposed new deepfake legislation as part of its digital copyright law** to protect individuals' rights from the impact of AI-generated deepfakes.
- **China rolled out its AI labelling rules**, under which content providers must now display clear labels to identify material created by AI.

### Way Forward

- **Digital framework:** A durable solution for AI content detection can be developed based on three pillars:
  - **Establishing a digital provenance framework, similar to Aadhaar**, embedding invisible yet verifiable signatures to authenticate content.

- **Implementing tiered accountability** that assigns responsibility based on the role and influence of platforms managing synthetic media.
- **Promoting AI literacy** to empower citizens to recognize manipulation.
- **Governance Architecture:** Develop regulatory structures, **standardized technical protocols, and robust oversight mechanisms** to strengthen AI content detection, while balancing privacy and ethical considerations.
- **Watermarking:** AI watermarking can provide a solution by embedding indelible markers into AI-generated content, **serving as a digital signature** that attests to the content's origin and integrity.
  - E.g., China's mandatory AI labeling rules.
- **Establish Global standards for AI-generated content detection:** Work towards **aligning domestic frameworks with international benchmarks** and periodically review policies to ensure robust and adaptive governance in the AI ecosystem.
- **Multi-stakeholder approach:** Adopt a multi-stakeholder approach by actively engaging government bodies, industry representatives, academia, and civil society in consultations to identify and share best practices for AI content detection.

## Conclusion

As India steps into the era of AI governance, harmonizing domestic regulations with global standards, fostering innovation-friendly safeguards, and enhancing public AI literacy will be crucial to building a safe and trustworthy online space that upholds both creativity and integrity.

## 1.3. REGULATION OF INDIA'S PHARMACEUTICAL SECTOR

### Why in News?

The World Health Organization (WHO) has voiced deep concern over gaps in India's drug safety regulations, following the deaths of at least 20 children from contaminated cough syrups.

### More on News:

- India's drug regulator has identified three contaminated cough syrups - Coldrif (Sresan Pharmaceuticals), Respifresh (Rednex Pharmaceuticals), and ReLife (Shape Pharma).

### Regulation of Pharma Products in India:

- **The Drugs and Cosmetics Act, 1940 & Drugs and Cosmetics Rules, 1945:** It governs the import, manufacture, distribution, and sale of drugs and cosmetics in India. It ensures that drugs meet the required standards of quality, safety, and efficacy.
- **State Drug Regulatory Authorities:** It is empowered to grant licenses, conduct inspections, and ensure compliance with drug laws at the state level.
- **The Central Drugs Standard Control Organisation (CDSCO)** under Directorate General of Health Services, Ministry of Health & Family Welfare is the National Regulatory Authority (NRA) of India.
  - Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality of imported Drugs in the country.
- **The National Pharmaceutical Pricing Authority (NPPA):** It enforces the provisions of the Drugs (Prices Control) Order.
- **Good Manufacturing Practices (GMP):** Schedule M of the Drugs and Cosmetics Rules prescribes Good Manufacturing Practices (GMP), which align with World Health Organization (WHO) guidelines.

### Key challenges leading to cases of spurious drugs in India:

- **Regulatory Gaps:** Oversight by the **CDSCO** and state authorities is inconsistent & fragmented resulting in weak monitoring of pharmaceutical companies.

### Data Bank

#### Status of India's Pharmaceutical Sector

- **Global Rank:** 3rd largest producer globally by volume and 14th largest producer by value.
- **Market Value:** \$50 billion (2023-24)
- **Global Supply:** India supplies 20% of the world's generic medicines.

- **Toxic Contamination or Substandard Medicines:** E.g: Investigations have shown some cough syrups contained toxic substances like **Diethylene Glycol (DEG)**, a toxic substance found in industrial solvents.
- **Poor Quality Control:** Lapses in manufacturing practices, inadequate lab testing, and **failure to adhere to Good Manufacturing Practices (GMP)** allow unsafe drugs to reach the market.
- **Supply Chain and Storage Issues:** Improper storage conditions and poor cold chain management can degrade medicines, making them unsafe.
- **Absence of Mandatory Recall Law:** India lacks a **binding national law** to mandate the recall of substandard drugs, a measure discussed since 1976 but never implemented.
- **Rising Threat of Online Spurious Drugs:** WHO warns that 1 in 10 medicines in low- and middle-income countries are substandard or falsified, with unauthorized online platforms becoming a major channel for their spread.

### Recommendations

Standing Committee on Chemicals and Fertilizers (2024-25), has emphasized the need for urgent and concrete measures to strengthen enforcement, regulatory oversight, and public awareness to combat spurious and adulterated drugs.

- **Rigorous Enforcement of Laws:** The Drugs and Cosmetics Act, 1940, and the Drugs Rules, 1945, must be enforced rigorously across the country to eliminate the menace of spurious and adulterated drugs.
  - **Swift Legal Action and Stronger Penalties:** Conduct prompt prosecutions, impose stricter penalties, and shut down non-compliant manufacturers.
  - **Strengthened Monitoring and Inspections:** Ensure strict monitoring, timely inspections, and full compliance, especially in high-risk regions.
- **Legally Enforceable GDP Guidelines:** Make CDSCO guidelines on Good Distribution Practices (GDP) legally enforceable to strengthen quality standards throughout the supply chain.
- **Enhanced Inter-Agency Coordination:** Strengthen collaboration with law enforcement and regulatory agencies to dismantle networks producing counterfeit drugs.
- **Enforcing Good Manufacturing Practices (GMP):** Implement updated Good Manufacturing Practices at the earliest.
- **National awareness campaign:** Launch a national awareness campaign to educate consumers and healthcare professionals about identifying counterfeit medicines and reporting violations.

## 1.4. TRIBAL GOVERNANCE

### Why in the News?

Special Gram Sabhas held across 1 lakh tribal-dominated villages and Tolas adopted the **Tribal Village Vision 2030 Declaration** as part of **Adi Karmayogi Abhiyan**.

### Key Features of Tribal Village Vision 2030 Declaration

- **Village-Level Priorities:** Each declaration outlines **actionable goals in education, health, livelihood, social and financial inclusion, and infrastructure** at the village level.
- **Institutional Mechanism:** Establishment of **Adi Sewa Kendras** in every village as **single-window citizen service centres**, with villagers contributing 1 hour per week of voluntary service (**Adi Sewa Samay**).

### About Adi Karmayogi Abhiyan

- It is a national movement to build a **decentralized tribal leadership and governance ecosystem**.
- **Coverage:** It marks the **world's largest tribal grassroots leadership programme**, covering 11 crore citizens in 30 States and UTs.
  - It is **world's largest tribal grassroots leadership mission**.
- **Ministry:** Ministry of Tribal Affairs.
- **Key Objectives**
  - Train and mobilize **20 Lakh tribal changemakers across 1 Lakh villages in 550 tribal-dominated districts**
  - Facilitate **Village Vision 2030 Planning & Development Action Plan**
  - Promote last-mile convergence & effective service delivery

- Capture & amplify voices of tribal communities
- **Three pillars of leadership:** Adi Karmayogi, Adi Sahyogi, Adi Saathi.

## Tribal Governance

- **Ministry of Tribal Affairs:** Founded in 1999 to provide organised approach to integrated socioeconomic development of Scheduled Tribes.
- **The Panchayat (Extension to the Scheduled Areas) Act, 1996 (PESA):** It seeks to empower tribal communities in practicing self-governance and preserving their core beliefs, values, and way of life in Scheduled Areas.
  - It empowers Gram Sabhas, giving them authority over resources, land transfers, socio-economic development etc.
- **Fifth and Sixth Schedule:** Sixth Schedule of the Constitution provides autonomy to tribal areas in the northeastern states of Assam, Meghalaya, Tripura and Mizoram
  - While, the Fifth Schedule deals with the administration of scheduled areas and scheduled tribes in states except those mentioned in the Sixth Schedule.
- **Customary tribal institutions (e.g., Adivasi Sabhas, Tribal Panchayats):** Such institutions continue to play a meaningful role in internal governance, culture, resource management and conflict resolution in tribal communities, often co-existing with formal Panchayat institutions.

## Reasons to promote grassroot population in governance

- **Inclusiveness:** When people take part in governance, they feel more connected and valued.
  - For example, social audits in MGNREGA let local communities, especially the poor, check how funds are used and ensure their needs are addressed.
- **Trust-building:** Active citizen participation programs foster trust in government institutions.
  - For example, **Gram Sabhas** fosters community trust at the grassroot level.
- **Accountability and Transparency:** For instance, RTI empowers citizens by providing them information to hold government officials and agencies accountable for their actions.
- **Raise concerns:** For example, Environmental Impact Assessment (EIA) provides opportunity to common people to express their opinions on adverse effects of the development projects on social and environmental issues.
- **Social Justice and Representation:** Political participation provides tribal communities with representation, challenging age-old marginalization and empowering them in leadership roles.

## Issues in Tribal Governance

- **Gaps in PESA implementation:** Many states have been slow to adopt PESA provisions in state laws, and there is **lack of awareness and capacity** among local officials and communities about their rights under PESA.
  - E.g. Despite being formed in 1996, Jharkhand is yet to implement PESA.
- **Limited Voice in Decision-Making:** Studies have found that the formal Gram Panchayat system, often does **not ensure adequate representation of tribal voices or preservation of their cultural heritage**.
  - Moreover, in Fifth Schedule states, **Tribes Advisory Councils (TACs)** are purely advisory and have largely been **ineffective in most states**.
- **Land Alienation and Displacement:** In many areas, tribals are vulnerable to losing their land to outsiders or development projects.
  - Even in regions with special constitutional protections (like Sixth Schedule areas), **land alienation, displacement, and socio-economic marginalization** of tribal people have been observed.
- **Poor Implementation of Welfare Policies:** Schemes targeting tribal welfare, such as the Forest Rights Act (FRA), often suffer from weak execution.
  - Over 38% FRA claims for land have been rejected till November 2022 (Central Government).
- **Socio-Economic Marginalization:** Poverty levels are very high, about **45% of tribals in rural areas and 24% in urban areas live below the poverty line**.
  - Many are **excluded from economic opportunities due to low education** levels (literacy rate for Scheduled Tribes in India is 72.1% according to PLFS report 2022)

## Steps towards Tribal Development

- **Pradhan Mantri Janjati Adivasi Nyaya Maha AbhiyaN (PM JANMAN):** A time-bound initiative for **socio-economic development of 75 Particularly Vulnerable Tribal Groups (PVTGs)** residing in 18 states and one UT.
- **Dharti Aaba Janjatiya Gram Utkarsh Abhiyan (DAJGUA):** Mission seeks to develop enabling infrastructure and enhance socio-economic conditions in selected tribal-majority villages (with a population of 500 or more, and at least 50% tribal residents as well as villages in Aspirational Districts with a tribal population of 50 or more).
- **Development Action Plan for Scheduled Tribes (DAPST):** Under it, besides Ministry of Tribal Affairs, 41 Ministries/Departments are allocating certain **percentage of their total scheme budget every year for tribal development.**
- **PM Adi Adarsh Gram Yojana (PMAAGY):** Aims at transforming villages with significant tribal population into model village (Adarsh Gram) covering about 40% of the total tribal population.
- **Development of Education:** Eklavya Model Residential Schools, National Fellowship Scheme, Pre Matric Scholarship scheme, Top Class Education Scheme etc.
- **Promotion of Entrepreneurship:** Van Dhan Vikas Kendras (sanctioning of 4,465 VDVKS across 29 states and union territories), Pradhan Mantri Janjatiya Vikas Mission, and Tribal Cooperative Marketing Development Federation of India (TRIFED) outlets with 118 TRIBES INDIA outlets.

## Conclusion

The Tribal Village Vision 2030 and Adi Karmayogi Abhiyan represent a transformative shift in India's approach to tribal development, from a top-down welfare model to a bottom-up, community-led governance paradigm.

## 1.5. NEWS IN SHORTS

### 1.5.1. PROMOTION AND REGULATION OF ONLINE GAMING RULES, 2025 NOTIFIED

The rules notified by the **Ministry of Electronics and IT** will operationalize the Promotion and Regulation of Online Gaming Act, 2025.

- The act categorizes online games as **E-Sport, Online Social Games, and Online Money Games.**
- It prohibits all forms of **online money games** (e.g., poker & fantasy sports), while only allowing “**online social games**” and e-sports.

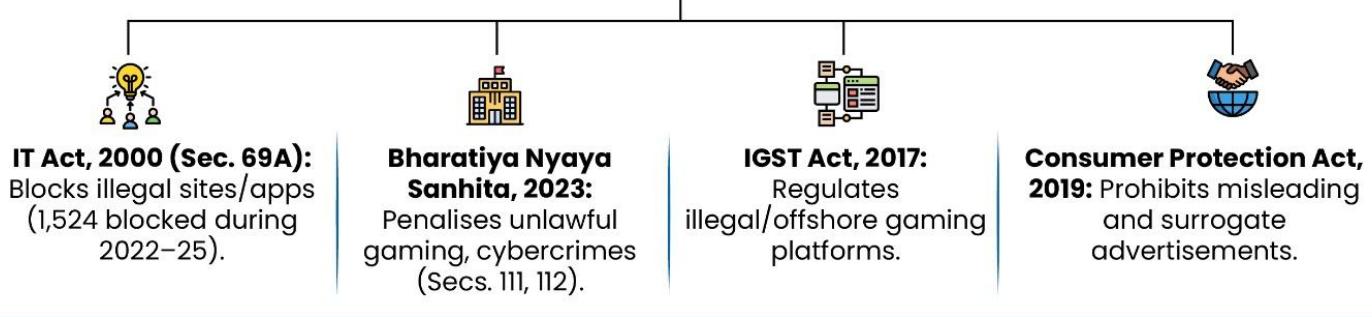
#### Key Highlights of Rules

- **Online Gaming Authority of India (OGAI):** It will be established to regulate online games, maintain registry, decide legality, impose penalties etc.
  - It will have a chairperson and five other members from various government ministries.
- **Registration of Games:** Both **social games and e-sports** must register with the OGAI and seek a **valid Certificate of Registration**.
- **3-Tiered Grievance Redressal Mechanism:** Every registered **online game or e-sport provider** must maintain a functional grievance redressal mechanism for user complaints.
  - Appeals can be made to the **Grievance Appellate Committee** and then to the **Authority**.
- **Violation:** The draft rules propose to make violations a **non-bailable offence** and hold the **entire company staff liable** for facilitating any breach.



**Read our previous coverage on Promotion and Regulation of Online Gaming Act, 2025**

## Other Initiatives Against Online Gaming Risks



### 1.5.2. POSTAL BALLOT

According to ECI's notification, penultimate round of EVM counting shall be taken up only after complete counting of Postal Ballots.

#### About Postal Ballot

- Allows voters to **cast their votes on an electronically received postal ballot**, Avoiding the need to visit polling stations physically.
- Legal Framework:** Governed by **Conduct of Election Rules, 1961** and **Representation of People Act, 1951**.
- Eligibility:** Service voters, special voters, absentee voters (seniors above 85, persons with disabilities, etc.) those under preventive detention, and election duty personnel.
  - Service Voters** include Members of the Armed Forces, central armed police forces, government servants posted abroad etc.
  - Special voters** include the President, Vice President, Governors, Cabinet Ministers, other high-ranking dignitaries, etc. and their spouses.

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# फाउंडेशन कोर्स सामान्य अध्ययन

## प्रारंभिक एवं मुख्य परीक्षा 2027

इनोवेटिव क्लासरूम प्रोग्राम

- प्रारंभिक परीक्षा, मुख्य परीक्षा और निबंध के लिए महत्वपूर्ण सभी टॉपिक का विस्तृत कवरेज
- मौलिक अवधारणाओं की समझ के विकास एवं विश्लेषणात्मक क्षमता निर्माण पर विशेष ध्यान
- एनीमेशन, पॉर्टर प्लाइंट, लीडिंग जैसी तकनीकी सुविधाओं का प्रयोग
- अंतर - विषयक समझ विकसित करने का प्रयास
- योजनाबद्ध तैयारी हेतु करेंट ओरिएंटेड अप्रोच
- नियमित क्लास टेस्ट एवं व्यक्तिगत मूल्यांकन
- प्री फाउंडेशन कक्षाएं

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

DELHI : 25 नवंबर, 11 AM

JAIPUR : 7 नवंबर

JODHPUR : 10 नवंबर

AHMEDABAD | BENGALURU | BHOPAL | CHANDIGARH | DELHI | GUWAHATI | HYDERABAD | JAIPUR | JODHPUR | LUCKNOW | PRAYAGRAJ | PUNE | RANCHI

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## 2. INTERNATIONAL RELATIONS

### 2.1. RISE OF ANTI-IMMIGRATION POLICIES

#### Why in the News?

In the recent years, there has been a striking surge in anti-immigration rhetoric, protests, and policies worldwide from Western democracies to the parts of Asia.

#### More on the News

- Examples of recent events displaying **anti-immigration sentiments**-
  - Hike in H1B Visa fee by the US administration
  - Campaigns by Japan's Sanseito Party framing immigration as 'silent invasion'
  - Opposition to Indian migration in Australia organized under the banner of "**March for Australia**", etc.
- This is primarily because of the **rise of populism** where public opinion takes the form of hostility to immigration, the political response has invariably been to curb new immigration by reducing legal migration routes, reinforcing border protection, cutting the entitlements of new arrivals and, in general, trying to deter migrants.

#### Causes of rising Anti-Immigration Sentiment

- **Economic:** Immigrants are often perceived as **taking away local jobs, depressing wages**, especially in low-skill sectors, and put **strain on welfare systems**.
  - E.g., Perception of job loss and wage depression was a major driver of support for BREXIT in the UK.
- **Social and Cultural:** Migrants are seen as a **threat to national identity, language, religion, and traditions**, fuelling cultural anxiety among native populations, especially in societies facing demographic change.
  - E.g., Rising anti-immigration sentiment in Europe, the United States.
- **Political:** Populist and nationalist leaders **exploit public fears** (unemployment, crime, welfare strain) over immigration to **gain electoral support**.
  - E.g., Italy's Prime Minister Giorgia Meloni argued that the country faces a migrant "invasion".
- **Security:** Governments and citizens link migration with **illegal border crossings and terrorism**, heightening fear and opposition, or organized crime.
  - E.g., Post 9/11 stricter immigration laws in USA.
- **Misinformation:** Social media amplify **xenophobia through false narratives** (migrants "taking jobs" or "raising crime rates"), reinforcing negative stereotypes, creating mass fear and moral panic.
  - E.g., Fake news on migrant-related crimes spread through media in Germany intensified anti-immigrant sentiment.

#### Impact of Anti- Immigration

- **Economic Impact:** Restrictive immigration laws **reduce labour supply, especially in sectors dependent on migrant workers** (agriculture, construction), leading to rise in labour costs and slower economic growth.
  - E.g., Post-Brexit UK faced shortages of farming sector.
- **Demographic impact:** Anti-immigration policies can **worsen the ageing population crisis in developed countries**, leading to fewer working-age taxpayers, and rising dependency ratio.
  - E.g., Labour shortages in Japan and EU due to ageing population.
- **Socio-cultural:** Stricter immigration laws can potentially **reduce multicultural exchange and hamper social cohesion**, further leading to polarization and xenophobia.
- **Reduced innovation:** Restricting skilled migrants **reduces innovation, research capacity, and start-up formation**.
  - E.g., As per National Foundation for American Policy, 55% of country's \$1 billion start-up had at least one immigrant founder.
- **Political Impact:** Stringent policies can lead to strained relations with neighbouring or source countries due to deportations or **discriminatory visa regimes**, and international criticism for violating human rights.

### Measures taken to prevent illegal Immigration

- **National Register of Citizens (NRC):** It is a list of citizens which was created for the first time in Assam in 1951 to combat the issue of illegal immigration in state.
- **Immigration and Foreigners Act, 2025:** It confers upon Central Government certain powers to provide for requirement of passports or other travel documents in respect of persons entering into and exiting from India.

### How should India respond?

- **Diplomatic engagement with host countries:** Bilateral dialogues and agreements with the host countries (like the US, Australia, Japan) to ensure fair treatment and legal protection for Indian workers and students abroad.
- **Leveraging Diaspora Diplomacy:** Proactive diaspora outreach through embassies and cultural missions to counter negative stereotypes and showcase positive contributions of Indians globally.
- **Strengthening domestic opportunities:** Creating more high-quality jobs in sectors such as IT, Healthcare, manufacturing, etc., within India can help reduce push factors driving migration.
  - In this regard, coordinated and effective implementation of initiatives like Make in India, Skill India, and Startup India can help retain skilled youth and reduce dependence on foreign employment.
- **Countering misinformation and xenophobia:** Government of India and other non-State actors can collaborate with international digital platforms to curb fake narratives against migrants.



**Read our previous coverage on Immigration and Foreigners Act, 2025**

### Conclusion

The rise of anti-immigration sentiment across the world reflects deeper economic anxieties, cultural insecurities, and political populism. For India, with one of the world's largest diasporas, the challenge lies in protecting its citizens abroad while promoting inclusive and responsible migration policies at home. A calibrated approach anchored in diplomacy, evidence-based policymaking, and respect for human rights, can ensure that migration remains a source of strength rather than contention in an increasingly interconnected world.

## 2.2. INDIA AFGHANISTAN RELATIONS: STRATEGIC RESETTING OF TIES

### Why in News?

Recently, Afghanistan's Foreign Minister arrived in New Delhi to hold bilateral discussions with India's External Affairs Minister.

### More on News

- This visit follows a special travel exemption granted to Afghanistan's Foreign Minister by **United Nations Security Council** to travel to India.
- It is the **first ministerial-level visit to India** since the Taliban took control of Afghanistan in August 2021.

### Key outcomes of the Visit

- **Diplomatic Engagement:** India restored status of Technical Mission of India in Kabul to that of Embassy of India in Afghanistan.
- **Connectivity:** commencement of India-Afghanistan Air Freight Corridor.



- **Infrastructure and Energy:** Both sides appreciated India's support for **India-Afghanistan Friendship Dam (Salma Dam) in Herat** and India agreed to collaborate on hydroelectric projects in Afghanistan.

### Why India is showing renewed interest in Afghanistan?

- **Safeguarding Strategic Interests:**
  - **Counterterrorism:** India's foremost priority is to prevent Afghanistan from once again becoming a breeding ground for terrorism threatening its security. E.g. Presence of groups such as **Al-Qaeda, Islamic State-Khorasan Province (IS-KP), Lashkar-e-Taiba, and Jaish-e-Mohammed** remains a serious threat.
  - **Security Commitments from Kabul:** E.g. Afghan Foreign Minister assured that Afghan territory will not be used for activities hostile to India.
- **Geopolitical Balancing and Rival Management**
  - **Limiting Pakistan's Influence:** India aims to counter Pakistan's influence by leveraging the deteriorating Pakistan-Afghanistan ties, creating space for pragmatic India-Afghanistan cooperation.
  - **Checking China's Strategic Expansion:** India also aims to prevent its strategic rivals, particularly China, from dominating Afghanistan's economic and geopolitical landscape following the Taliban's return to power.
- **Protecting Strategic Investments:** India has invested **USD 3 billion in more than 500 projects** across various provinces of Afghanistan, covering power, water, roads, healthcare, education, agriculture, and capacity building.



**Read our previous coverage on Shift in India-Afghanistan Relations**

### Global and Regional Perspectives

- **Moscow Format Unity:** India participated in the **7<sup>th</sup> Moscow Format Consultations on Afghanistan** alongside China, Iran, Pakistan, Central Asian nations, and Russia.
  - India reiterated that a secure, peaceful and stable Afghanistan is vital for its people, regional resilience and global security.
- **Russia's Recognition:** Russia has **formally recognized Islamic Emirate of Afghanistan**, effectively legitimizing Taliban governance and consolidating Moscow's growing influence in the region.
- **U.S. Strategic Posture:** The United States has signaled a renewed interest in **Bagram Air Base**, suggesting a possible re-entry into Afghanistan's strategic sphere.
- **China's Strategic Initiative:** China has promoted trilateral cooperation among **China, Pakistan, and Afghanistan** under the **Belt and Road Initiative (BRI)**, aiming to link Afghanistan to the **China-Pakistan Economic Corridor (CPEC)**.

### Challenges for India: Navigating a Complex Political Landscape

- **Lack of Formal Recognition:** India has **not formally recognised the Taliban government**, limiting the scope of diplomatic and institutional cooperation.
- **Diplomatic Dilemmas:** Moreover, India risks losing its moral credibility if perceived as aligning with an oppressive regime just to counter Pakistan.
- **Balancing Strategic Interests with Humanitarian Concerns:** India's secular democracy contrasts with the Taliban's theocratic rule whose restrictions on women and religious freedoms raises concerns about Human Rights violations.

### Conclusion

India's renewed engagement with the Taliban reflects a **pragmatic shift** by prioritising strategic interests over earlier ideological reservations. This renewed approach is vital for securing India's borders against terrorism and countering the influence of strategic rivals. It underscores that **engaging with a difficult partner does not signify endorsement** and reflects a **pragmatic choice of dialogue over disengagement**.

## 2.3. INDIA-RUSSIA RELATIONS

### Why in the News?

Recently, the 25th anniversary of the Declaration of Strategic Partnership between Russia and India has been celebrated.

### More on the News

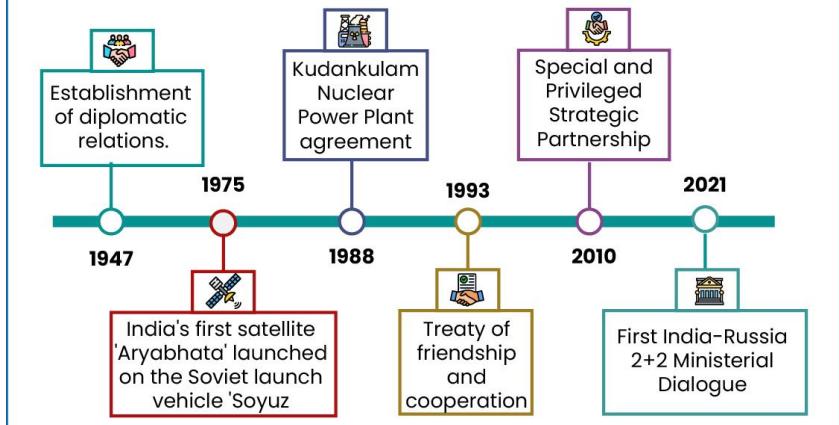
- The Declaration was signed in the year 2000.
- Since then, 22 annual summits, regular leader-level meetings, ministerial dialogues and working groups across sectors have **institutionalised the partnership, ensuring continuity and depth.**
- It established a qualitatively new framework that **elevated bilateral cooperation** across political, security, economic, defence, and cultural spheres.

### Core pillars of the India-Russia partnership:

- Political and Diplomatic Convergence:** Annual summit is at its centrepiece. Beyond summits, the two nations coordinate closely through **ministerial exchanges, the 2+2 dialogue, and forums like UN, G20, BRICS, SCO etc.**
  - Russia also backs India's bid for a permanent seat on the UN Security Council.
- Defence and Security:** Russia is **India's top military supplier** accounting for **36% of total defence imports during 2020-24 (SIPRI Report)**. E.g., S400 air defence system, MiG-29K naval fighter aircraft, etc.
  - Defence ties have evolved from a **buyer-seller model** to **joint research, development, and production** of advanced defence technologies. E.g., **BrahMos Cruise Missiles**
  - Conducts military exercise INDRA and Avia Indra.
- Energy Security:**
  - Russia is the **largest crude oil supplier** to India. It supplies oil at **discounted prices** which has helped in curbing inflation.
  - Some of India's largest state-owned and private companies have **invested in the Russian Far East (RFE)**, including ONGC's investments in oil and gas project.
  - Promotes nuclear energy development. E.g., **Kudankulam Nuclear Power Plant**, Tamil Nadu.
- Trade and Economic:** Bilateral trade between both countries reached a record high of **USD 68.7 billion in FY 2024-25**.
  - They have set a target to take **bilateral trade to \$100 billion (by 2030)**.
  - Major items of export from India include pharmaceuticals, organic and inorganic chemicals, iron & steel etc.
  - 90% trade between Russia and India is conducted in **local currencies i.e. rubles and rupee**.
- Connectivity:** Russia can enhance India's connectivity with **Central Asia** and the wider **Eurasia** through projects like the **International North-South Transport Corridor (INSTC)**, **Northern Sea Route** and **Chennai-Vladivostok Eastern Maritime Corridor**.
- Enhances Technological Capability:** E.g., In Space sector, it is assisting first crewed space mission, **Gaganyaan**.
- Cultural and people-to-people ties:** Indian cinema once captivated Soviet audiences, Russian ballet continues to find fans in India, and yoga enjoys wide popularity across Russia - building long-lasting goodwill.



### Timeline of India-Russia Relationship



## Challenges in the India–Russia Relations

- **Trade Imbalance:** Trade balance favors Russia. Indian imports from Russia are about of USD 63.84 billion in FY 2024-25, while exports stood at USD 4.88 billion.
- **Rupee Surplus Problem:** Trade imbalance has generated financial challenges as billions of Indian rupees have accumulated in **Special Rupee Vostro Accounts (SRVAs) in Indian banks.**
  - The Russian Foreign Minister identified this surplus as a "problem," noting Russia's inability to use these funds for international transactions outside the Western financial system.
- **Declining Defence Imports:** It is mainly due to diversification of India's arms import from countries like Israel, France, and the United States – along with indigenization efforts.
- **Diverging Geopolitical Priorities:**
  - **India-US convergences:** India is increasingly aligning with the West, particularly the US. E.g. Security relationship such as Quad.
  - **Growing Russia-China ties:** In 2022, Russia and China announced a “no limits” partnership outlining closer political, security, and economic engagement.
  - **Russia’s rapprochement with Pakistan:** E.g., Recent cooperation between Pakistan and Russia includes defence initiatives like joint counter-terrorism drills and naval exercises.
- **Sanctions by USA:** No major military deals with Russia have been concluded since the S-400 deal to avoid USA sanctions under **Countering America’s Adversaries through Sanctions Act (CAATSA), 2017.**
  - CAATSA allows the **imposition of sanctions on countries** dealing with three nations, i.e., Russia, Iran, and North Korea.

### How India is balancing its relation with Russia and USA?

- India sometimes finds itself caught between the **interests** of the **US and Russia.**
  - E.g. US recently imposed tariffs on India for **purchasing oil from Russia.** It accuses India of financing Russia's war in Ukraine.
- **India’s Approach in dealing with such situations**
  - **Following Strategic Autonomy:** India follows a **flexible foreign policy approach** balancing ties with both the USA and Russia. Approach is based on **strategic autonomy** and **realistic policies.**
    - > For instance, in the case of Ukraine–Russia Conflict, India abstained from a **UNSC resolution** which called for condemning the Russian military action against Ukraine.
  - **Relationships based on national interest:** Despite the imposition of additional tariff, India has maintained deep ties with Russia.
    - > At the same time, India’s quiet diplomacy in **multilateral platforms like BRICS, SCO, and G20** has allowed it to remain a bridge between the **Global South and competing power blocs.**
  - **Internationalisation of Rupee:** To deal with **sanctions on Russia**, India is promoting alternative payment mechanisms such as trading in rupees or roubles.

### Way Forward

- **Enhancing Mutual Trust:** Both countries need to reinforce mutual trust amid growing apprehensions about Russia-China and India-US convergences.
- **Strengthening Tier II diplomacy:** Strengthening contacts with the new generation as well as academia and stationing Indian correspondents in Russia.
- **Diversifying trade:** Indo-Russia trade should expand beyond oil, incorporating products from traditional sectors such as IT, textile, agriculture, etc. It will promote India’s export to Russia.
- **Promoting Joint research & co-development:** Building on past successes like BrahMos missile and AK-203 rifles, future collaboration should focus on next-generation defence technologies.
- **Finalizing Free Trade Agreement (FTA) with Eurasian Economic Union (EEAU):** Russia is a key member of the EEAU.
- **Promote cooperation in Nuclear Energy:** Russia can help India in developing Small Modular Reactors (SMRs).
- **Other:** Promoting Cooperation in non-traditional areas like AI, cyber security, etc.

## Conclusion

The future of India–Russia relations depends on both nations' ability to adapt their partnership to emerging global realities expanding beyond defence and energy into technology, innovation, and people-to-people links.

## 2.4. GAZA PEACE SUMMIT

### Why in the News?

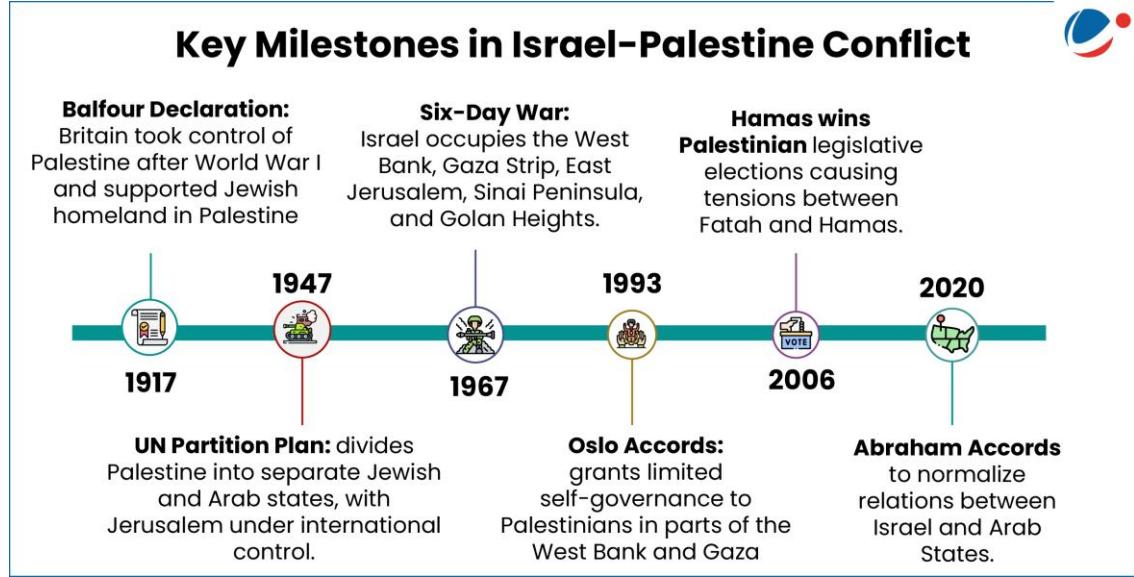
Recently, **USA and Egypt** co-hosted the **Gaza Peace Summit** in Sharm El-Sheikh, Egypt to advance peace in Gaza and overall stability in the Middle East.

### More on the News

- During the summit, four ceasefire mediators—the **United States, Egypt, Qatar, and Turkey** signed a declaration to inaugurate the USA's 20-point peace plan or the **Trump Declaration for Enduring Peace and Prosperity**.
- Peace plan declares that **future disputes will be resolved via diplomatic engagement and negotiation**, not through force or protracted conflict.
- Plan calls for Hamas's disarmament and an internationally supervised reconstruction of Gaza.
- Long term, Trump's twenty-point plan stipulates that **no Palestinians will be militarily forced to leave Gaza**, and that Israel will agree not to occupy or annex the Gaza Strip.
  - Importantly, 20-point plan for Gaza does **not guarantee a two-state solution** or the creation of the state of Palestine.
- India's Minister of State for External Affairs** attended the summit and appreciated the efforts towards a **lasting peace in the region**.

### Significance of Peace in the region

- Regional Prosperity:** The peace plan could aid in the expansion of **Abraham Accords** and unlock broader peace and prosperity.
  - The Abraham Accords are a feature of **U.S. Middle Eastern diplomacy** involving peace agreements between Israel and the **United Arab Emirates, Bahrain, Morocco, etc.**



- Strategic Location:** The region, rich in oil and gas resources is strategically located at the juncture of **critical global lines of communication** involving **Red Sea, Strait of Hormuz, and Suez Canal**.
- Contemporary Geopolitics:** **Great power competitions** can lead to **regional fragmentation** in the absence of peace. E.g., **Russia** is showing security interest while **China** has economic interests in the region.
- Global Trade:** The region houses one of the **youngest and fastest-growing populations** expected to reach around **580 million people by 2030**, serving as a **market for goods and services** in times of peace.

- **Importance for India:** Energy and remittances from the Indian workforce in the region are of vital strategic interest for India.
  - India imports nearly 70% of its annual oil from the region and is gaining importance through initiatives/groupings like **India–Middle East–Europe Economic Corridor, I2U2**, etc.

India's Stance on the Palestinian issue		
1947-1991	1991-2014	2014- Present
<ul style="list-style-type: none"> <li>• <b>Support for Two-State Solution:</b> Driven by a combination of <b>anticolonial solidarity</b> with Arab states and commitment to <b>Non-Aligned Movement</b>.                     <ul style="list-style-type: none"> <li>○ India favours a <b>sovereign and independent State of Palestine</b> living side by side with Israel.</li> <li>○ <b>India recognized Palestine in 1988.</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Strategic Ties with Israel:</b> Establishment of full <b>diplomatic relations with Israel in 1992</b> marking a fundamental policy shift.                     <ul style="list-style-type: none"> <li>○ Presently, India and Israel have formed a <b>strong strategic connection</b>, with India being <b>top buyer of Israel's defence products</b>.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>De-hyphenation:</b> It establishes <b>diplomatic ties</b> with Israel <b>separate</b> from those India would have with Palestine.                     <ul style="list-style-type: none"> <li>○ Indian Prime Minister's visit to <b>both Israel (2017) and Palestine (2018)</b> highlights that India's ties with Israel would not alter its <b>fundamental attitude on Palestine</b>.</li> </ul> </li> </ul>

### Conclusion

India's present foreign policy toward Israel has witnessed **strategic recalibration**. From historical support for Palestine to increased engagement with Israel, India has gradually shown **pragmatic shift** in its priorities aligning with its **moral commitments, strategic imperatives, and regional geopolitics**.

Key Strategic Locations in the Region (See Map)	
<ul style="list-style-type: none"> <li>• <b>Gaza:</b> Small piece of land on the <b>Mediterranean Sea</b> bordering Egypt to the south. Under the semi-autonomous <b>Palestinian Authority since 1993</b>.</li> <li>• <b>West Bank:</b> Landlocked region to the west of Jordan and East of Israel. <b>Territories divided into three:</b> fully controlled by Israel, fully controlled by Palestine, and ones shared between <b>Israel and Palestine</b>.</li> <li>• <b>Golan Heights:</b> Bounded by the <b>Jordan River and the Sea of Galilee</b> on the west. Contentious between Israel and Syria.</li> <li>• <b>Sinai Peninsula:</b> Lies between <b>Suez Canal</b> and the <b>Gulf of Aqaba</b>, bounded by <b>Mediterranean Sea (North) and the Red Sea (South)</b>.</li> <li>• <b>Jerusalem:</b> Ancient city wholly under Israel. Important for three major monotheistic religions- Jews, Christians, and Muslims.</li> </ul>	

## 2.5. INDIA-EUROPEAN FREE TRADE ASSOCIATION TRADE AND ECONOMIC PARTNERSHIP AGREEMENT (TEPA)

### Why in the News?

**India-European Free Trade Association (EFTA) Trade and Economic Partnership Agreement (TEPA)**, signed on **10 March 2024**, came into effect from 01 October 2025.

## Key Features of the Agreement

- **Capital Investment:** EFTA will promote investments worth USD 100 billion in India over 15 years-a major boost to “Make in India”.
  - This is accompanied by the **creation of one million direct jobs in India**, a first in any FTA signed by the country.
- **Market Access for Goods:** Indian exporters in sectors like **machinery, organic chemicals, textiles, and processed foods** to have improved access to EFTA markets **enhancing competitiveness, and reducing compliance costs**.
  - Under TEPA, EFTA has offered 92.2% of **tariff lines** encompassing **99.6% of India's exports**.
- **Boost for Services and Mobility:** It is the first Indian FTA to include **Mutual Recognition Agreements (MRAs)** in regulated professions like nursing, chartered accountancy, and architecture, making it easier for Indian professionals to work in EFTA countries.
  - Improved access via: **Mode 1:** Digital delivery of services, **Mode 3:** Commercial presence and **Mode 4:** Greater certainty for entry and temporary stay of key personnel.
- **Intellectual Property Rights:** TEPA ensures IPR commitments at TRIPS level, along with fully addressing India's interests in **generic medicines** and those related to **evergreening of patents**.
- **Sustainable and Inclusive Development:** It will foster transparency, efficiency, simplification, harmonization, and consistency in trade procedures.
- **Technology Collaboration:** Access to **world leading technologies** in **precision engineering, health, renewable energy, Innovation and Research & Development**.
- **Reinforces India's Global Image:** Positions India as an **equal negotiating partner** with advanced economies, ensuring outcomes aligned with its **long-term strategic and developmental interests**.

About EFTA	EFTA countries
<p>EFTA is an <b>intergovernmental organisation</b> set up in 1960 for the promotion of free trade and economic integration to the benefit of their trading partners across the globe.</p> <ul style="list-style-type: none"> <li>• Its current members are <b>Iceland, Liechtenstein, Norway and Switzerland</b>, which are in the Schengen area but are not EU member states.</li> <li>• It has <b>population of 13 million</b> and a combined <b>GDP of more than \$1 trillion</b>.</li> <li>• <b>India is the EFTA's fifth-largest trading partner</b> after the European Union, the United States, Britain and China</li> <li>• Among EFTA, <b>Switzerland is the largest trading partner of India</b>, followed by Norway.</li> </ul>	 <p><b>EFTA Countries</b></p> <ol style="list-style-type: none"> <li>1. Switzerland</li> <li>2. Norway</li> <li>3. Iceland</li> <li>4. Liechtenstein</li> </ol>

## Issues with the agreement

- **Limited Benefits for India:** For India, the benefits are limited in terms of trade in goods, given pre-existing low tariff rates in the EFTA bloc and most imports already receiving tariff-free treatment.
  - The agreement mainly favours EFTA exports to India through tariff reductions and better market access.
- **Trade imbalances:** Despite modest current trade volumes India exported goods worth around USD 1.97 billion to EFTA in FY25 against imports of USD 22.44 billion.
- **Limitations of the pact:** Several analysts warned that India is likely to keep facing difficulties in exporting farm produce to Switzerland due to a complex web of tariffs, quality standards, and approval requirements.
  - **Key agricultural items** including dairy, soya, coal, etc., placed on the exclusion list.
- **Limited Investment Options:** The investment section of the deal excludes pension and sovereign wealth funds.

## Conclusion

TEPA serves as both an **economic** and **diplomatic asset** and is India's most forward-looking deal. In an era where trade is increasingly tied to **resilience, supply chain diversification, and climate commitments**, it sets a **new benchmark** for future global partnerships.

## 2.6. NEWS IN SHORTS

### 2.6.1. INDIA-ASEAN RELATIONSHIP

The 47<sup>th</sup> ASEAN summit was held recently in Kuala Lumpur, Malaysia.

- ASEAN Summits take place twice a year, hosted by the country holding the ASEAN Chairmanship.

#### Key Highlights of the Summit

- Addition of 11<sup>th</sup> Member:** Timor-Leste (East Timor) was officially admitted as ASEAN's 11th member
- Theme:** Inclusivity and Sustainability.
- Kuala Lumpur Accord:** Joint ceasefire agreement between Thailand and Cambodia.

**22nd ASEAN-India annual Summit** was also held on the sidelines of the summit. The key highlights include:

- Maritime Cooperation:** 2026 was designated as “**ASEAN-India Year of Maritime Cooperation**” and **supported the grouping's centrality** in the Indo-Pacific.
- Sustainable Tourism:** Adoption of the **ASEAN-India Joint Leaders' Statement on Sustainable Tourism**.
- Plan of Action:** Extended support for implementation of the ASEAN-India Plan of Action to implement the ASEAN-India Comprehensive Strategic Partnership (2026-2030)



Read our previous coverage on **ASEAN Centrality**

### 2.6.2. INDIA-UNITED KINGDOM

India and UK released Joint Statement during the visit of Prime Minister of England to India.

#### Key highlights of the India-UK Joint Statement

- Technology:** Both nations welcomed the tangible progress made across critical and emerging technologies, including telecommunications, critical minerals, AI, and health tech. Key outcomes of Technology Security Initiative (TSI) include:
  - Connectivity & Innovation Centre for AI native network for 6G, Non-Terrestrial Networks (NTNs),** cyber security for telecoms with at least £24m of joint funding.
  - Joint Centre for AI promoting responsible AI** in healthcare, climate, FinTech, and BioTech.
  - Phase 2 of the UK-India Critical Minerals Supply Chain Observatory** to expand Mineral coverage and establish a **new satellite campus** at IIT-ISM Dhanbad.
- Trade and Investment:** Both welcomed the resetting of the **Joint Economic and Trade Committee (JETCO)** which will support the governance and utilisation of the **Comprehensive Economic and Trade Agreement (CETA)**.
- Defence:** Both sides committed to maritime security cooperation in the Indo-Pacific, including establishing a **Regional Maritime Security Centre of Excellence (RMSCE)** under the **Indo-Pacific Oceans Initiative (IPOI)**.
- Education:** Both sides reaffirmed the **Migration and Mobility Partnership** to enable legal migration and curb irregular movement.



Read our previous coverage on **India-UK relationship**

- E.g., Queens University of Belfast and Coventry University have been authorised to open their branch campuses in GIFT City.
- **Climate and Energy:** Both announced a joint investment in the Climate Tech Start-up Fund to support innovation in climate tech and AI.
  - Additionally, Offshore Wind Taskforce and expressed intent to collaborate through the Global Clean Power Alliance (GCPA).

### 2.6.3. NEW STRATEGIC EU-INDIA AGENDA

The European Council has approved the EU-India Strategic Agenda, identifying **five priority pillars** to address emerging opportunities, challenges, and threats in a geopolitical context.

#### Five Priority Pillars

- **Prosperity and Sustainability:** Focuses on economic growth, job creation, decarbonization, and strengthening supply chains.
  - The goals of finalizing a Free Trade Agreement (FTA) and concluding an Investment Protection Agreement (IPA) are central to this.
- **Technology and Innovation:** Deepens cooperation on critical emerging technologies, digital infrastructure, and promoting research collaboration through the Trade and Technology Council and Horizon Europe.
- **Security and Defence:** Addresses global security threats, geopolitical tensions, and technological change. E.g. Coordinate on Indo-Pacific and promote rule based maritime order.
- **Connectivity and Global Issues:** Strengthens regional connectivity, global governance, and cooperation in third countries.
  - Example: Strengthening initiatives like India-Middle East-Europe Economic Corridor (IMEC) and Global Gateway.
- **Enablers across Pillars:** Facilitates skills mobility, knowledge exchange, business engagement, and institutional cooperation to support all four main pillars.



### 2.6.4. INDIA-MONGOLIA

The two countries celebrated the **10th anniversary of their Strategic Partnership** with key MoUs signed during the visit of Mongolian President to India.

#### Key MoUs signed

- **Development Cooperation:** Both countries reaffirmed commitment to the Mongol Oil Refinery Project, being implemented with US\$ 1.7 billion Line of Credit by India.
- **Cultural Relations:** MoU between Ladakh Autonomous Hill Development Council and Mongolia's Arkhangai Province.
- **Spiritual Cooperation:** India plans to send holy relics of Lord Buddha' disciples Sariputra and Maudgalyayana to Mongolia, help digitise the 1 million ancient Buddhist manuscripts, and link Nalanda and Gandan Monastery.
- **Others:** Free e-visas to Mongolian citizens, strengthening trade through exploring the potential of third-country ports, enhance cooperation in Uranium, resilient supply chains and critical minerals, etc.



## Significance Of Mongolia for India

- **Strategic Importance:** Mongolia's **strategic location**, essential for enhancing geopolitical balance and regional stability.
- **International and Development Cooperation:** Both countries commit to a **free, open, and rule based Indo-Pacific**, along with cooperation in multilateral fora.
- **Energy and Economic Partnership:** Mongolia has vast reserves of **coking coal**, useful for Steel industry.

## India-Mongolia Relations



**Bilateral Relations: Diplomatic**  
Ties established in 1955 And  
**Strategic Partnership** in 2015.



**Economic Relations:**  
**110.8 Million USD** total  
Bilateral trade (2024).



**Military Cooperation:** Military exercises, namely, **Nomadic Elephant** and **Khaan Quest**.

### 2.6.5. SEVILLA FORUM ON DEBT LAUNCHED

The forum is launched at the 16th session of the **United Nations Conference on Trade and Development (UNCTAD16)** to tackle the **entrenched debt crisis in developing countries**.

#### About Sevilla Forum on Debt

- It is led by Spain, supported by the **UNCTAD** and **United Nations Department of Economic and Social Affairs (UN DESA)**.
- It will bring together all stakeholders, creditors, borrowers, international financial institutions and academia on debt sustainability, management and innovative solutions.
- It is one of the **outcomes** of the **Fourth International Conference on Financing for Development (FfD4)** and part of **Sevilla Platform for Action**.
  - The other three outcomes are **Debt Swaps for Development Hub**, **Debt-for-Development Swap Programme**, and **Debt “Pause Clause” Alliance**.
- This initiative will complement the **Sevilla Commitment**.
  - **Sevilla Commitment** lays out a path to close the \$4 trillion annual SDG financing gap in developing countries.
  - It is the **first inter-governmentally agreed** financing for development framework since 2015.

#### Debt Crisis

- **Global public debt:** In 2024, global public debt reached \$102 trillion (**developing countries burden-US\$ 31 trillion**)
  - Developing countries spend \$1.4 trillion on annual debt service.
- Over **3.4 billion people** live in nations spending more on debt servicing than on health or education.

### 2.6.6. PLUTONIUM MANAGEMENT AND DISPOSITION AGREEMENT (PMDA)

Russia's lower house **approved withdrawal from Plutonium Management and Disposition Agreement (PMDA)** with the U.S.

- Previously, Russia in 2016 suspended implementation of the agreement, citing U.S. sanctions.

#### About PMDA

- The agreement **signed in 2000** commits the U.S. and Russia to each irreversibly dispose of **at least 34 metric tons of weapons-grade plutonium**.
  - **Plutonium (atomic number 94)** is a radioactive material with a **high melting point, and the heaviest naturally occurring element**.
- **Disposition goal:** Convert plutonium into safer forms (MOX fuel, reactor irradiation).

## 2.6.7. UN HUMAN RIGHTS COUNCIL

India was elected unopposed to UN Human Rights Council for the seventh time.

- India is elected for a three-year term (2026–28) starting next year.

### About UN Human Rights Council

- **Overview:** It is an intergovernmental body within the United Nations system that promotes and protects human rights globally.
- **Genesis:** Established in 2006 by the General Assembly by replacing the Commission on Human Rights.
- **Membership:** It has 47 members elected annually by the UN General Assembly, serving three-year terms with a maximum of two consecutive terms.
- **Function:** Provides a global forum on human rights, adopts resolutions, reviews member states, and mandates investigations and special procedures.

## 2.6.8. INTERNATIONAL CONVENTION FOR THE SUPPRESSION OF THE FINANCING OF TERRORISM

Iran ratified International Convention for the Suppression of the Financing of Terrorism.

### About International Convention for the Suppression of the Financing of Terrorism

- Adopted by the UN General Assembly in 1999 and entered in 2002.
- **Purpose:** Criminalizes the financing of terrorism and holds funders of terrorist acts accountable.
- **India has also ratified it**



**Read our previous coverage on Terrorist Financing**

## 2.6.9. AREAS IN CONFLICT IN NEWS

Areas in Conflict	Reason	Key Geographical Features	Map
<b>Myanmar (Sagaing Region)</b>	Over a million Rohingya Muslims from Myanmar now live as refugees in Bangladesh, where their human rights are being violated.	<ul style="list-style-type: none"> <li>• Lies at the <b>northwesternmost part</b> of mainland <b>Southeast Asia</b>.</li> <li>• <b>Bordered by:</b> China (North and Northeast), Laos (East), Thailand (South East), Bangladesh (West), India (Mizoram, Manipur, Nagaland and Arunachal Pradesh in the North West).</li> <li>• <b>Bordering water bodies:</b> Andaman Sea (south) and by the Bay of Bengal (southwest).</li> <li>• <b>Major mountain ranges:</b> Rakhine Mountains, Shan Plateau, Dawna Range, Tenasserim Mountains etc.</li> <li>• <b>Highest point:</b> Mount Hkakabo Razi</li> <li>• <b>Major rivers:</b> Irrawaddy, Chindwin, Sittang, Salween, Yangon River.</li> </ul>	

<p><b>Madagascar (Antananarivo, the capital city)</b></p>	<p>Anti-government Gen Z protests in Madagascar have led to the fall of the government.</p>	<ul style="list-style-type: none"> <li><b>Bordered by:</b> Mauritius and Réunion (territory of France) (east). The French territory of Mayotte and the island country of Comoros (northwest).</li> <li><b>Located off the coast of East Africa in the Indian Ocean.</b></li> <li><b>The second-largest island country</b> in the world.</li> <li>Approximately <b>90% of Madagascar's flora and fauna</b> is found nowhere else.</li> </ul>	
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# 3. ECONOMY

## 3.1. MULTIDIMENSIONAL POVERTY

### Why in the News?

The United Nations Development Programme (UNDP) and the Oxford Poverty and Human Initiative (OPHI) released the **2025 Global Multidimensional Poverty Index (MPI)** report.

### Key Highlights of Report

- **Multidimensional Poverty:** 1.1 billion (18.3%) out of 6.3 billion people across 109 countries live in acute multidimensional poverty.
  - Almost **half** of all multidimensionally poor people globally live **in just six middle-income countries**: Bangladesh, China, **India**, Nigeria, Pakistan and Tanzania.
  - Around 27.8 % of all **children live in multidimensional poverty**, more than double the rate among adults (13.5 %).
- **Poverty and Climate Hazards:** Poverty and climate shocks create a **double burden**. Poverty drives exposure to climate hazards. These, in turn, reinforce and prolong poverty.
  - Nearly **8 in 10 people** living in multidimensional poverty – 887 million out of 1.1 billion globally – are **directly exposed to climate hazards** such as extreme heat, flooding, drought, or air pollution.
  - 309 million poor people live in regions **exposed to three or four overlapping climate hazards** while experiencing acute multidimensional poverty.
    - > These individuals face a "**triple or quadruple burden**," often possessing **limited assets and minimal access to social protection systems**, amplifying the negative effects of the shocks.
  - Individually, the most widespread hazards affecting poor people globally are **high heat** (608 million) and **air pollution** (577 million).
  - Sub-Saharan Africa and South Asia are identified as global hotspots, accounting for the largest numbers of poor people living in regions affected by climate hazards.
- **Poverty in India:** In 2005–2006, 55.1 % of people in India were poor. The share plummeted to 16.4 % in 2019–2021, and roughly 414 million people left poverty.

### Methodology of Global MPI

- **Deprivation Indicators:** Computation of the global MPI begins by constructing a deprivation profile for each household and person in it, **covering 10 indicators of health, education and standard of living (see table)**.
  - All **indicators are equally weighted within each dimension**.
  - A person's deprivation score is the **sum of the weighted deprivations** she or he experiences.
  - The global MPI identifies people as multidimensionally poor if their **deprivation score is one third (33.3%) or higher**.
- **MPI Value:** It is the product of the **incidence** (H, or the proportion of people who live in multidimensional poverty) and **intensity of poverty** (A, or the average deprivation score among multidimensionally poor people).
  - Put simply,  $\text{MPI} = H \times A$ .
  - The MPI is known as the **adjusted headcount ratio** and it includes both the share of people in multidimensional poverty (Incidence or Headcount) and the extent to which they are deprived (Intensity).
  - MPI values range from **0 to 1**, and **higher values imply higher poverty**.



**Read our previous coverage on Poverty in India**

Dimensions of Poverty	Indicator	Deprived if living in the household where...	Weight
Health	Nutrition	Any adult under 70 years of age or any child for whom there is nutritional information is undernourished.	1/6

	Child mortality	Any child under the age of 18 years has died in the family in the five-year period preceding the survey.	1/6
<b>Education</b>	Years of schooling	No household member aged 'school entrance age + six years or older has completed at least six years of schooling.	1/6
	School attendance	Any school-aged child is not attending school up to the age at which he/she would complete class eight.	1/6
<b>Standard of living</b>	Cooking fuel	The household cooks with dung, wood, charcoal or coal.	1/18
	Sanitation	The household's sanitation facility is not improved (according to SDG guidelines) or it is improved but shared with other households.	1/18
	Drinking water	The household does not have access to improved drinking water (according to SDG guidelines) or improved drinking water is at least a 30-minute walk from home, round trip.	1/18
	Electricity	The household has no electricity.	1/18
	Housing	At least one of the three housing materials for roof, walls and floor are inadequate: the floor is of natural materials and/or the roof and/or walls are of natural or rudimentary materials.	1/18
	Assets	The household does not own more than one of these assets: radio, television, telephone, computer, animal cart, bicycle, motorbike or refrigerator, and does not own a car or truck.	1/18

#### NITI Aayog National Multidimensional Poverty Index

- Methodology:** It uses the **internationally acclaimed Alkire Foster methodology** (also used in Global MPI), retaining all 10 indicators from Global MPI and **incorporating two additional indicators – Maternal Health and Bank Accounts**.
- National MPI Value:** Like global MPI, the MPI value is arrived at by multiplying the headcount ratio (H) and the intensity of poverty (A).
- Indicators:** Like the global MPI, India's national MPI has **three equally weighted dimensions Health, Education, and Standard of living** – which are represented by **12 indicators (See infographic)**.

#### Conclusion

2025 Global Multidimensional Poverty Index underscores that poverty is no longer a unidimensional challenge of income deficiency but a complex web of interlinked deprivations in health, education, and living standards, now further aggravated by climate vulnerabilities. India's remarkable reduction in multidimensional poverty reflects the effectiveness of targeted welfare interventions and inclusive growth strategies. However, sustaining this progress demands a paradigm shift toward resilience-oriented development.

Indicators of National MPI		
Indicators and their weights		
	<b>1/3</b>	<ul style="list-style-type: none"> <li>1/6 Nutrition</li> <li>1/12 Child &amp; Adolescent Mortality</li> <li>1/12 Maternal Health</li> </ul>
	<b>1/3</b>	<ul style="list-style-type: none"> <li>1/6 Years of Schooling</li> <li>1/6 School Attendance</li> </ul>
	<b>1/3</b>	<ul style="list-style-type: none"> <li>1/21 Cooking Fuel</li> <li>1/21 Sanitation</li> <li>1/21 Drinking Water</li> <li>1/21 Housing</li> <li>1/21 Electricity</li> <li>1/21 Assets</li> <li>1/21 Bank Account</li> </ul>

## 3.2. NOBEL PRIZE IN ECONOMIC SCIENCES 2025

#### Why in the news

The Sveriges Riksbank Prize in Economic Sciences 2025 (Nobel Prize in Economic Sciences) was awarded to Joel Mokyr, Philippe Aghion and Peter Howitt for **explaining innovation-driven economic growth**.

## About The Sveriges Riksbank Prize in Economic Sciences (Nobel Prize of economics)

- Establishment:** In 1968 by Sveriges Riksbank (Sweden's central bank).
  - It is **not one of the five Nobel Prizes** established by Alfred Nobel's will in 1895.
- Awarded by:** The Royal Swedish Academy of Sciences
- First recipients:** To Ragnar Frisch and Jan Tinbergen in 1969.
- **Amartya Sen** was the first Indian to receive Nobel Prize for Economics in 1998 for his contributions to **welfare economics and social choice theory**.

### Specific Contributions of the Laureates

#### Joel Mokyr: Prerequisites for Sustained Growth

- He was awarded for "having identified the prerequisites for sustained growth through technological progress".
- For technological advances to drive sustained growth, **three key elements must be present:**
  - A joint evolution of science and technology
  - Mechanical competence
  - A society open to change

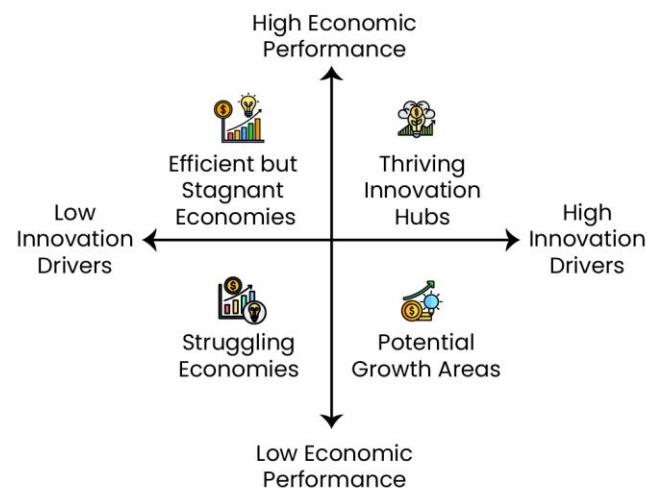
#### Philippe Aghion and Peter Howitt: The Theory of Creative Destruction

- They were recognized for their **mathematical model** (framework) of creative destruction, developed in 1992.
- Creative destruction** describes the process where a new and better product enters the market, making older products obsolete and causing companies selling them to lose out.
  - This process is creative because it introduces something new and destructive because it outcompetes existing products.
- One of the key elements of their model stated that** companies are incentivized to invest in R&D by **temporary monopoly** through patents. However, patents do not protect firms from a competitor making a new patentable innovation.

### Role of innovation and knowledge in growth

Role	Examples
Boosts productivity- Same input generates greater output	In OECD countries (UK, USA), 2/3rd to 3/4ths of labour productivity growth came from intangibles (R&D, software, innovation) and ICT (1995 to 2006)
Improving standard of living	New medicines, transport, better food, internet, increased opportunities for communication
Transforms Economies into Knowledge-Based Systems	Countries investing in education, ICT, and R&D (like South Korea <b>R&amp;D spending 4.9% of GDP</b> ) experience <b>faster GDP growth</b> and higher income mobility (World Bank's Knowledge Economy Index)
Encourages Entrepreneurship and High-Value Jobs	India's startup ecosystem created <b>1.5 lakh startups and 17 lakh direct jobs</b> (Dec 2024)
Promotes Sustainable and Inclusive Growth	Renewables (onshore Wind and solar)- the <b>most cost-effective option</b> for new electricity generation (IRENA, 2024)

## Innovation and Economic Growth Dynamics



## Role of Creative Destruction in growth

Role	Examples
Fosters Innovation and Technological Upgrading	Automobile industry's <b>transition to electric vehicles (EVs)</b> displacing traditional combustion-engine firms, creating new markets for batteries and clean energy
Encourages Entrepreneurship and Competition	<b>India's digital revolution</b> (UPI, fintech, e-commerce) disrupted traditional banking and retail, increasing inclusion and innovation
Reallocation of Resources	High rates of <b>firm entry and exit</b> (over 10% in U.S.) and improved efficiency of <b>production factors</b> across units, improves <b>labor productivity growth</b> .
Economic Resilience	<b>COVID-19 digital transformation</b> accelerated, enabling remote work and e-commerce growth

## Government Initiatives for Innovation and technological progress



### RDI Scheme

Promotes private sector research with a 1 Lakh Crore fund.



### Atal Innovation Mission

Develops innovation infrastructure in educational institutions nationwide by NITI Aayog.



### Deep Tech Fund of Funds

₹10,000 crore for cutting-edge research and startup scaling.



### Technology Advancement Policies

PLI, Semiconductor Mission, and IndiaAI Mission drive technological growth.



### Startup and Research Support

PRISM Scheme and PM Research Fellowship promote research.



### Digital Infrastructure Initiatives

Digital India, Startup India, and Make in India initiatives.



### International Collaborations

ICET with USA, semiconductor partnership with Japan, and QUIN by QUAD.



### Thematic Missions

National strategies on Blockchain, AIRAWAT, Quantum Mission, and Deep Tech Policy.

## Conclusion

Economic growth stems from both innovation and strong fundamentals. Investment in infrastructure, education, and health boosts productivity, while macroeconomic stability builds investor confidence. Efficient use of resources and global integration further drive industrial expansion and technology transfer. Sustaining this momentum requires a proactive approach—fostering openness, managing disruption, resisting protectionism, ensuring coherent policies, and investing in research to secure long-term prosperity.

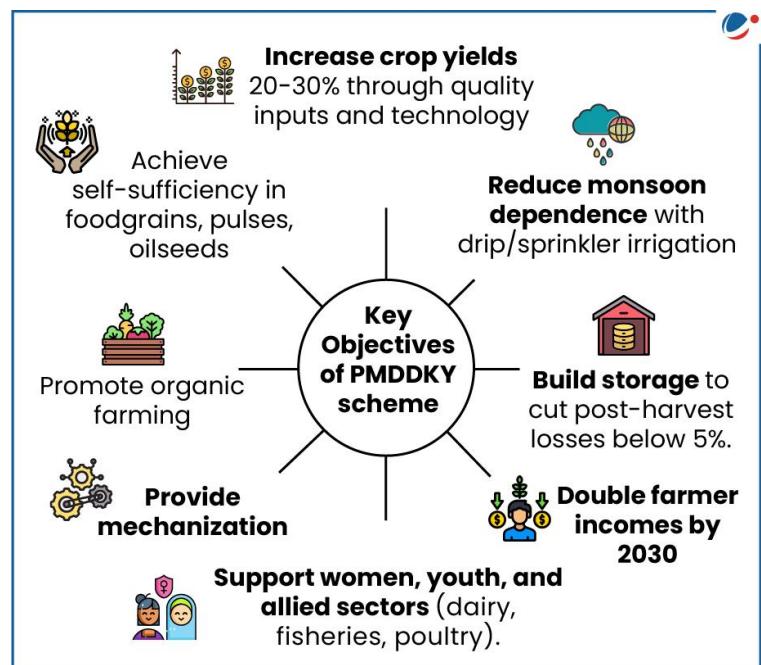
## 3.3. PM DHAN DHAANYA KRISHI YOJANA

### Why in the News?

The Prime Minister launched The **Pradhan Mantri Dhan-Dhaanya Krishi Yojana (PMDDKY)** initiative to revolutionize Indian agriculture by making it more productive, sustainable, and financially rewarding for farmers.

## About PM Dhan Dhaanya Krishi Yojana (PMDDKY)

- It was announced during the **Union Budget 2025-26** and draws inspiration from NITI Aayog's Aspirational District Programme.
- It consolidates **36 existing agricultural schemes** across **11 ministries**, including **PM-KISAN** (cash transfers), **PMFBY** (crop insurance), **PMKSY** (irrigation), with multiple benefits (refer table).
  - The convergence will also include state schemes and local partnerships with the private sector.
- Aim:** To support **1.7 crore farmers**, particularly small and marginal farmers owning less than 2 hectares of land, who constitute 86% of India's farming population (Economic Survey 2024-25).
- Ministry:** Ministry of Agriculture and Farmers' Welfare.
- Duration:** 6 Years (2025-26 to 2030-31).
- Financial Outlay:** Annual budget of **₹24,000 crore** for 6 years, totaling **₹1.44 lakh crore**.
  - 40% for subsidies, 30% for infrastructure (storage, irrigation), 20% for loans, and 10% for training and market support.
- Coverage:** **100 underperforming districts** with low crop yields, water scarcity, and limited access to resources. (minimum of 1 district from each state).
  - Uttar Pradesh to have maximum 12 districts in scheme.
- Focus:** On regions with **low crop yields** (e.g., wheat yields below 3.5 tonnes/hectare national average), **moderate cropping intensity** (fewer than 1.55 crop cycles per year), and **limited access to credit**.
- Beneficiaries:** Small and Marginal Farmers, Women Farmers, Young Farmers adopting modern farming techniques/starting agribusinesses/value-added product ventures, Farmers in Low-Productivity Areas, Farmer Producer Organizations (FPOs), Allied Sector Workers.
- Significance of Consolidation of agricultural schemes under PMDDKY:** It will resolve Duplication & inefficiency.
  - 45% of capital expenditure in agriculture is actually utilized for asset formation, indicating low expenditure efficiency.
  - Sectors like water supply, transport, etc., allocate more than 75% of capital towards asset formation.



Key Benefits and their impacts		
Aspect	Benefit	Impact
Crop Yields	<ul style="list-style-type: none"> <li><b>50-80% discounts</b> on high-yielding seeds, bio-fertilizers, and equipment like drip irrigation systems</li> </ul>	<ul style="list-style-type: none"> <li>20-30% more output</li> </ul>
Financial aid	<ul style="list-style-type: none"> <li><b>Short Term Loans:</b> ₹50,000–₹1 lakh at 4-7% interest through Kisan Credit Cards for immediate needs like seeds, fertilizers, or pesticides</li> </ul>	<ul style="list-style-type: none"> <li>20-40% profit increase</li> <li>Affordable inputs, investment</li> </ul>
	<ul style="list-style-type: none"> <li><b>Long Term loans:</b> ₹1–10 lakh for capital investments such as tractors, storage units etc.</li> </ul>	
Storage	<ul style="list-style-type: none"> <li><b>Free or low-cost use of village and block-level warehouses and cold storage</b></li> </ul>	<ul style="list-style-type: none"> <li>Saves 20% of crops</li> </ul>
Irrigation	<ul style="list-style-type: none"> <li><b>Subsidized drip and sprinkler systems</b></li> </ul>	<ul style="list-style-type: none"> <li>Saves 30-50% water</li> </ul>

<b>Market Access</b>	<ul style="list-style-type: none"> <li><b>Free access to digital platforms</b> like e-NAM or new PMDDKY apps for direct sales to buyers</li> </ul>	<ul style="list-style-type: none"> <li>Higher prices, no middlemen</li> </ul>
<b>Modern skills, global exposure</b>	<ul style="list-style-type: none"> <li><b>Free workshops</b> by KVKs, agricultural universities, and private partners on organic farming, mechanization, and allied activities.</li> <li><b>Fully funded international trips for 500 farmers</b> to learn advanced techniques in countries like Israel (drip irrigation), Japan (precision farming), etc.</li> </ul>	<ul style="list-style-type: none"> <li>Modern skills, global exposure</li> </ul>

### Structural Design and Institutional Mechanism of the scheme

- National level:** Oversight from a **National Steering Committee**
  - Two teams to be formed at the central level:** One under **Union Ministers** and another under **Secretaries and department officers**.
- State level:** Nodal committees
- District level:** **District Dhan Dhaanya Samitis** led by District Collectors.
  - District-level plans** will be prepared by district collectors with support from agricultural universities and NITI Aayog.
  - Use of digital dashboard, farmer app, and district ranking system** (117 Key Performance Indicators (KPIs)) to ensure transparency.
  - Central Nodal Officers** appointed for each district to conduct **regular field visits**, monitor progress, and coordinate with local teams.

### Conclusion

The **PM Dhan Dhaanya Krishi Yojana** ensures **scheme convergence, data-driven planning, and resource optimisation**, fostering **integrated agricultural growth, productivity enhancement, and farmer welfare** through holistic, sustainable, and technology-enabled rural transformation.

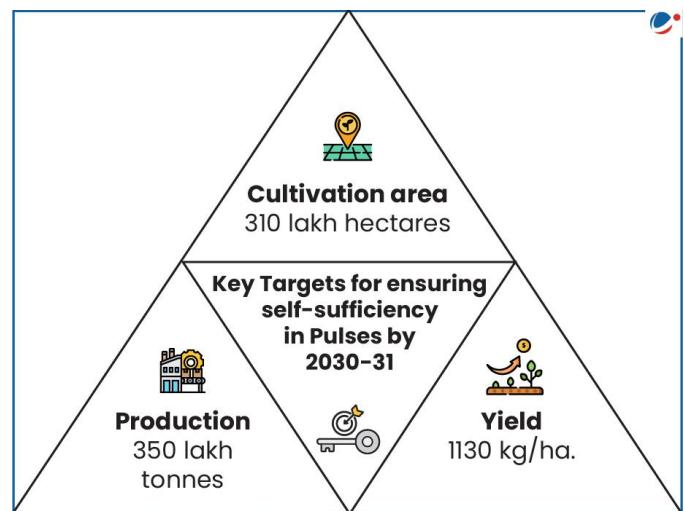
## 3.4. MISSION FOR AATMANIRBHARTA IN PULSES

### Why in the News?

Prime Minister of India recently launched the **Mission for Aatmanirbharta in Pulses (Dalhan Aatmanirbharta Mission)**.

### Key Features of Mission for Aatmanirbharta in Pulses

- Aim:** Boosting domestic production, reduce import dependence and achieving self-sufficiency (Aatmanirbharta) in pulses by December 2027.
- Duration:** 6 Years (2025-26 to 2030-31).
- Financial Outlay:** Rs. 11,440 crore.
- Ministry:** Ministry of Agriculture & Farmers' Welfare, Government of India
- Focus Crops:** Tur/Arhar (pigeon pea); Urad (black gram) & Masoor (red lentil).
- Cluster-based approach:** Tailoring interventions to the specific needs of each cluster.
- Benefit:** To benefit 2 crore farmers from guaranteed procurement, quality seed distribution, and enhanced value chain support.
- Other intended benefits:**
  - Promote climate-resilient and soil health-friendly practices.
  - Create substantial employment opportunities.
  - Promoting intercropping and crop diversification.



- **Operational Strategy**
  - **Seed Development and Distribution:** Production and distribution of **126 lakh quintals of certified seeds** and the **free provision of 88 lakh seed kits** to farmers.
    - > Emphasis is placed on developing and disseminating **high-yielding, pest-resistant, and climate-resilient pulses varieties.**
  - **Assured Procurement:** 100% procurement of Tur, Urad, and Masoor at MSP for four years.
    - > National Agricultural Cooperative Marketing Federation of India (NAFED) & National Cooperative Consumers' Federation of India Ltd. (NCCF) will procure from farmers in participating states under Price Support Scheme (PSS) of Pradhan Mantri Annadata Aay SanraksHan Abhiyan (**PM-AASHA**).
  - **Role of states:** To ensure effective implementation, states will prepare **rolling five-year seed production plans**, with breeder seed production monitored by ICAR and quality assurance maintained through the SATHI portal.
    - > SATHI (Seed Authentication, Traceability & Holistic Inventory) is a user-oriented centralized portal by the Ministry of Agriculture and Farmers' Welfare, in partnership with National Informatics Centre (NIC).
  - **Post-harvest value chain:** Establishing **1,000 processing and packaging units**, supported by **subsidies of up to ₹25 lakh per unit.**

#### **Status of Pulses production in India**

- India is **world's largest producer, consumer, and importer of pulses.**
- **Top 3 pulses-producing states:** Madhya Pradesh (largest producer, contributing 22.11% of total production), Maharashtra, and Rajasthan accounting nearly 55% of India's pulse production.
- **Season:** Grown in all three seasons (kharif, rabi, and summer).
  - **Kharif crops:** pigeon pea, green gram, black gram, and minor pulses (moth bean, rajmash, horse gram, etc.)
  - **Rabi crops:** chickpea, lentil, field bean, green gram, and black gram
  - **Summer crops:** green gram and black gram
- **Important pulses:** Chickpea (47.4%), pigeonpea (15.4%), green gram (12%), black gram (10.3%), and lentil (5.4%)
- **Production trend:** Rose from 192.55 lakh tonnes in FY14 to 244.93 FY24 lakh tonnes.

#### **Need for Aatmanirbharta in Pulses**

- **Insufficient Domestic Production:** Domestic production has not kept pace with demand, leading to a 15–20% increase in pulse imports
  - In 2023–24, India imported 47.38 lakh tonnes of pulses, even as it exported 5.94 lakh tonnes.
- **Addressing Malnutrition:** Pulses contribute nearly **20–25 % of total protein intake** in Indian diets, however the per capita consumption of pulses **falls short of the recommended 85 grams per day.**
- **Increasing Demand:** Total demand is projected to reach **46.33 MT by 2030 and 50.26 MT by 2047.**
- **Environmental and Soil Health Benefits:** Pulses enhance soil fertility due to their ability to **fix atmospheric nitrogen**, which helps reduce dependence on synthetic fertilizers,
- **Price and Market Stabilization:** Price fluctuation due to volatility in global trade and domestic production acts as a challenge in meeting inflation targets.

#### **Other initiatives for promoting pulse production**

- **National Food Security Mission (NFSM) – Pulses:** Initiated in 2007, focused on area expansion, productivity enhancement, and the adoption of modern technologies.
- **Accelerated Pulses Production Programme (A3P) (2010–2014):** Focused on cluster demonstrations of advanced agricultural practices.
- **PM-AASHA (Pradhan Mantri Annadata Aay Sanrakshan Abhiyan):** Launched in 2018, this umbrella scheme provides price assurance for pulse, oilseeds, and copra.
- **Minimum Support Prices (MSPs):** For key pulse crops, including pigeonpea(tur), chickpea(chana), green gram (Moong), black gram(urad), and lentil(masoor).
- **Buffer Stock Management:** The government maintains a buffer stock of pulses through the Price Stabilization Fund (PSF) and PSS procurement to stabilize consumer prices and ensure availability.

- Subsidized Retail Distribution (Bharat Dal):** Government launched an initiative to convert stocks of chana (chickpea), mung (green gram), and masur (lentil) into subsidized “**Bharat Dal**” for retail distribution through outlets like NAFED, NCCF etc.

## Conclusion

The “Mission for Aatmanirbharta in Pulses” lays the groundwork for a self-reliant, sustainable, and resilient pulses sector. By combining technology, innovation, and farmer empowerment, it will ensure nutritional security, boost rural prosperity, and reduce import dependence — steering India toward true agricultural and economic self-sufficiency.

## 3.5. WTO AGREEMENT ON FISHERIES SUBSIDIES

### Why in the News?

The WTO Agreement on Fisheries Subsidies has officially entered into force after two-thirds of WTO members submitted their instruments of acceptance.

### About WTO Agreement on Fisheries Subsidies

- Overview:** It is the first WTO agreement to explicitly focus on the environment and the first broad, **binding**, multilateral agreement on **ocean sustainability**.
- Adoption:** It was adopted at the **12<sup>th</sup> WTO Ministerial Conference** (MC12), Geneva, 2022 and **entered into force** on **September 15, 2025**.
- Aligned with SDG 14:** The agreement seeks to **protect marine ecosystems** through the **elimination of harmful fisheries subsidies**.
  - SDG 14.6** aims to eliminate harmful fisheries subsidies that cause overfishing, overcapacity, or support Illegal, Unreported, and Unregulated (IUU) fishing.
- India:** India has not yet ratified the Agreement.

## The Importance of the WTO Fisheries Agreement



### Curbing Overfishing



Addresses the issue of 35.5% of fish stocks being overfished

### Reducing Harmful Subsidies

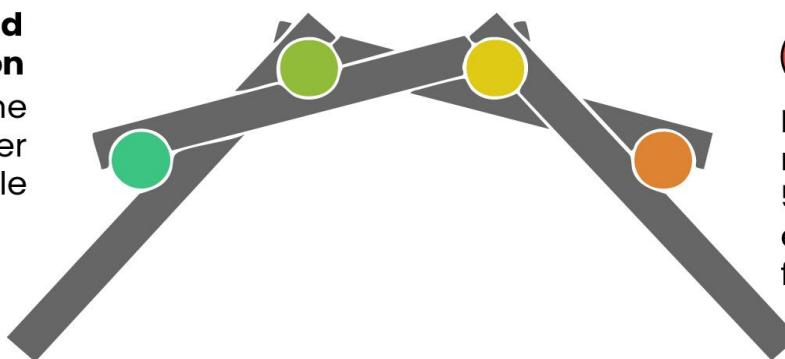


Aims to decrease the USD 22 billion in unsustainable subsidies



### Livelihood Protection

Supports the livelihoods of over 260 million people



### Tackling IUU Fishing

Focuses on reducing the USD 50 billion in economic losses from illegal fishing

### Key Provisions of the Agreement

- Prohibition of Harmful Subsidies:** The Agreement prohibits subsidies that contribute to **Illegal, Unreported, and Unregulated (IUU) fishing**, as well as those linked to **overfished stocks** and **unregulated fishing activities** in the high seas.

- The top 5 subsidizers i.e., **China, EU, U.S., South Korea, and Japan**, account for **58%** of the global fisheries subsidies.
- **Special and Differential Treatment (S&DT):** Recognizing the developmental needs of poorer nations, **developing and Least Developed Countries (LDCs)** are granted a **two-year transition period** from the date of entry into force of the Agreement.
- **WTO Fish Fund:** The Agreement creates a **voluntary funding** mechanism to **support developing and least-developed countries (LDCs) with technical assistance and capacity building** for its implementation.
  - It is fully operational.
- **Transparency obligations:** Members are required to **notify the WTO** about their **fisheries subsidies, fish stock status, and management measures**.
- **High Seas Fishing:** The Agreement also **prohibits providing subsidies for fishing on high seas, which are outside the jurisdiction of coastal countries** and Regional Fisheries Management Organizations/ Arrangements (RFMO/As).
- **Implementation:** A **Committee on Fisheries Subsidies** will oversee the Agreement's implementation, ensure transparency, and facilitate regular dialogue among members on their fishing practices and subsidy policies.

#### Why India has not ratified the Agreement?

- **Low Subsidies:** India is **one of the lowest fisheries subsidizers** globally, despite a **large coastal population and extensive fisheries sector**.
  - India's fishing practices are **small-scale, sustainable**, and support the **livelihoods of millions of traditional and artisanal fishers**.
- **PPP and CBDR:** India advocates the '**Polluter Pays Principle**' and '**Common but Differentiated Responsibilities (CBDR)**', ensuring that **countries responsible for overfishing take greater obligations**, while **protecting developing nations from undue burden**.
- **Moratorium:** India had proposed that Distant Water Fishing Nations be subject to a **25-year moratorium** on all subsidies for fishing or fishing-related activities beyond their Exclusive Economic Zones (EEZs).
- **Other issues:** Flawed Over Capacity and Over Fishing (OCOF) approaches, grossly overlooking the intensity of subsidies, and other factors such as the size of the EEZ, long coastal line, population of small fishers and the per capita subsidies to fisher men.

#### Implementation Issues

- **Capacity Constraints:** Many **developing countries lack the technical and institutional capacity** to monitor fishing activities and ensure compliance with the Agreement.
- **Data Gaps:** **Incomplete or unreliable data** on fish stocks and subsidies may hinder accurate reporting and transparency.
- **Enforcement Challenges:** Effective monitoring of **high seas and distant-water fleets** remains difficult due to jurisdictional limitations and lack of surveillance infrastructure.
- **Financial Dependence:** Small-scale fishers in developing countries rely on limited subsidies for **livelihood and food security**, making abrupt withdrawal challenging.
- **Unequal Obligations:** Concerns persist that the Agreement may **disproportionately affect developing nations**, while **major subsidizing nations** continue with capacity-enhancing support under different categories.

#### Way Forward

- **Strengthen Capacity Building:** Enhance **technical and financial support** through mechanisms like the **WTO Fish Fund** to help developing countries comply effectively.
- **Improve Data and Monitoring Systems:** Establish **robust national databases** and use **satellite-based tracking and digital tools** for better reporting and enforcement.
- **Promote Equity:** Ensure that the principle of **Common but Differentiated Responsibilities (CBDR)** guides to protect the interests of **small-scale fishers**.
- **Global Cooperation:** Foster **coordination among RFMOs** and promote **information sharing** to combat IUU fishing collectively.

## Conclusion

The **WTO Agreement on Fisheries Subsidies** aims to protect oceans and fish stocks by **curbing harmful subsidies** and promoting **transparency** in fisheries management. This is expected to lead to the **recovery of fish stocks**, better **monitoring of fishing**, the establishment of **sustainable fishing measures**, and the protection of **food security and income** for people dependent on fisheries globally. It is a common effort to better protect our oceans, our fisheries and our shared future.

## 3.6. INDIA'S APPROACH TO AI AND EMPLOYMENT

### Why in the News?

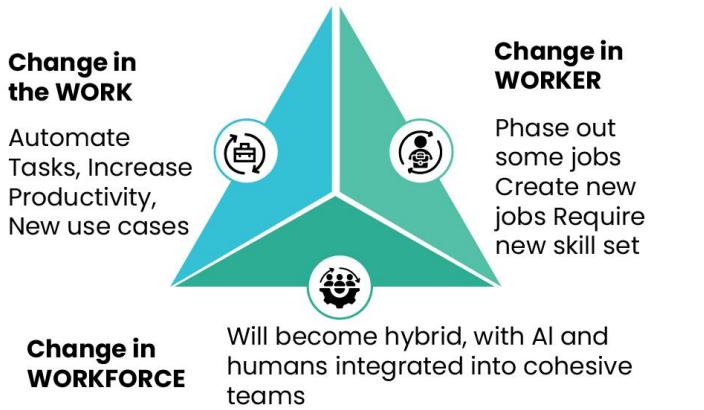
Recently, two reports highlighting India's approach to AI and employment were **released by NITI Aayog**.

### About The NITI Aayog Reports

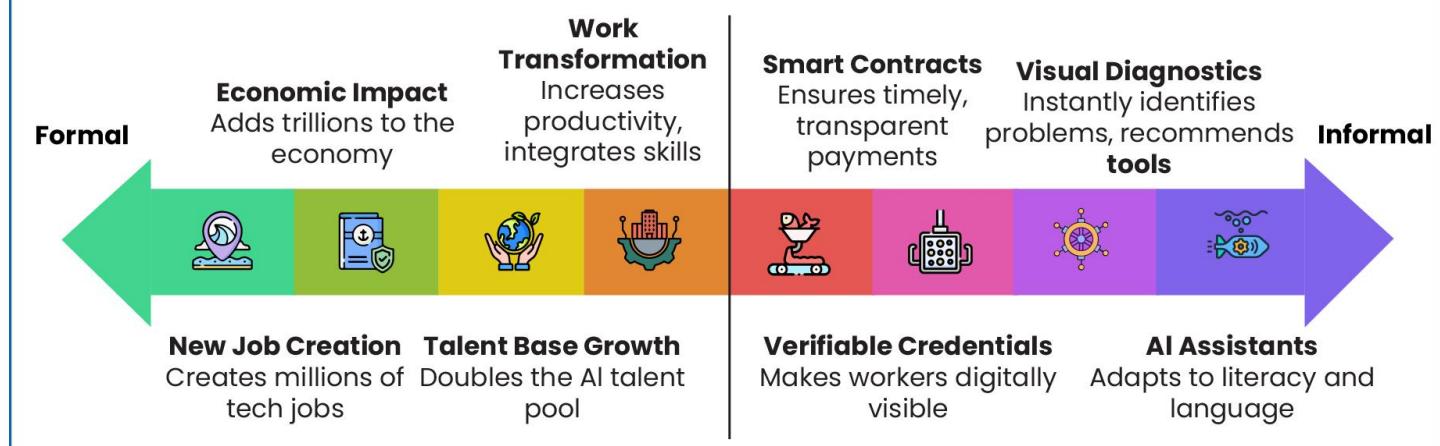
- **"Roadmap for Job Creation in the AI Economy"**: This report outlines India's strategic plan to navigate AI disruption and position itself as the **global AI workforce capital**. It highlights the 3W framework for AI and the associated impact (refer infographics).
- **"Roadmap on AI for Inclusive Societal Development"**: This report aims to leverage frontier technologies to transform informal workers into a formal, empowered, future-ready labour force.
- **AI presents a challenge and opportunity for the Indian economy**: It is disrupting established formal jobs while offering an unparalleled pathway to formalize and boost the productivity of the vast informal workforce.
  - On similar lines, the **Nobel Economic Prize 2025** has been awarded for explaining innovation-driven **economic growth**, particularly the **theory of sustained growth through creative destruction**.
    - > This concept highlights that **new technology like AI is creative (innovation) but also destructive** (companies/older technologies become outcompeted).

### AI related risks in India

### 3W Framework of AI's Impact



### AI's impact ranges from formal to informal sectors



### Operational Risks

- **High Job Displacement Risk**: Over **60% of formal sector jobs** in India are susceptible to automation by 2030, particularly within the IT and Business Process Outsourcing (BPO) sectors.

- The report highlights that a "business-as-usual approach" risks irreversible job losses and shrinkage in competitiveness and societal disruption.
- **Talent Migration:** India has a **net negative talent migration** for AI professionals (-1.55 per 10,000), risking the loss of highly skilled professionals abroad.

## Structural Risks

- **Education and Skill Gaps:**
  - **Curriculum:** Indian curricula often lag, focusing less on **specialized, research-intensive courses** compared to global peers.
    - > Furthermore, **computer science education** is unevenly offered, unlike in countries like China and Russia where it is mandatory at primary/secondary levels.
  - **Lagging Research Output:** India lags significantly in **AI publication citations and its share** of granted AI patents fell from 8–10% in 2010 to under 5% in 2023.
  - **Critical Talent Supply-Demand Gap:** The supply of AI talent currently meets only **50% of the existing demand**, and this gap is expected to widen, despite growing demand.
  - **Limited access to informal workers:** This is a systemic barrier characterized by the **absence of verifiable identities, contracts, and work histories**, limiting access to secure jobs and financial services.
  - **Systemic Access and Usability Gaps:** Digital Public Infrastructure remains **underutilized** due to low digital literacy, linguistic challenges, and complex interfaces that are difficult to navigate.

## Recommendations

- **To establish National AI Talent Mission:** As recommended by **NITI Aayog**, the mission will focus on making AI literacy a foundational skill across schools and universities.
  - **Key features:**
    - > **Building India as a Global AI Talent Magnet** to retain domestic talent and attract international experts with **AI Talent Visa** for fast-track residency.
    - > **Building a national reskilling engine** to upskill and reskill millions of professionals for higher-value, AI-augmented roles.
- **To establish Mission Digital ShramSetu:** To empower informal workers with access and skills in the digital age by harnessing **frontier technologies** such as AI, blockchain, and immersive learning to enable inclusion at an unprecedented scale.

## Conclusion

India stands at a critical juncture where the threat of AI disruption is real, potentially leading to irreversible job losses in the absence of action. By executing a unified, urgent, and mission-driven response through the implementation of the **National AI Talent Mission** and the **Mission Digital ShramSetu**, India can proactively capitalize on the tailwinds of new AI roles to emerge as a **global AI leader**.

## 3.7. INCENTIVE SCHEME FOR THE PROMOTION OF CRITICAL MINERAL RECYCLING

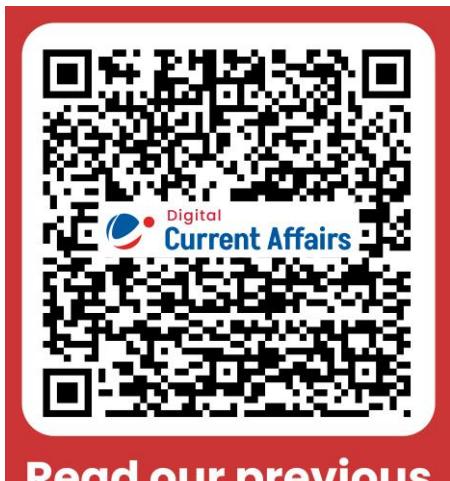
### Why in the News?

The Ministry of Mines has issued detailed guidelines for the **Incentive Scheme for the Promotion of Critical Mineral Recycling**.

### Key features of the scheme

- It is part of the **National Critical Mineral Mission (NCMM)**.
- **Ministry:** The Ministry of Mines

- **Aim:** To incentivize the development of recycling capacity for the separation and extraction of critical minerals from eligible waste streams within the country.
- **Tenure:** 6 years (from FY 2025-26 till FY 2030-31).
- **Financial Outlay:** ₹1,500 crore.
- **Eligible Feedstock:** Includes e-waste, Lithium-Ion Battery (LIB) scrap, and other scraps such as catalytic converters from end-of-life vehicles.
  - Schemes covers **27 critical minerals** including Antimony, Cadmium, Cobalt, Gallium, Graphite, Lithium, Nickel, Niobium, Rare Earth Elements (not containing Uranium and Thorium) etc.
- **Beneficiaries:** Both large and small/new recyclers (including start-ups).
- **Incentive Mechanism:**
  - **Capital expenditure (capex) subsidy:** Upto 20% capital expenditure subsidy on plant and machinery for timely production.
  - **Operational expenditure (opex) subsidy:** on incremental sales; 40% in the 2nd year and 60% in the 5th year (FY 2026-27 to FY 2030-31)
  - **Incentive Ceilings:** Total incentives per entity capped at ₹50 crore for large entities and ₹25 crore for small entities, within which there will be a ceiling for Opex subsidy of Rs.10 crore and Rs.5 crore respectively.



**Read our previous coverage on Critical Minerals and NCMM**

#### About Critical minerals

- **Minerals** that are naturally occurring elements and compounds essential for a country's economic development and national security but facing significant supply-related challenges, often stemming from limited geographical occurrences or sourcing vulnerabilities.
- Ministry of Mines identified 30 critical minerals **for India** including Bismuth, Cobalt, Copper, Phosphorous, Potash, Rare Earth Elements (REE), Silicon, Tin, Titanium, etc.
  - 24 minerals from the list were included in **Part D of the First Schedule of the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)**.

#### Significance of Recycling of Critical Minerals

- **Strengthening Domestic recycling Infrastructure:** It will enhance the **technological, regulatory, and financial ecosystems** for processing and recycling such as chemical processing, metallurgical extraction, or R3 and R4 level recycling of LIB scrap.
  - The scheme incentives is expected to develop at least **270 kilo ton of annual recycling capacity** resulting in around 40 kilo ton annual critical mineral production.
- **Securing Supply and Mitigating Geopolitical Risk:** Critical minerals are vital for modern technology and their supply chain is fragile and vulnerable due to the geographical concentration of their production and processing.
  - China controls ~60-70% of rare earth production and placed export restrictions on rare earth elements (REEs) and magnets used in the defence, energy, and automotive sectors.
- **Saving forex reserves:** Recycling, often referred to as **urban mining**, can reduce India's reliance on importing saving valuable forex reserves.
  - Import on four critical minerals - lithium (apart from lithium ion), cobalt, nickel and copper alone was around ₹34,800 crore in FY23-24.
- **Environmental and Sustainability Goals:** It will help improve **E-Waste Management**, conserving natural resources and **reducing pollution from new mines**.
- **Formalization of industry:** It is estimated to bring in Rs.8,000 crore of investment and creating 70,000 direct and indirect jobs as envisaged in recycling scheme.

## 3.8. ANNUAL SURVEY OF INDUSTRIES (ASI) FOR 2023-24

### Why in the news?

Ministry of Statistics and Programme Implementation (MoSPI) has released the Annual Survey of Industries (ASI) FY 2023-24.

### About Annual Survey of Industries (ASI)

- **Conducted by:** National Statistical Office (NSO), under the Ministry of Statistics and Programme Implementation (MoSPI).
- **Mandated By:** Conducted annually under the **Collection of Statistics (Amendment) Act, 2017**.
- **Industries covered:**
  - Factories registered under Sections 2m (i & ii) of Factories Act, 1948.
  - Bidi and cigar manufacturing establishments under the Bidi & Cigar Workers (Conditions of Employment) Act, 1966.
  - Electricity undertakings not registered with Central Electricity Authority (CEA).
  - Units with 100 or more employees registered in the Business Register of Establishments (BRE) prepared and maintained by the State Governments.
- **Industries Excluded:** Defense establishments, oil storage and distribution depots, departmental units such as railway workshops, gas storage, etc.

### Key Findings from the ASI 2023-24 Report

- **Gross Value Added (GVA):** Increased by 11.89% at current prices from the previous year.
  - **Top 5 Industries:** Basic metal, motor vehicles, chemical and chemical products, food products, and pharmaceutical products were the largest contributors.
  - **Top States:** Maharashtra (16%), Gujarat, Tamil Nadu, Karnataka, and Uttar Pradesh were the top five states by GVA.
- **Industrial Output:** Grew by 5.80% over the previous year.
- **Employment Growth:** The industrial sector added over 5.7 million jobs during the last decade, with a 5.92% year-on-year increase in employment for 2023-24.
  - **Top 5 States:** Tamil Nadu, Gujarat, Maharashtra, Uttar Pradesh, and Karnataka had the highest employment share.

### Know the term

- **Gross Value Added (GVA):** It is defined as **additional value created by the process of production**. This is calculated by deducting the value of total input from total output.
- **Net Value Added (NVA):** It is arrived by **deducting total input and depreciation** from total output.
- **Fixed Capital:** Fixed assets are those that have a normal **productive life of more than one year**. E.g., land including leasehold land, buildings, plant & machinery etc.
  - It **represents the depreciated value of fixed assets** owned by the factory as on the closing day of the accounting year.

## 3.9. NEWS IN SHORTS

### 3.9.1. PAYMENTS REGULATORY BOARD CONSTITUTED BY RBI

The 6-member Board will be responsible for the **regulation and supervision of payment systems** under the **Payment and Settlement Systems Act, 2007**.

- It has replaced the earlier **Board for Regulation and Supervision of Payment and Settlement Systems (BPSS)**.

### About the Payments Regulatory Board

- **Composition & Structure:**
  - As per **Section 3 of the Payment and Settlement Systems Act**, the Board shall consist of

- > **Governor of the Reserve Bank as ex officio Chairperson;**
- > **Deputy Governor of the Reserve Bank** (in-charge of the Payment and Settlement Systems) as **ex officio member**;
- > **One officer of the Reserve Bank, nominated by the Central Board of the Reserve Bank as ex officio member;**
- > **Three central government nominated persons**, expert in payment systems, IT, cybersecurity, law.
  - ✓ **Tenure:** 4 years, **not eligible for re-nomination**; resignation allowed with **6 weeks' notice**.
  - ✓ **Disqualifications:** Age >70; insolvency; criminal conviction ≥180 days; MPs/MLAs, etc.
- **Principal Legal Adviser** of RBI is a **permanent invitee**.
- RBI may also invite **experts (permanent/ad hoc)** for meetings.
- **Meetings:** At least **twice a year** with a **Quorum of 3 members** including **Chairperson (or Deputy Governor in his absence)** and a **nominated member**.
- **Decision-making:** Decisions by **majority** of votes of the **members present and voting**;
  - **Chairperson (or Deputy Governor in his absence)** has a **casting vote in case of tie**.

## Payment and Settlement Systems Act, 2007



**Goal:** Regulates and supervises payment systems in India, from manual clearing to electronic transfers like RTGS and NEFT.



**Central Authority:**  
RBI serves as the central authority overseeing payment and settlement infrastructure.



**Customer Protection:** Prevents unfair charges and ensures accountability of intermediaries for transaction mishaps.

### 3.9.2. INTERNATIONALISATION OF RUPEE

The RBI has unveiled new measures to **promote wider international use of the Indian Rupee (INR)**, expanding both **trade** and **investment** avenues.

- Internationalisation of the Rupee means allowing the **Indian Rupee to be used for global trade and financial transactions**.

#### Key Measures Announced

- **Loans in Indian Rupees to Non-Residents:** Authorised dealer banks in India and their overseas branches will be permitted to lend in INR to persons resident in Bhutan, Nepal, and Sri Lanka, including a bank.
- **Establishing Transparent Reference Rates:** Financial Benchmarks India Limited (FBIL) will develop **transparent reference rates** for the rupee against **major global currencies**.
  - Currently, the RBI publishes reference rates for the U.S. dollar, euro, Japanese yen, and sterling.
- **Widening Use of Special Rupee Vostro Accounts (SRVAs):** SRVA balances can now be used to invest in **corporate bonds and commercial papers**.
  - Previously, surplus **vostro balances** were allowed to be invested in central government securities.



**Read our previous coverage on Internationalisation of Rupee**



## Benefits of Internationalization of Currency



Reduces Requirement of Forex Reserves



**Reduced Exchange Rate Risk** (Protects against US dollar fluctuations and global liquidity pressures.)



Ensures Economic Autonomy



**Boosts Trade Influence** (Positions the Rupee as a stable regional currency, enhancing India's role in global trade.)

### Special Rupee Vostro Account

- A Special Rupee Vostro Account is an account maintained by a **foreign bank** with an **Indian bank** to facilitate settlement of trade transactions directly in Indian Rupees (INR) without converting into foreign currencies.

### 3.9.3. SELF-REGULATORY ORGANISATION FOR NBFCs

RBI granted Self-Regulatory Organisation status to Finance Industry Development Council (FIDC) to oversee NBFCs.

- FIDC is a **representative body of non-banking financial companies (NBFC)** registered with the RBI.
- Granting SRO status to FIDC will ensure better governance for **NBFCs**.

#### About Self-Regulatory Organisation

- Objective:** SRO is expected to adhere to a set of **overarching objectives** for **betterment of the sector** they represent, foster advancement and address **critical industry concerns** within the broader financial system.
- Legal Backing:** RBI's Omnibus Framework for recognising Self-Regulatory Organisations (SROs) for Regulated Entities (REs), 2024
- Eligibility of SROs:**
  - An SRO shall be setup as a not-for-profit company registered under Section 8 of the Companies Act, 2013.
  - It should have adequate net worth, sufficiently **diversified shareholding** (no entity shall hold 10% or more of its paid-up share capital) and must represent the sector.
- Responsibilities of SROs:**
  - Towards members:** Frame a code of conduct, establish a grievance redressal and dispute resolution/ arbitration framework, etc.
  - Towards Regulator:** Ensuring regulatory compliance, promote sector development, foster innovation and detect early warning signals.
- Governance framework:**
  - Articles of Association (AoA)/bye-laws shall provide for manner of functioning of Governing Body and specify the functions of SRO.
  - At least **one-third of members** in Board of Directors including Chairperson shall be independent.



## Non-Banking Financial Company



**Registration:**  
Registered under the  
**Companies Act, 1956.**



**Objective:** Engages in lending and investment in shares, bonds, and securities, excluding activities like agriculture, industry, trading (except securities), services, and real estate.



**Difference from Banks:**  
Cannot accept demand deposits, are outside the payment and settlement system, and cannot issue cheques on themselves.



**Status:** Over 9,000 NBFCs registered with RBI as of 2024.

### 3.9.4. RESERVE BANK - INTEGRATED OMBUDSMAN SCHEME, 2021

The Central and State Co-operative Banks have been brought under the ambit of Reserve Bank - Integrated Ombudsman Scheme, 2021.

#### About Reserve Bank - Integrated Ombudsman Scheme, 2021 (RB-IOS, 2021)

- **Objective:** Provide customers of **regulated entities (REs)** a **speedy, cost-effective** and **expeditious alternate grievance redress mechanism**.
- **Coverage:** Until now it covered-
  - All Commercial Banks, Regional Rural Banks, Scheduled Primary (Urban) Co-operative Banks, and Non-Scheduled Primary (Urban) Co-operative Banks with deposits size of ₹50 crore.
  - All **Non-Banking Financial Companies** (excluding **Housing Finance Companies**) which are authorised to accept deposits or have customer interface, with an assets size of ₹100 crore
  - All System Participants (includes System Provider which participate in a **payment system** in accordance with the **Payment and Settlement Systems Act, 2007**).
  - Credit Information Companies
- It **integrated the three Ombudsman schemes of RBI**, namely,
  - the Banking Ombudsman Scheme, 2006;
  - the Ombudsman Scheme for Non-Banking Financial Companies, 2018; and
  - the Ombudsman Scheme for Digital Transactions, 2019.
- It adopted the '**One Nation One Ombudsman**' approach by making the **RBI Ombudsman mechanism jurisdiction neutral**.
- **Power:** The Ombudsman can award up to ₹20 lakh in compensation, plus up to ₹1 lakh for the complainant's time, expenses, and any mental distress or harassment.

### 3.9.5. NEW INITIATIVES BY RBI

Recently, RBI unveiled key initiatives like the **Unified Lending Interface (ULI)**, **Central Bank Digital Currency (CBDC)** **retail sandbox**, pilot for **tokenisation of Certificates of Deposit (CDs)**.

#### About Initiatives

- **ULI:** It is envisioned as a Digital Public Infrastructure (DPI).
  - It aggregates data from multiple data sources which would be made available to lenders for better **credit assessment**.
  - It aims to enhance the delivery of credit.
- **CBDC Retail sandbox-** for fintech firms to innovate and test solutions.
  - **CBDC** is a digital version of **fiat currencies** issued by Central Banks.
- **Tokenisation of CDs:** Facilitates faster settlements, improves liquidity, enhances transparency, etc.

- **Tokenization** is the process of creating a **digital representation**, called a "token", of a **real-world asset like stocks** on a distributed ledger or blockchain.
- **CD** is a negotiable money market instrument and issued in dematerialised form or as a Promissory Note against **funds deposited at a bank** or other eligible financial institution.
- Its maturity period is up to one year (min- 7 days).

### 3.9.6. SWAMIH FUND

RBI has exempted **SWAMIH (Special Window for Affordable and Mid-Income Housing) Fund**, a **government-backed fund** from its tightened rules of **Alternate investment fund (AIF)**.

- The RBI prescribes the regulatory guidelines in respect of investment by the regulated.
- entities in AIF.

#### About SWAMIH, 2019

- It is a **Category II AIF**.
  - **AIF** means any fund established or incorporated in India which is a privately pooled investment vehicle which collects funds from sophisticated investors, whether Indian or foreign, for investments.
  - SEBI regulates **AIF**. E.g., Venture capital funds (Including Angel Funds)
- **Objective:** Provide priority debt financing for completion of stalled housing projects.
- **Fund Manager:** SBI Ventures Limited.



### 3.9.7. ENGELS' PAUSE

**Geoffrey Hinton** who was awarded the **2024 Nobel Prize**, warned that **AI could trigger a modern Engels' pause**.

#### About Engels' Pause

- It is a term **coined by Oxford economist Robert Allen, based on Friedrich Engels' observations** of 19th-century Britain.
- It refers to the **paradox** during **early Industrial Revolution in Britain** (c. 1780–1840) when industrial output rose **sharply but real wages of workers** remained stagnant.
- There are concerns that AI driven Economy could **replicate Engels' pause**, where economic growth exists but **the gains are unequally distributed, leaving many behind**.

Aspect	Historical (Industrial Revolution)	Modern (AI-driven Economy)
Driver of Change	Mechanization and steam power	Artificial Intelligence, automation, machine learning
Timeframe	1780–1840	2020s–2030s (projected)
Productivity Trend	Sharp industrial growth	Rising output through AI automation
Wage Response	Real wages stagnant	Wages of low/mid-skill workers stagnate or decline
Distribution of Gains	Capital and inventors enriched	Tech firms, investors, and high-skilled AI workers benefit
Social Outcome	Urban inequality, worker unrest	Skill polarization, job displacement, inequality across sectors and countries

### 3.9.8. WEIGHTED AVERAGE CALL RATE (WACR)

RBI would continue to use the overnight weighted average call rate (WACR) as the operating target for monetary policy.

#### About WACR

- It is the average interest rate at which **banks lend and borrow money from each other overnight**, just for one day.
- Significance:**
  - It reflects the **short-term cost of money** in the banking system.
  - It helps the RBI monitor how easy or difficult it is for banks to get funds.
    - If WACR goes up, it means money is becoming costlier; if it goes down, it means money is easier to get.

### 3.9.9. WORLD ECONOMIC OUTLOOK (WEO)

IMF projected India's GDP growth rate for 2025-26 to **6.6% (6.4% earlier)** and **6.2% for 2026-27** in its WEO.

- Global growth is projected to **slow from 3.3% in 2024 to 3.2% in 2025 and 3.1% in 2026**.

#### About World Economic Outlook

- Published by:** International Monetary Fund (IMF)
- Purpose:** It presents **analyses and projections** of the world economy in the near and medium term.
- It is usually **published twice a year** with updates in between.

### 3.9.10. GLOBAL FINANCIAL STABILITY REPORT (GFSR)

International Monetary Fund (IMF) recently released the **Global Finance Stability Report (GFSR)**, April 2025.

#### About GFSR

- Purpose:** Provide a regular assessment of **global financial markets** and identify **potential systemic weaknesses** before they lead to crises.
- Key Findings**
  - Tightened Global Financial Conditions:** Have caused significant increase in the Global financial stability risks.
  - Role of Major geopolitical risk events:** Especially **military conflicts**, can lead to substantial decline in stock prices and increases in **sovereign risk premiums**.
- Other Key Reports by IMF:** World Economic Outlook, Fiscal Monitor.

### 3.9.11. PM-SETU (PRADHAN MANTRI SKILLING AND EMPLOYABILITY TRANSFORMATION THROUGH UPGRADED ITIS) LAUNCHED

The scheme will be implemented under the **Ministry of Skill Development and Entrepreneurship**.

#### About PM-SETU

- Type:** ₹60,000 crore centrally sponsored scheme.
- Aim:** To transform 1,000 Government Industrial Training Institutes (it is) across India into modern, industry-aligned training institutions.
- Implementation:** PM-SETU will follow a **hub-and-spoke model**, with **200 hub ITIs** linked to 800 spoke ITIs.
  - Each hub will be equipped with advanced infrastructure, innovation and incubation centres, production units, training of trainer facilities, and placement services, while the **spokes will extend access and outreach**.
- Main Components:**
  - Introduce **new, demand-driven courses** and revamp existing ones in collaboration with industry;
  - Set up **Special Purpose Vehicles (SPVs)** with credible Anchor Industry Partners to manage clusters and ensure outcome-based training;
  - Create pathways for **long-term diplomas, short-term courses, and executive programs**;
  - Strengthen **5 National Skill Training Institutes** in - Bhubaneswar (Odisha), Chennai (Tamil Nadu), Hyderabad (Telangana), Kanpur (Uttar Pradesh), Ludhiana (Punjab), as Centres of Excellence with global partnerships.

## Industrial Training Institutes (ITIs)



**Structure:** State-run institutions serving as the backbone of Vocational Education and Training (VET) in India since the 1950s.



**Accreditation:** Managed by the Directorate General of Training (DGT) under the **Ministry of Skill Development & Entrepreneurship.**



**Status:** Around 15,034 ITIs operational, with 78% privately owned.



**Schemes:** STRIVE, Model ITI, and ESDI (Enhancing Skill Development Infrastructure in NE States).

### 3.9.12. REMISSION OF DUTIES AND TAXES ON EXPORTED PRODUCTS (RODTEP) SCHEME

Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme has been extended till March 2026.

#### About RoDTEP Scheme

- **Launched:** January 2021 by Ministry of Commerce and Industry
- **Objective:** To reimburse taxes, duties, and levies at central, state, and local levels that are **not refunded under any other mechanism.**
  - Reduces hidden costs and make **Indian exports more competitive in global markets.**
- **Scope:** Covers taxes incurred during **manufacture and distribution** of exported products

### 3.9.13. 'WE RISE' INITIATIVE

'We Rise' (Women Entrepreneurs Reimagining Inclusive and Sustainable Enterprises) initiative was launched recently.

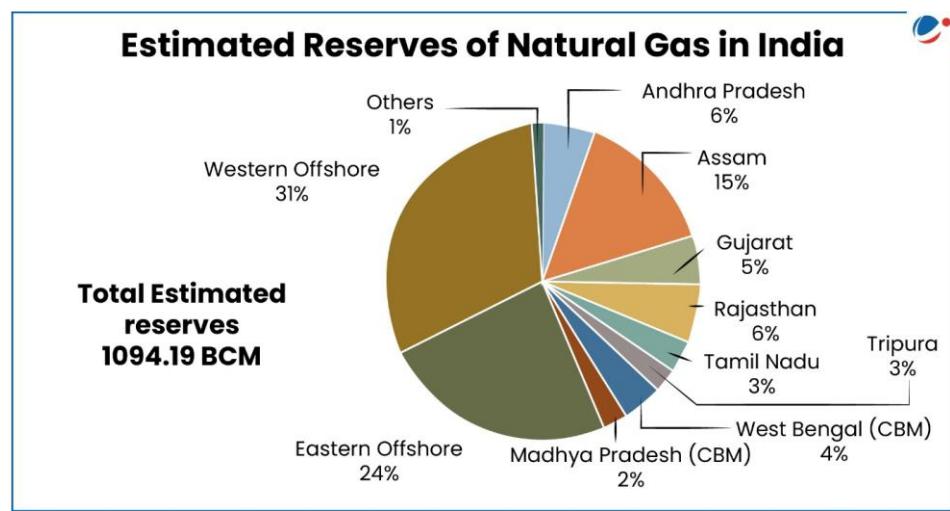
#### About We Rise Initiatives

- **Launched by:** NITI Aayog's Women Entrepreneurship Platform (WEP) under its Award to Reward (ATR) initiative along with DP World.
- **Objective:** To help women entrepreneurs, including **women-led MSMEs**, to scale their businesses globally through trade facilitation, mentorship, and strategic partnerships.

### 3.9.14. DISCOVERY OF NATURAL GAS IN ANDAMAN BASIN

Ministry of Petroleum and Natural Gas informed about the occurrence of natural gas in the Sri Vijayapuram 2 well at 17 km from the shoreline on the east coast of the Andaman Islands.

- **India's Hydrocarbon Resource Assessment Study (HRAS) estimates** hydrocarbon resources of 371 million Metric Tons of Oil Equivalent (MMTOE) in the **Andaman-Nicobar (AN) Basin.**
  - Geologically, the AN basin lies at the intersection of the Andaman and Nicobar Basins, part of the **Bengal-Arakan sedimentary system.**



- Tectonic setting at the boundary of the **Indian and Burmese plates** have created numerous stratigraphic traps conducive to hydrocarbon accumulation.
- Earlier, gas has been discovered in **adjacent basins along North Sumatra (Indonesia) and Irrawaddy-Margui (Myanmar)**.
- The discovery aligns with India's vision of establishing a **Gas Based Economy by 2030** and increasing **share of natural gas in its primary energy basket to 15 percent** by 2030.
- Currently, India's **natural gas production meets only around 50% of its demand** with rest demand being fulfilled through imports.
  - > **Qatar, US and UAE are major sources** of India's Liquified Natural Gas (LNG) imports.

#### Initiatives for Natural Gas Exploration

- **Hydrocarbon Exploration and Licensing Policy (HELP) 2016:** Introduced a uniform licensing framework for all hydrocarbon exploration and production and introduced Open Acreage Licensing Policy (OALP).
- **National Deep Water Exploration Mission:** Under it, large number of deepwater exploration wells are planned in offshore basins to find new discoveries and fully exploit hydrocarbon reserves.
- **Other Initiatives:** National Data Repository, National Seismic Program, 100% FDI in natural gas sector etc.

#### 3.9.15. STATE MINING READINESS INDEX

Ministry of Mines releases **State Mining Readiness Index (SMRI)**

##### About State Mining Readiness Index

- **Objective:** To capture State's relative contribution in **developing the country's mining sector**, promote **mining sector reforms** and assess State performance.
- **Basis:** The index evaluates States based on **auction performance, early mine operationalization, exploration thrust, and sustainable mining practices** related to **non-coal minerals**.
- **Classification:** States are classified into **three categories** based on their **mineral endowment**.
  - Top Performers in these categories are:
    - > **A:** Madhya Pradesh, Rajasthan, and Gujarat
    - > **B:** Goa, Uttar Pradesh, and Assam
    - > **C:** Punjab, Uttarakhand, and Tripura

#### 3.9.16. MAJOR AND MINOR MINERALS

Ministry of Mines classified limestone as a major mineral completely.

- Earlier limestone was classified as minor mineral as well as major mineral depending upon the end use.

##### About Major and Minor minerals

- 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.
- **The major minerals** cover fuel minerals consisting of coal, lignite, petroleum & natural gas and metallic minerals including atomic minerals and non-metallic minerals.
- **Minor minerals** consist of materials such as marble, slate, shale etc.
  - MMDR Act gives State Governments the power to make rules for minor minerals.



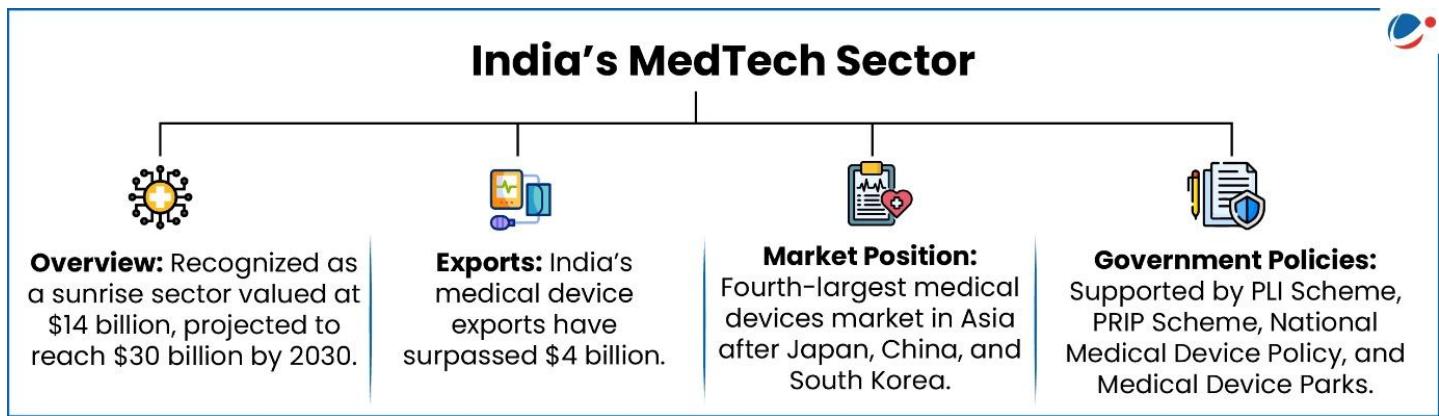
#### 3.9.17. MISSION FOR ADVANCEMENT IN HIGH-IMPACT AREAS (MAHA) - MEDTECH MISSION LAUNCHED

MAHA-MedTech Mission has been launched by the **Anusandhan National Research Foundation (ANRF)**, in collaboration with the Indian Council of Medical Research (ICMR) and the Gates Foundation.

- ANRF has been established, through ANRF Act, 2023, as an apex body to provide high-level strategic direction of scientific research as per recommendations of the National Education Policy.

#### About MAHA-MedTech Mission

- Aim:** To accelerate innovation in India's medical technology sector, reduce reliance on high-cost imports, and promote equitable access to affordable and high-quality medical technologies.
- Funding:** Provide funding support to a wide range of entities including Academic and R&D institutions, Hospitals, Startups, MSMEs, MedTech industry and collaborations between entities.
  - Milestone-linked funding of ₹5–25 crore per project (and up to ₹50 crore in exceptional cases).
- Enabling Support:** Through national initiatives such as Patent Mitra (IP protection and technology transfer), MedTech Mitra (regulatory guidance and clearances), a Clinical Trial Network (for clinical validation and evidence generation) etc.
- Technology Areas:** Innovative medical devices and IVD (In vitro diagnostics) including High-end Frontier Technologies (Deep Tech like Imaging, Radiotherapy equipment, Robotics, minimal invasive technologies, implants, AI/ML enabled platforms & devices etc.).



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# 4. SECURITY

## 4.1. LEFT-WING EXTREMISM (LWE)

### Why in the News?

The Ministry of Home Affairs (MHA) has informed that the number of most affected districts reduced from 6 to three (Bijapur, Sukma, Narayanpur- all in Chhattisgarh).

### More on the News

- State achievements:** Andhra Pradesh and Telangana have recently been delisted from the category of LWE-affected states.
- Government Target:** Complete elimination of Naxalism by **March 31, 2026**.
  - The overall number of LWE-affected districts has reduced from **18 to 11**.

### About LWE

- LWE, commonly referred to as **Naxalism**, is one of India's most serious internal security challenges.
- Ideology:** It is rooted in **socio-economic inequalities** and fueled by **Maoist ideology**, utilizing violence and propaganda to overthrow the existing democratic government and establish a classless society.
- Region affected**
  - Origin:** The movement originated from the **Naxalbari movement of 1967** in West Bengal.
  - Historical Reach (Red Corridor):** It spread primarily across **Chhattisgarh, Jharkhand, Odisha, Maharashtra, Kerala, West Bengal, Madhya Pradesh, Andhra Pradesh, and Telangana**.

<b>LWE Determinants</b>	
	<b>Socio-economic Disparities</b> Areas suffer from poverty, low levels of literacy, poor health standards, and lack of connectivity
	<b>Tribal Exploitation and Displacement</b> Arises from implementation of the <b>Forest (Conservation) Act of 1980</b> and displacement of tribal populations due to development projects and mining operations
	<b>Governance Vacuum</b> Weak governance and socio-political-cultural discrimination create alienation; lack of State presence sustains Maoist domination
	<b>Maoist Manipulation</b> Maoist exploit vulnerable individuals by providing weapons and financial aid to recruit them into the movement

Threats posed by LWE	
<b>Human Cost</b>	Between 2004 to 2025 (31 March), 8895 lives have been lost to LWE-related violence in different parts of India (Ministry of Home Affairs).
<b>Infrastructure Destruction</b>	Extremists deliberately targets <b>school buildings, roads, railways, bridges, health infrastructure, and communication facilities</b> to perpetuate marginalization and set back development by decades
<b>Subversion of Democracy</b>	In Bijapur district, polling booths could not be set up for 17 years due to Maoist intimidation

### Measures by Government to eradicate LWE

- Developmental initiatives (3Cs: Road, Mobile and Financial connectivity)**
  - Financial Inclusion:** More than 1,000 bank branches and 900 ATMs have been opened in 30 most affected districts. Around 5,900 Post Offices (with banking services) have opened in LWE districts (since 2014).
  - Education & Skill Development:** 178 Eklavya Model Residential Schools (EMRSs) have been made functional. 48 Industrial Training Institutes (ITIs) and 61 Skill Development Centres (SDCs) are functional.
  - Dharti Aaba Janjatiya Gram Utkarsh Abhiyan:** Launched in 2024, to achieve full saturation in rural amenities, benefiting nearly **1.5 crore people** in over 15,000 villages.
  - Other:** Civic Action Programme (civic activities for local welfare, bridging the gap between Security Forces and locals), road connectivity projects, installing mobile towers to improve telecom expansion, etc.
- Security Initiatives**
  - SAMADHAN Framework:** It was enunciated to tackle LWE by MHA in 2017.

- **Financial Choking:** The National Investigation Agency (NIA) and the Enforcement Directorate (ED) have been activated to break the Naxalites' financial backbone by seizing assets and filing cases under the Prevention of Money Laundering Act (PMLA).
- **Others:** Enhancing security infrastructure like construction of Fortified Police Stations, increasing presence of security forces, Naxals Surrender and Rehabilitation Policy to integrate surrendered extremists back into society, ensuring rights and entitlements of local communities under PESA and Forest Rights Act.

#### Way forward

- **Sustained Holistic Approach:** The integrated strategy focused on security, development, and rights empowerment must be sustained.
- **Focus on Local Capacity:** Emphasis must be placed on capacity-building, modernization of **local police forces** and use of specialized and skilled Joint Task Forces.
- **Grievance Redressal:** Ensure legitimate forums exist for grievance redressal, acknowledging that violence cannot succeed in a democracy. Effective implementation of the Forest Rights Act, 2006, is a key policy measure for indirect benefit.
- **Judicial Accountability:** Accelerate investigation and prosecution of all LWE-related cases.
- **Countering Propaganda:** Civil society and media must be sensitized to the violent nature of the Maoist insurgency to build pressure on extremists to abandon violence. The Civic Action Programmes (CAP) should continue to build trust between forces and locals.

#### Conclusion

India's fight against LWE is in its final phase, shifting the narrative from the "Red Corridor" to "Growth Corridors". The resolute implementation of the multi-pronged strategy, blending aggressive security operations with an unprecedented focus on development, financial inclusion, and social justice has systematically dismantled the insurgency, both operationally and geographically, ensuring lasting peace and development for the most vulnerable sections of society.

## 4.2. ARMED FORCES (SPECIAL POWERS) ACT (AFSPA)

#### Why in the News?

The Ministry of Home Affairs recently extended the Armed Forces (Special Powers) Act, 1958 in parts of **Manipur, Arunachal Pradesh, and Nagaland** for another six months.

#### More on the News

#### About AFSPA, 1958

- It is a special law **granting extraordinary powers to the military** to maintain **law and order**.
- **Objective:** To empower the **armed forces** to operate in "**disturbed areas**" where **public order is seriously threatened**.
- Currently, AFSPA is in effect in parts of **Nagaland, Assam, Manipur, and Arunachal Pradesh**.
  - It was lifted from **Tripura in 2015, Meghalaya in 2018** and **Mizoram in 1980s**.
- **AFSPA** also remains in force in Jammu and Kashmir through the **Armed Forces (Jammu and Kashmir) Special Powers Act, 1990**.

#### Key Provisions of the Act

- **Declaration of Disturbed Area (Section 3): Governor, Administrator, or Central Government** can declare part or whole state/UT as "**disturbed**" if they believe the situation requires **armed forces to aid civil authorities**.

## 8 Pillars of fighting Left Wing Extremism

	<b>S</b>	Smart Leadership
	<b>A</b>	Aggressive strategy
	<b>M</b>	Motivation and training
	<b>A</b>	Actionable Intelligence
	<b>D</b>	Dashboard based KPIs
	<b>H</b>	Harness technology
	<b>A</b>	Action plan for each theatre
	<b>N</b>	No access to financing

#### Do you know?

➤ AFSPA has been applicable in **Manipur since 1981**.

- **Special Powers of the Armed Forces (Section 4):** Grants special powers **to armed forces personnel** in areas declared as “disturbed” -
  - Use force, **including shooting to kill**, against anyone violating law.
  - **Arrest and Enter/Search premises without warrant** based on suspicion.
  - **Prohibit assembly** of 5 or more persons.
  - **Destroy any arms dump, fortified position** from which armed attacks can be made or any training camp for armed volunteers
- **Immunity to Armed Forces personnel (Section 6):** Protection from **prosecution and legal suits for acts under AFSPA** without the Central government’s sanction.
- **Treatment of arrested person:** Armed forces required to **hand over the person to the nearest police** “with least possible delay.”

### Landmark Judicial Decisions

- **Naga People’s Movement of Human Rights v. Union of India (1997):** Validated AFSPA constitutionally with safeguards on use of force and immunity.
- **Extra-Judicial Execution Victim Families Association v. Union of India (2016):** Immunity under Section 6 is not absolute; accountability for excessive force is mandatory.
- **Sebastian M. Hongray v. Union of India (1984):** Security personnel can be held accountable despite AFSPA immunity.

### Critical analysis of AFSPA

Arguments in Favor of AFSPA	Arguments Against AFSPA
<ul style="list-style-type: none"> <li>• <b>National Security:</b> Empowers armed forces to swiftly tackle insurgency and protect India’s sovereignty in conflict-prone and border areas like the North East and J&amp;K.</li> <li>• <b>Aids Civil Administration:</b> Allows quick deployment of military support when civil authorities are unable to maintain law and order in “disturbed” regions.</li> <li>• <b>Prevents Legal Paralysis:</b> Officers can arrest, search, or use force without warrants, preventing delays that insurgents could exploit.</li> <li>• <b>Accountability Through “Sanction Clause”:</b> Central government approval is required to prosecute personnel safeguarding them from frivolous or politically motivated cases.</li> <li>• <b>Judicial and Legislative Validation:</b> Supreme Court ruling (Naga People’s Movement of Human Rights v. Union of India (1997)) affirms AFSPA’s constitutionality, emphasizing that armed forces act in aid of, not above, civil power.</li> <li>• <b>Proven Role in Stabilizing Regions:</b> Contributed to reducing insurgency in states like Mizoram, Tripura.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Violation of Fundamental Rights:</b> Sections allowing shoot-to-kill and legal immunity clash with Articles 14, 21, and 22 on equality, life, and liberty.</li> <li>• <b>Lack of Accountability:</b> Sanction clause effectively shields security personnel from prosecution, creating a culture of impunity.</li> <li>• <b>Prolonged Militarization:</b> Areas remain under military control for decades without a defined time limit, normalizing conflict conditions and anti-Army sentiment.</li> <li>• <b>Federalism and Civil-Military Friction:</b> Central deployment undermines state autonomy and demoralizes local police forces, leading to tension.</li> <li>• <b>Damages India’s Democratic Image:</b> Continued use of AFSPA contradicts international human rights commitments under Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), the Convention against Torture.</li> <li>• <b>Allegations of Human Rights Abuses:</b> Numerous reports allege cases of extrajudicial killings, torture, and sexual violence.</li> </ul>

### Way Ahead

- **Restrict & Phase Powers:** Apply AFSPA only in disturbed districts; gradually reduce powers as situations improve.
- **Amend Sections for Accountability:** Amendments may include provisions to prevent extrajudicial killings; present arrested persons before magistrates within 24 hours and limit immunity while establishing oversight for prompt investigations.

- **Alternative Policing:** Use CRPF/state police for **routine law and order**; reserve army for high-intensity conflicts.
- **Human Rights Compliance:** Ensure military operations respect **human rights**; strengthen professionalism in counterinsurgency.
- **Local Trust & Participation:** Involve **civil society, bureaucracy, and army** in local development to **gain public support**.
- **Follow Committee Recommendations:**
  - **Jeevan Reddy Committee (2005):** Repeal AFSPA; restrict prolonged army deployment; merge powers into Unlawful Activities (Prevention) Act, 1967.
  - **Second ARC (2007):** Repeal AFSPA after **stakeholder consultations**.
  - **Santosh Hegde Committee (2013):** Investigate **unlawful encounters**; prevent **misuse of powers**.
  - **Justice J.S. Verma Committee (2013):** It recommended for **immediate review of AFSPA** and if any officer of armed forces commits sexual violence against women he should be dealt under ordinary criminal law.

### Conclusion

AFSPA, while **vital for counterinsurgency** in disturbed areas, **raises concerns over human rights and accountability**. A balanced approach **restricting its scope, ensuring oversight, and strengthening local governance** can safeguard security without **compromising democratic values**.

## 4.3. UNITED NATIONS CONVENTION AGAINST CYBERCRIME

### Why in the News?

Recently, 72 of the 193 member states signed the United Nations Convention against Cybercrime in Hanoi, Vietnam.

### About United Nations Convention Against Cybercrime

- **Convention was adopted by the General Assembly** of the United Nations on 24 December 2024.
- It will enter into force **90 days after the 40th State deposits its ratification**.
  - The signing process will remain **open until 31 December 2026**.
  - **India has not signed the treaty yet**.
- **UN Office on Drugs and Crime (UNODC)** served as secretariat to negotiations.
- **UN Convention Against Cybercrime** is the **first universal legally binding framework** for the collection, sharing and use of electronic evidence for all serious offences.
  - **Budapest Convention on Cybercrime (2001)**, drafted by the Council of Europe, **was the first international treaty** focused on combating cybercrime and strengthening cross-border cooperation.
  - A number of states such as Russia and China have rejected the Budapest Convention and have long advocated for a new international cybercrime convention.



**Read our previous  
coverage on  
Cybercrime**

### Key features of the Convention Against Cybercrime

- **Expanded Scope of Cyber Offences:** It criminalizes cyber-dependent crimes and also **offences related to online fraud, online child sexual abuse, non-consensual dissemination of intimate images etc.**
- **International Cooperation:** It establishes a 24/7 network to boost international cooperation.
- **Protection of sovereignty:** States Parties shall carry out their obligations under this Convention in a **manner consistent with the principles of sovereign equality and territorial integrity of States** and that of non-intervention in the domestic affairs of other States.
- **Victim Support:** The Convention encourages States to provide victims with **access to recovery services, compensation, restitution, and the removal of illicit content**. This support will be delivered according to each country's domestic laws.
- **Respect for human rights:** States Parties to ensure that the implementation of their obligations under the Convention is consistent under **international human rights law**.

## Significance of the Convention

- **Relevance of Multilateralism:** The convention marks the **victory of multilateralism**, reflecting collective will of States to promote international cooperation for combating cybercrime.
- **Tackle Rising Digital Threats:** Global cybercrime costs are projected to **reach \$10.5 trillion annually by 2025**, as per industrial experts.
- **Helping Global South States:** Global convention would help developing countries who often lack **robust cybersecurity infrastructure**.
- **Emerging Challenges:** It provides a cooperative framework to address new and evolving threats such as AI-driven cyberattacks, deepfakes, disinformation campaigns etc.

## Conclusion

The UN Cybercrime Convention marks a milestone in global cooperation against cyber threats, promoting prevention, capacity-building, and multilateral solidarity. Its success depends on protecting rights, preventing misuse, aiding developing nations, and adapting to evolving technologies for a secure digital ecosystem.

## 4.4. NEWS IN SHORTS

### 4.4.1. ANANT SHAstra AIR DEFENCE SYSTEM

- It is an **indigenous Quick Reaction Surface-to-Air Missile (QRSAM) system**.
- **Developed by:** DRDO in collaboration with Bharat Electronics Limited (BEL) and Bharat Dynamics Limited (BDL).
- **Capabilities:** Highly mobile and agile with a range **of around 30 km**.
- **Integration:** Works alongside MR-SAM, Akash, Spyder, and Sudarshan S-400 systems.
- **Deployment:** To be stationed along **western and northern borders** once approved.

### 4.4.2. SAKSHAM SYSTEM FOR REAL-TIME COUNTER-DRONE DEFENCE

Indian Army initiated procurement of indigenously developed **SAKSHAM (Situational Awareness for Kinetic Soft and Hard Kill Assets Management)** Counter-Unmanned Aerial System (CUAS) Grid System.

#### About SAKSHAM System

- It is a **modular, high-end Command and Control (C2) system** operating on the secure Army Data Network (ADN).
- It can detect, track, identify, and neutralise hostile drones and unmanned aerial systems in **real time**, ensuring comprehensive airspace security across the newly defined **Tactical Battlefield Space (TBS)**.
  - TBS is a domain extending up to 3,000 metres (10,000 feet) above ground level.
- Developed in collaboration with the **Bharat Electronics Limited (BEL)**.

### 4.4.3. DRONE WALL

After suspected Russian drone incursions in Denmark, the European Union has started efforts **towards building a ‘drone wall’**.

#### About Drone Wall

- An artificial intelligence (AI)-based **multilayered drone defence system called Eirshield**, an anti-drone platform.
- Designed to work on **fast-flying unmanned targets carrying warheads**.
- Provides **early warning, real-time threat detection, and intelligence against drone incursions, GPS jamming**, and other unconventional attacks.

### 4.4.4. SCHEME FOR INNOVATION AND TECHNOLOGY ASSOCIATION WITH AADHAAR (SITAA)

Unique Identification Authority of India (UIDAI) launched Scheme for Innovation and Technology Association with Aadhaar (SITAA).

## About SITAA

- Aim:** To strengthen India's digital identity ecosystem and combat emerging **security threats such as deepfakes, spoofing, and presentation attacks.**
- Implementing Agency:** UIDAI under Ministry of Electronics & Information Technology.
- Focus Areas:** Biometric authentication, AI/ML solutions, data privacy, and advanced biometric security.

## 4.4.5. INS ANDROTH

The Indian Navy commissioned **INS Androth** at the Naval Dockyard, Visakhapatnam.

### About INS Androth

- It is the **second Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)** after **INS Arnala**.
  - These are part of the 8 ASW-SWCs being constructed by **Garden Reach Shipbuilders and Engineers Ltd. (GRSE), Kolkata**.
- It is named after **Androth**, the **northernmost island** of the **Lakshadweep group**.
- Capabilities:** Maritime Surveillance, Search and Rescue, coastal and anti-submarine defence missions, and Low Intensity Maritime Operations (LIMO).

## 4.4.6. EXERCISE IN NEWS

- Exercise Pacific Reach:** It is biennial multinational submarine rescue exercise featuring participation from over 40 nations.
  - Host:** Singapore.
- KONKAN-25 Exercise:** Joint bilateral exercise between Indian Navy and United Kingdom's Royal Navy.
- AUSTRAHIND 2025:** India-Australia joint annual military exercise.
- Samudra Shakti Exercise:** India-Indonesia joint bilateral maritime exercise.
- JAIMEX -2025:** Biennial naval exercise between the **Indian Navy** and the Japan Maritime Self-Defense Force.
- Exercise Ocean Sky:** Multinational air exercise hosted by the Spanish Air Force.
  - This is the first time a **non-NATO country** (India) is participating in this exercise.



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## 5. ENVIRONMENT

### 5.1. 10 YEARS OF SDGS: INDIA'S PROGRESS

#### Why in the News?

Recently, UN Sustainable Development Goals (SDG), also known as Global Goals, completed ten years since their adoption in September 2015.

#### About Sustainable Development Goals (SDGs)

- **Sustainable development** was first defined in **World Commission on Environment and Development's 1987 Brundtland report** as development that meets the needs of present without compromising the ability of future generations to meet their own needs.
- In **2015**, all the countries in United Nations adopted **2030 Agenda for Sustainable Development**. It sets out **17 SDGs, which include 169 targets**.
  - SDGs are a call to action to end poverty and inequality, protect the planet, and ensure that all people enjoy health, justice and prosperity. It is critical that no one is left behind.

#### Progress towards achieving SDGs

- **Global** (as per 10th edition of Sustainable Development Report (SDR), 2025)
  - **Finland** has been ranked **first** in SDG Index with a score of 87, followed by Sweden and Denmark. On average, **East and South Asia** has shown **fastest progress on SDGs since 2015**, driven notably by rapid **progress on socioeconomic targets**.
  - Only **17% of SDG targets are on track** to be achieved by 2030.
    - > **Most UN member states have made strong progress** on targets related to access to basic services and infrastructure, including mobile broadband use and internet use (SDG 9), access to electricity (SDG 7), under-5 mortality rate and neonatal mortality (SDG 3).
- **India's progress in achieving SDGs**
  - For the first time, **India ranks among top 100 in SDG Index at 99 in 2025** with a score of 67 out of 100. (SDR, 2025)

SDG	Achievement(s)
<b>SDG-1 (No Poverty)</b>	Over 135 million people have moved out of multidimensional poverty between 2015-2016 and 2019-2021. (NITI Aayog SDG India Index 2023-24)
<b>SDG-2 (Zero Hunger)</b>	Prevalence of undernourishment in 2021-23 is 13.7%. (SOFI 2024)
<b>SDG-3 (Good Health and Well-Being)</b>	Maternal mortality ratio (Per 100,000 live births) declined to 80.5 in 2023 from 130 in 2014-16. (SDR, 2025)
<b>SDG-4 (Quality Education)</b>	Net primary enrollment rate is 99.9% in 2024. (SDR, 2025)
<b>SDG- 5 (Gender Equality)</b>	Demand for family planning satisfied with modern methods rose to <b>77.5%</b> in 2024. (SDR, 2025)
<b>SDG- 7 (Clean Energy)</b>	99.2% population have access to electricity in 2022. (SDR, 2025)
<b>SDG- 9 (Industry, Innovation and Infrastructure)</b>	886 million active internet users in 2024. (IAMAI, 2024)

#### Integration of SDGs into India's Development Planning

- **Whole-of-Government Approach:** India adopted a comprehensive approach by **integrating SDGs vertically across the three tiers of government** (central, state, and local) and **horizontally across ministries**.



**Read our Weekly Focus coverage on SDGs**

- Example: **NITI Aayog acts as the central coordinating body** to facilitate SDG implementation across sectors and states, ensuring systemic alignment. **NITI Aayog's State Support Mission** further bolsters the bottom-up approach for fostering inclusive and sustainable development.
- **Data-Driven Competitive Federalism:** e.g., **NITI Aayog's SDG India Index, School Education Quality Index, State Health Index, Composite Water Management Index, SDGs India Index, etc.**
- **Localization:** e.g., **NER District SDG Index** has directly influenced targeted investment in Northeastern states, including the \$825 million investment via PM-DevINE scheme.
- **Institutionalization of SDGs:** Several states have set up dedicated **SDG Coordination and Acceleration Centres** to institutionalize and mainstream SDG efforts within governance frameworks, improving accountability and implementation capacity.
- **Inclusive and Equitable Focus: Aspirational Districts Programme (ADP)** focuses on lagging regions and addresses various socioeconomic challenges by sharing responsibilities, expertise and resources, ensuring equitable SDG delivery.
  - E.g., As per UNDP report, aspirational districts experienced improved development outcomes in just 3 years of ADP implementation.

### Issues faced in achieving SDGs

- **Data Availability:** e.g., **SDG India Index 2023-24 does not measure indicators of SDG 17** owing to the unavailability of suitable data at State/UT level.
- **Regional Disparities:** e.g., Bihar, Jharkhand, Uttar Pradesh have emerged as poorest states in India while Kerala, Sikkim, Tamil Nadu have registered lowest poverty across India. (MPI report, 2023)
- **Financial Constraints:** Persistent financing gap driven by difficulties in mobilizing domestic resources, limited access to private finances, and constraints in leveraging international development cooperation, etc.
- **Institutional and Governance:** Despite efforts to mainstream SDGs in planning, varying capacities and coordination across ministries, states, and local bodies affect uniform implementation, impacting SDG progress.
  - Example, while measuring progress of developmental schemes, focus is on Central Sector Schemes, while schemes implemented by State Governments are often overlooked in measuring progress.
- **Sustainability Challenges:** Balancing rapid economic growth with environmental protection remains difficult, especially in areas like renewable energy expansion, forest conservation, and reducing emissions intensity.
- **Pandemic After-effects: Learning losses** and interrupted healthcare services due to COVID-19 have reversed years of human development gains.

### Way Forward

- **Data quality:** Strengthening data systems and capacity building at national and sub-national levels to improve data availability, quality, and monitoring.
- **Mobilise finances:** Enhancing financial resource mobilization by **boosting domestic revenue generation**, increasing private and international participation through innovative financing instruments.
- **Governance:** Promoting **cooperative federalism by strengthening institutional frameworks** and coordination among central, state, and local governments. Further, **integrating SDGs into sectoral policies** and budgets systematically to ensure policy coherence and financial alignment
- **Engaging stakeholders:** Encouraging multi-sectoral partnerships and wider societal participation including civil society, academia, and private sector for more inclusive implementation.
- **Sustainability:** Development policies must integrate environmental sustainability by promoting clean energy, efficient water management, waste reduction, and conservation of natural ecosystems.
  - **Example:** Prioritizing renewable energy expansion, waste-to-energy projects, water resource management, etc.

### Conclusion

India's decade-long journey with the SDGs shows meaningful progress in key social and infrastructure indicators. With sustained institutional coordination and inclusive stakeholder participation, India can accelerate its path toward achieving the SDGs by 2030.

## 5.2. COLD DESERT BIOSPHERE RESERVE

### Why in the news?

UNESCO designated the Cold Desert Biosphere Reserve in India – as part of 26 new sites – to UNESCO's World Network of Biosphere Reserves (WNBR).

### More in the news

- This designation brings India's total to **13 UNESCO Biosphere Reserves**, joining a global network of **785 sites**.
- Also, **São Tomé and Príncipe** – a Central African island nation – became the **first State to have its entire territory designated as a biosphere reserve**.

### About Cold Desert Biosphere Reserve

- Location:** This is India's first high-altitude cold desert biosphere reserve and **one of the coldest and driest ecosystems in UNESCO's WNBR**.
  - It is located in **Himalayas** and stretches from **Ladakh** (comprising Leh and Kargil Districts) in north to **Kinnaur** (Spiti valley and Kinnaur district in Himachal Pradesh) in South.
- Protected Areas:** It covers the **Pin Valley National Park** and its surroundings, **Chandratal and Sarchu** and the **Kibber Wildlife Sanctuary**.
- Biome:** It constitutes a **Cold Desert biome** with harsh climatic conditions, attributed to **two factors** – location on leeward side of Himalayas (making it a rain-shadow zone) and very high elevation.
- Soil:** Thin, coarse-textured, sandy-loamy soils with low organic matter due to limited vegetation.
- Hydrology:** Meltwater from glaciers feeds rivers like **Spiti** and **Pin** rivers.
- Flora:** Common species include **Caragana**, **Ephedra**, **Juniperus**, **Artemisia**, and **Seabuckthorn**
  - Seabuckthorn** is particularly important for **soil stabilization**, **carbon sequestration**, and **local livelihoods** (used for juice, oil, and medicinal products).
- Fauna:** **Snow Leopard (Flagship species)**, **Himalayan Ibex**, **Tibetan Argali**, **Blue Sheep (Bharal)**, **Red Fox**, **Eurasian Lynx**, and **Himalayan Wolf**.
- Culture:** Distinct Buddhist culture dominates the region with presence of:
  - Gompas** (Buddhist monasteries), **Chorten** (remarkable type of stupas) and Mani Walls (long and thick platform like row of stones).
- Human Settlements:** Dominant communities include **Bhotia, Changpa, and Spiti tribes**, practicing **pastoralism**, **barley and buckwheat cultivation**, and **yak and goat rearing**.



### About WNBR

- Launched in 1976, WNBR is **managed by the Man and the Biosphere (MAB) Programme of UNESCO**.
  - Launched in 1971, **MAB is an intergovernmental scientific programme** aiming to establish a scientific basis for enhancing the relationship between people and their environments.
- Network promotes **synergies between human societies and natural ecosystems**, facilitating sustainable development.
- How are Biosphere reserves (BRs) designated under MAB?**
  - Designated by:** Director-General of UNESCO following the decisions of the MAB International Coordinating Council (MAB ICC).

- **Methodology used:** Seville Strategy for BRs and the Statutory Framework of the World Network of BRs
- **Proposal:** Sites can be proposed by all Member States and Associate Members of UNESCO
  - > After designation Sites remain under the sovereign jurisdiction of states where they are located.
  - > States can also remove a BR from the network by notifying the MAB Secretariat
- **Periodic review:** Each BR undergoes a **periodic review every 10 years** to assess its functioning and management effectiveness.
- > UNESCO can **withdraw designation** if a reserve fails to meet the required standards.

## 5.3. NEWS IN SHORTS

### 5.3.1. ENVIRONMENTAL ACCOUNTING ON FOREST 2025 REPORT

Released by the **Ministry of Statistics and Programme Implementation (MoSPI)**, it is the 8<sup>th</sup> consecutive issue related to environment accounts.

- It is also the **first dedicated publication on forest accounting**, based upon the **UN System of Environmental Economic Accounts (SEEA) Framework**.

#### Key Findings of the Report

- **Physical Asset Account:**
  - **Forest Cover (2010-11 to 2021-22):** Increased by 17,444.61 sq. km (22.50%), reaching 7.15 lakh sq. km (**21.76% of India's geographical area**).
  - **Top States in gains:** Kerala, Karnataka, Tamil Nadu.
- **Extent Account:**
  - **Forest Extent (2013–2023):** Net increase of 3,356 sq. km in forest extent due to reclassification and boundary adjustments.
  - **Top States:** Uttarakhand, Odisha, Jharkhand in Recorded Forest Area (RFA).
- **Condition Account:** Assesses ecosystem quality, focusing on growing stock (volume of usable wood in living trees).
  - **Growing Stock (2013-23):** rose by 305.53 million cum (7.32%).
  - **Top Contributors:** Madhya Pradesh, Chhattisgarh, Telangana.
- **Service Accounts:**
  - **Provisioning Services (timber and non-timber products):** Value increased to ~**0.16% of GDP** in 2021-22.
    - > **Top States:** Maharashtra, Gujarat, Kerala.
  - **Regulating Services (carbon retention):** Value rose to ~**2.63% of GDP** in 2021-22.
    - > **Top States:** Arunachal Pradesh, Uttarakhand, Assam.

### UN System of Environmental Economic Accounts (SEEA) Framework



#### Developed by:

United Nations,  
European Commission,  
and FAO in 2012.



#### About:

International statistical  
framework integrating  
economic and  
environmental data to  
evaluate mutual impacts.



#### Adoption in India:

First adopted by the Ministry  
of Statistics and Programme  
Implementation (MoSPI) in  
2018.

### 5.3.2. GOVERNMENT NOTIFIES FIRST GREENHOUSE GAS EMISSION INTENSITY (GEI) TARGET RULES

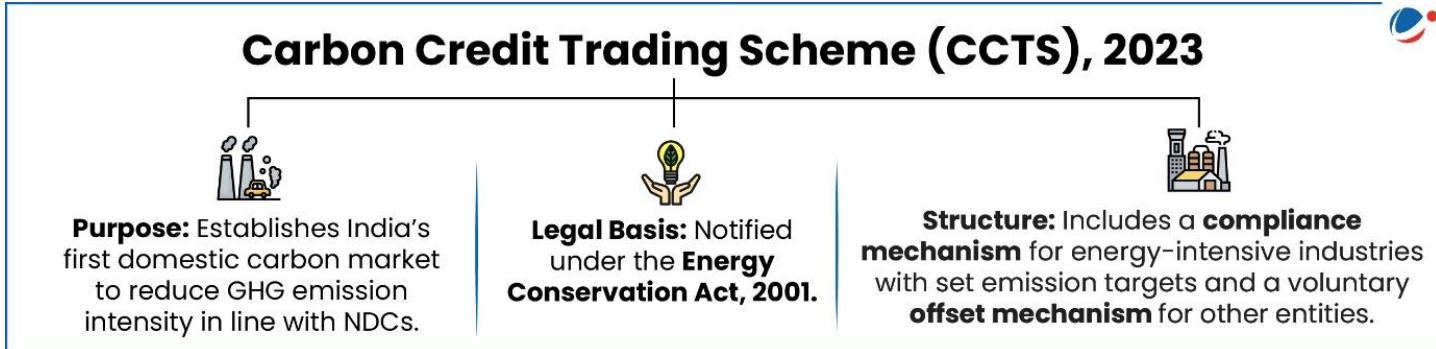
First legally binding GEI Target Rules, 2025 target four high-emission sectors i.e. **aluminium, cement, pulp & paper, and chlor-alkali**.

- Each facility must **reduce the amount of greenhouse gases** emitted per unit of output compared to a 2023-24 baseline.

- GEI is the **amount of GHGs** that are **emitted per unit of product output**. For instance, the gases released in the production of a tonne of product, such as cement or aluminium.

#### What are the rules?

- **Issued under:** compliance mechanism of **Carbon Credit Trading Scheme (CCTS), 2023**.
- **Compliance Enforced by:** Central Pollution Control Board (CPCB).
- **Objective:** To reduce **greenhouse gas emissions** per unit of output (tCO<sub>2</sub>e per tonne of product) **in carbon-intensive sectors** and facilitate carbon credit trading.



#### Mechanism:

- **Compliant entities reducing emissions** below target earn tradable **carbon credit certificates**.
  - The Bureau of Energy Efficiency (BEE) will issue the **carbon credits certificate**.
- **Non-compliant entities** must buy additional certificates **or pay an environmental compensation**, which equals **twice the average carbon credit price** for that compliance year.

#### Significance

- **Market-based compliance:** Earned carbon credits can be traded on the domestic carbon market.
  - Rules will help **operationalize the country's domestic carbon market** under the Carbon Credit Trading Scheme (CCTS), 2023.
- **Transparency:** Registration and documentation under **Indian Carbon Market portal**.
- **Revenue for sustainability:** Environmental compensation funds **support carbon market infrastructure**.
- **Supports India's climate goals:** Supports **commitments under the Paris Agreement**.

### 5.3.3. OZONE POLLUTION

In its report, **Central Pollution Control Board (CPCB)** found that Delhi-National Capital Region (NCR) is the **worst impacted** in the country by high Ozone (O<sub>3</sub>) pollution, followed by Mumbai Metropolitan Region (MMR).

#### About Ozone

- **Ozone (O<sub>3</sub>)** is a variant of oxygen composed of three oxygen atoms. It occurs in two layers of the atmosphere: the **stratosphere (upper layer)** and the **troposphere** (ground level up to 10km).
  - In the **stratosphere**, ozone protects life on Earth from the sun's **ultraviolet radiation**.
  - In the **troposphere**, it is an **air pollutant**.
- The **safe eight-hourly ozone** standard is set at **100 micrograms** per cubic metre ( $\mu\text{g}/\text{m}^3$ ), while the one-hour limit is  $180\mu\text{g}/\text{m}^3$ .

#### Ground-level Ozone (GLO)

- GLO is a secondary, short-lived pollutant that remains in the atmosphere for only hours to weeks.
- **Factor Responsible:** Created by chemical reactions between **oxides of nitrogen (Nox)** and **volatile organic compounds (VOC)**.
  - **Anthropogenic sources:** Transportation, power plants, **residential, agricultural activities**, etc.
  - **Natural sources:** Soil-based emissions of Nox, and wildfire-induced CO and biospheric methane emissions.

## Impact of Ground-level Ozone (GLO)


**Health:**

Aggravates bronchitis, triggers asthma, and causes respiratory issues.


**Climate:**

Acts as a strong greenhouse gas by absorbing radiation and is a major component of **smog**.


**Agriculture and Ecosystems:**

Disrupts photosynthesis and hampers plant growth.

### 5.3.4. NATPOLREX-X

The Indian Coast Guard (ICG) conducted the 10<sup>th</sup> edition of the National Level Pollution Response Exercise (NATPOLREX-X).

- NATPOLREX** is a biennial flagship exercise which aims to evaluate and enhance India's national preparedness to respond to marine oil spill incidents.

### 5.3.5. NEW RAMSAR SITES IN BIHAR

**Gokul Reservoir** and **Udaipur Lake** in Bihar have been designated as new Ramsar Sites.

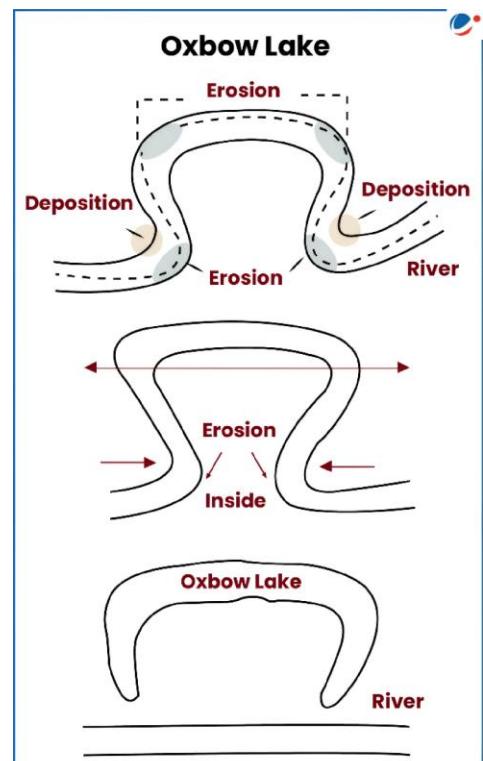
- With these additions, India now has **93 Ramsar sites**. They cover total area of 1,360,719 hectares.
- Bihar already had **three Ramsar sites** – Kabar Jheel (Kabar Taal) in Begusarai and Nagi and Nakti bird sanctuaries in Jamui district.

#### About New Wetlands

- Both Wetlands are **oxbow lakes**.
  - An **oxbow** is a crescent-shaped lake lying **alongside a winding river**.
- Gokul Reservoir** (Buxar district) is located on the southern edge of the **Ganga River**.
- Udaipur Lake** in West Champaran district is surrounded by the **Udaipur Wildlife Sanctuary**.
  - It is an important wintering ground for many migratory bird species, including pochard (*Aythya ferina*).

#### About Ramsar Convention (Convention on Wetlands)

- Adopted in 1971.
- An intergovernmental treaty under **UNESCO**.
- Objective:** Provides the framework for the conservation and wise use of wetlands and their resources.
- Criteria:** A wetland must meet at least 1 of 9 criteria such as regularly supporting 20,000 or more water birds, or conserving biological diversity etc.
- India ratified the Convention in 1982.



### 5.3.6. UNION MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE LAUNCHES MULTIPLE INITIATIVES

It includes 5 initiatives launched for Species Conservation and Conflict Management:-

Initiatives	Details
<b>Project Dolphin (Phase-II):</b> Implementation of the Action Plan to strengthen conservation measures for	<ul style="list-style-type: none"> <li>India is home to freshwater dolphins such as <b>Ganges</b> (National Aquatic Animal of India) and <b>Indus water dolphins</b>.</li> </ul>

<p><b>both riverine and marine cetaceans</b> across India.</p>	<ul style="list-style-type: none"> <li>• <b>Protection Status (Both): Endangered (IUCN) and Schedule I (WPA, 1972).</b></li> </ul>	 <a href="#">Read our previous coverage on river dolphins</a>
<p><b>Project Sloth Bear:</b> Launch of the national implementation framework for the conservation of the Sloth Bear.</p>	<ul style="list-style-type: none"> <li>• <b>Mainly found in India, Nepal and Sri Lanka</b></li> <li>• <b>Protection Status: Vulnerable (IUCN) and Schedule I (WPA 1972)</b></li> <li>• They primarily eat termites and ants.</li> <li>• <b>Unlike other bear species</b>, they carry their cubs on their backs.</li> </ul>	
<p><b>Project Gharial:</b> Launch of the implementation action plan for the conservation of Gharials.</p>	<ul style="list-style-type: none"> <li>• Mainly found in <b>Nepal and India</b></li> <li>• <b>Protection Status: Critically Endangered (IUCN) and Schedule I (WPA1972).</b></li> <li>• <b>Males</b> develop a bulbous growth at the tip of their snout, called a "ghara" <ul style="list-style-type: none"> <li>◦ It has several functions, including acting as a <b>vocal resonator</b>.</li> </ul> </li> </ul>	
<p><b>Tigers Outside Tiger Reserve:</b> A project to address conflicts involving tigers outside protected areas, employing a landscape approach, technological interventions, capacity building, and community support.</p>	<ul style="list-style-type: none"> <li>• <b>Found</b> in India, Bangladesh, Nepal, Bhutan, China and Myanmar.</li> <li>• <b>Protection Status:</b> Endangered (IUCN), Schedule I (WPA1972)</li> <li>• Their unique stripes make each tiger identifiable.</li> </ul>	
<p><b>Centre of Excellence for Human-Wildlife Conflict Management (CoE-HWC)</b></p>	<ul style="list-style-type: none"> <li>• <b>Establishment of a dedicated national center at SACON</b> to support policy, research, and field-based mitigation of human-wildlife conflicts.</li> </ul>	

### 5.3.7. GLOBAL FOREST RESOURCES ASSESSMENT (GFRA) 2025

GFRA, released every five years by FAO, was published during **Global Forest Observations Initiative (GFOI) Plenary in Bali, Indonesia**.

- GFOI is a **flagship programme of the Group on Earth Observations (GEO)**, which is a network of governments, academia, organizations, civil society and private sector aiming to harness the power of Earth Intelligence.
  - India is a member of GEO.

#### Key highlights of GFRA 2025

- **Forest extent:** Forests cover 4.14 billion hectares, or 32% of the global land area.
  - **Nearly half of the world's forests are located in the tropics**, followed by boreal, temperate and subtropical domains.
  - **Europe has the largest forest area**, accounting for 25% of world's total.
- **India's Forest Extent:** India moved up one rank to **9<sup>th</sup> position** in terms of total forest area globally, accounting for 2% of global forest area.
  - India ranks **5<sup>th</sup> in terms of rubber plantation**.
- **Deforestation and expansion:** Deforestation slowed to 10.9 million hectares per year in 2015–2025, down from 17.6 million in 1990–2000.
- **Natural Regeneration:** More than 90% of world's forests are regenerating naturally.
- **Carbon Stock:** Forest carbon stocks have increased, reaching 714 gigatonnes, with soil holding majority forest carbon stock, followed by living biomass, and litter and deadwood.

- **Disturbances:** Fire is prevalent forest disturbance in subtropics while **insects, diseases and severe weather** affect mainly the temperate and boreal domains.

### 5.3.8. STATE OF FINANCE FOR FORESTS 2025

The UN Environment Programme released the **first State of Finance for Forests 2025 report**, providing a global overview of public and private forest finance in 2023.

#### Major Findings

- Report finds an annual forest finance gap of US\$ 216 billion between current financial flows and the investment required to achieve global forest goals by 2030.
- Governments were the primary source of forest funding, accounting for 91% of total flows in 2023.

### 5.3.9. IUCN WORLD CONSERVATION CONGRESS

International Union for Conservation of Nature (IUCN) World Conservation Congress 2025 concluded in Abu Dhabi, UAE.

Held once every four years, the IUCN World Conservation Congress hosts the **Members' Assembly**, which is the **IUCN's highest decision making body**.

#### Key Resolutions at Member's Assembly

- **Abu Dhabi Call to Action:** Accelerate action across **five key areas** – reaffirming nature as foundation of well-being, strengthening multilateralism, ensuring justice and inclusion, advancing knowledge and innovation, and scaling up resources for nature and climate action.
- **New Members:** Over 100 new members including six states – Armenia, Tajikistan, Marshall Islands, Gabon, Tuvalu, and Zimbabwe.
- **First-ever Policy on Synthetic Biology and Nature Conservation:** Synthetic biology may carry both substantial benefits (e.g. to restore lost genetic diversity or to locally eradicate invasive alien species) and significant risks (e.g. unintended ecological cascades), necessitating balanced policy.
- **Crime of Ecocide:** Recognizes ecocide (deliberate environmental harm) as international crime under the International Criminal Court.



## International Union for Conservation of Nature (IUCN)



 **Founded:** In 1948, IUCN is now the **world's largest and most diverse environmental network**.

 **Membership:** 1,400+ members (states, NGOs, research institutions). **India is a member.**

 **Governance:** The **IUCN World Conservation Congress** is the highest governing body, while the **IUCN Council** acts as the principal body between its sessions.

 **Key Instruments:** IUCN Red List, World Heritage Outlook, The World Database on Protected Areas.

### 5.3.10. UPDATE TO IUCN RED LIST OF THREATENED SPECIES

Released by IUCN World Conservation Congress latest update modified the **conservation status of 12 Indian bird species**, downlisting eight species, signaling positive trends in their conservation while uplisting four species.

- **Four species that have been uplisted include:**
  - **Indian Courser, Indian Roller and Rufous-tailed Lark** uplisted to Near Threatened;
  - **Long-billed Grasshopper-warbler** uplisted to Endangered.
- All these four species depend upon **open natural ecosystems**, which include habitats like grasslands, semi-arid landscapes, desert, croplands, hilly scrublands, and fallow lands.

- **Threats to these ecosystems:** Expansion of power infrastructure, intensification of agriculture, introduction of invasive species, and conversion of grasslands into woodlands through afforestation.

#### Update to IUCN Red List

- **More than half of bird species globally are in decline** primarily due to habitat loss and degradation, driven by agricultural expansion and intensification and logging.
  - Birds play **vital roles in ecosystems** and for people, serving as pollinators, seed dispersers, pest controllers, scavengers and ecosystem engineers.
- **Three species of Arctic seal** have moved **closer to extinction** with primary threat being sea ice loss driven by global warming.
  - **Seals, a keystone species**, play a central role in food web, consuming fish and invertebrates and recycling nutrients.
- **Green Sea Turtle**, a keystone species, has improved in status from Endangered to Least Concern, due to sustained conservation efforts.

## IUCN Red List of Threatened Species



### Overview:

Established in 1964, it is the world's most comprehensive source on the global conservation status of animal, fungi, and plant species.



### Categories:

Classifies species into nine groups – from Not Evaluated to Extinct

### 5.3.11. FIRST IUCN GREEN STATUS OF SPECIES ASSESSMENT FOR THE TIGER RELEASED

The assessment classified the Tiger as '**Critically Depleted**', reflecting the severe historical and ongoing threats.

- Threats include habitat loss, prey depletion, poaching, and regional extinctions.

#### Key Findings

- **Population Trend:** Decreasing (Current estimate (mature individual)- 2608-3905)
  - Tigers are now extinct in 9 of the 24 areas evaluated and are threatened in all spatial units where they still persist.
- **Status of Conservation Legacy and Recovery Potential:** High and Medium, respectively.

#### About IUCN Green Status of Species

- Launched in **2012**, it builds upon the **IUCN Red List of Threatened Species**.
  - In **2020**, it became an optional part of Red List assessments.
- Provides a **tool for assessing the recovery of species' populations and conservation impact** alongside extinction risk.
- **Categories:** It includes Largely Depleted, Moderately Depleted, Slightly Depleted, Fully Recovered, etc.

#### How Green Status defines Species Recovery?

- A species is fully recovered if :
  - It is present in **all parts of its historical range** (including areas lost due to human impact).
  - It is **viable** (not at risk of extinction) across its range.
  - It performs its **ecological functions** in all parts of its range.
- These factors together give a "**Green Score**" (0–100%), indicating how close a species is to full recovery.

#### About Tiger (*Panthera tigris*)

- The tiger is the **largest wild cat** in the **world**.
- India has almost **75%** of the world's wild tiger population.
- **Range Countries:** Bangladesh, Bhutan, China, India, Indonesia, etc.
- **Habitat:** Forest, Savanna, Shrubland, Grassland, Wetlands (inland), etc.
- **Conservation Status:** Endangered (IUCN Red List); Schedule I (Wildlife Protection Act, 1972); CITES Appendix I



### 5.3.12. STATUS OF ELEPHANTS IN INDIA: DNA BASED SYNCHRONOUS ALL INDIA POPULATION ESTIMATION OF ELEPHANTS (SAIEE) 2021-25

SAIEE is India's first DNA-based count of elephants conducted by the Wildlife Institute of India, under the aegis of **Project Elephant**, Ministry of Environment, Forest and Climate Change.

#### Key Findings of the report

- It estimates **total Asian Elephant population at 22,446** and India harbours the **largest wild population** – approximately 60% of global total.
- Currently, wild elephants persist **mainly in four forested hill regions**— Himalayan foothills, Northeastern states, East-central India, and Western/Eastern Ghats—with a small feral population in Andaman Islands.
  - **Western Ghats hosts the largest population of wild elephants** followed by North Eastern Hills and Brahmaputra Flood Plains.
- Among states, **Karnataka supports highest population**, followed by Assam, Tamil Nadu and Kerala.
- **Threats:**
  - **Habitat Shrinkage & Fragmentation:** Once-contiguous elephant population in the Western Ghats is rapidly disconnecting due to **changing land use**, including expanding commercial plantations (coffee and tea), **invasive plants, farmland fencing, human encroachment and mushrooming developmental projects**.
  - **Human-Elephant Conflict (HEC):** Rising sharply in **Central India and Eastern Ghats**.
  - **Linear Infrastructure:** Roads, railways, and power lines disrupt corridors and cause **fatalities via electrocution and collisions**.
- **Recommendations:** Strengthening corridors and connectivity, restoration of habitat, improving protection strategies and mitigation of developmental projects.

#### Asian Elephants

- **Largest land mammal on Asian continent**, they inhabit dry to wet forest and grassland habitats in 13 range countries.
- **Characteristics:**
  - Elephants are organized into **complex social structures** led by a matriarch (a female leads the group).
  - They have the **longest gestation period** of any mammal, lasting 22 months.
- **Role of Elephants in Ecosystem:** Create pathways for other animals in dense forest, creation of micro ecosystems, and seed dispersal maintaining forest diversity.
- **Conservation Status:**
  - Endangered in IUCN Red List
  - Listed in Schedule I of Wildlife Protection Act 1972
  - Listed in Appendix I of CITES

### 5.3.13. INDIAN WOLF (CANIS LUPUS PALLIPES)

International Union for Conservation of Nature (IUCN) for the first time evaluated Indian Wolf separately **as potential distinct species within the Canis genus**.

- The genus currently has **seven species** recognized by the **IUCN**. With the inclusion of the Indian wolf, this will be the eighth recognized species of the genus.

#### About Indian Wolf

- **Habitat:** Thorn forests, scrublands, arid and semi-arid grassland habitats in **India** (few found in Pakistan).
  - It is one of the **common large carnivores** found in the agro-pastoral regions of semi-arid India.
- **Threats:** habitat loss, conflict with humans, and diseases.
- **Conservation Status:** Vulnerable (IUCN).

### 5.3.14. DRAFT POLICY PAPER ON CAMELS PROPOSES NATIONAL CAMEL SUSTAINABILITY INITIATIVE (NCSI)

Draft policy paper has been prepared by Ministry of Fisheries, Animal Husbandry and Dairying in consultation with the Food and Agriculture Organization (FAO).

#### Key Highlights of Draft Policy Paper

- India's camel population has **declined by more than 75%** since the 1970s.
- Drivers of Population Decline:** Decline in traditional economic utility, loss of grazing lands, environmental stress (desertification, invasive species, prolonged droughts etc.), restrictive legal framework, underdeveloped markets for camel products etc.
- Strategic Recommendations:** Launching National Camel Sustainability Initiative (NCSI), securing grazing rights, strengthening camel dairy value chains, reviving camel-based tourism, and introducing veterinary and genetic conservation programs.

#### About Camels

- Once revered as "**Ship of the Desert**", camels are exceptionally **suited to dryland ecosystems** and are **primarily reared (90%) in Rajasthan and Gujarat**.
  - Pastoralist communities** associated with camel rearing include **Raika, Rabari, Fakirani Jat, and Manganiyar** communities.
- Characteristics:** Survive days without drinking water, travel long distances, feed on thorny desert plant species.
  - Camels' humps store fats** providing them energy when food is scarce and they **store water in their blood cells**, not their humps.
- Role of Camels:**
  - Ecological Role:** Their low water needs, selective grazing habits, and soft-padded hooves help maintain vegetative diversity and prevent desertification.  
Camel dung **enriches soil in arid regions**.

#### Key Camel Breeds in India



**Single-Humped Dromedary Camels:**  
Bikaneri, Jaisalmeri, Mewari (Rajasthan), Kachchhi and Kharai (Gujarat)



**Double-Humped Bactrian Camel (Ladakh)**

### 5.3.15. INDIA'S DUGONG CONSERVATION RESERVE RECOGNIZED BY IUCN

International Union for Conservation of Nature (IUCN) has adopted a motion recognising **India's first Dugong Conservation Reserve** in Palk Bay at IUCN World Conservation Congress 2025.

- To promote dugongs (Dugong dugon) conservation, IUCN encouraged extending the Indian model to other parts of the Indian Ocean and similar habitats worldwide.

#### Dugong Conservation Reserve

- Established in 2022, by the Tamil Nadu government under the **Wildlife Protection Act, 1972**.
- Covers 448.34 sq. km. in northern Palk Bay.
- The region is home to over 12,250 hectares of **seagrass meadows**.
  - Seagrasses** also support a host of other **marine species**, making the reserve ecologically significant.
  - Seagrass plays a vital role in **carbon sequestration**.



### About Dugong (Sea Cow)

- Key Feature:** Only marine herbivorous mammals that depend on seagrass.
- Distribution:** In India, apart from Palk Bay (highest), it is also found in Gulf of Mannar, Gulf of Kutch, etc.
- Population:** Expected about 200.
- Threat:** Habitat degradation, hunting and unintentional captures.
- Status:**
  - IUCN Red list status:** Vulnerable
  - Listed in **Schedule I** of the **Wild Life (Protection) Act, 1972.**

### 5.3.16. CENTRAL ASIAN MAMMALS INITIATIVE (CAMI)

Central Asian countries have come together **under CAMI to protect 17 shared species like Saiga, Bukhara Deer etc.**

#### Central Asian Mammals Initiative (CAMI)

- It was launched in **2014** at the 11th Meeting of the Conference of the Parties (COP11) to **the Convention on the Conservation of Migratory Species of Wild Animals (CMS).**
- Objective:** To coordinate conservation efforts for 17 key migratory mammal species in Central Asia.

### 5.3.17. WORLD METEOROLOGICAL ORGANIZATION (WMO) CONGRESS CALLS FOR ACCELERATED IMPLEMENTATION OF EARLY WARNINGS FOR ALL (EW4ALL)

#### Early Warnings for All (EW4All) initiative

- Aim:** Ensure **universal protection** from hazardous hydrometeorological, climatological and related environmental events through **life-saving multi-hazard early warning systems by 2027.**
- Launched:** At **COP27** of UNFCCC in **2022** by the UN Secretary-General.
- Organizations:** It is jointly led by **WMO, UNDRR, ITU and IFRC.**
- Coverage:** Initially focused on **30 high-risk countries**, EW4All has since expanded to more than **100 participating nations.**

## Early Warnings for All (EW4All)

Four Pillars of Multi-Hazard Early Warning Systems



#### Disaster Risk Knowledge

Collect data and conduct risk assessments to increase knowledge on hazards, vulnerabilities, and their evolving trends.

*Led by UNDRR (UN Office for Disaster Risk Reduction)*



#### Detection, Observation, Monitoring, Analysis & Forecasting

Develop and sustain operational capacity for hazard monitoring, forecasting, and delivery of early warning services.

*Led by WMO (World Meteorological Organization)*



#### Warning Dissemination & Communication

Communicate risk information effectively so it reaches all relevant users and communities at risk.

*Led by ITU (International Telecommunication Union)*



#### Preparedness & Response Capabilities

Build national and community-level capabilities to respond effectively to the warnings they receive.

*Led by IFRC (International Federation of Red Cross and Red Crescent Societies)*

### About Early Warning System (EWS)

- EWS is an **integrated** system of **hazard monitoring, forecasting, disaster risk assessment, communication and preparedness** which aims at enabling early action to save and protect lives, livelihoods and assets of people at risk.
- **Need for Early Warning:**
  - The damage caused by a disaster can be **reduced by 30%** if an early warning is issued within 24 hours.
  - Disaster mortality is **six times higher** and the number of people affected is four times higher in countries with limited multi-hazard early warning systems.
  - Economic damages from extreme weather events continue to **surge**, with over **US\$4 trillion in losses globally since 1970**.

### 5.3.18. ARABIAN SEA MINI WARM POOL

Scientists have uncovered that Arabian Sea Mini Warm Pool (MWP) acts as a self-correcting mechanism that helps the monsoon recover from the disruptions caused by the previous El Niño.

#### About Arabian Sea Mini Warm Pool (MWP)

- The **Arabian Sea MWP** is a **small patch** of unusually warm sea surface temperatures (SST) in the Arabian Sea, especially the southeastern part (**near the Kerala coast**).
  - A warm pool is defined as a **body of very warm water**, typically with sea surface temperatures exceeding 28.5°C, that plays a **significant role in influencing regional climate and weather patterns**.
  - **Duration:** Forms every year during April and May, just before the onset of the Indian Summer Monsoon.

### 5.3.19. MAITRI II

Union Finance Ministry granted approval to Maitri II, new research station in Eastern Antarctica.

- This will be India's 4<sup>th</sup> research base expected to be operational by **January 2029**.
- It would be established as a **green research base** powered using renewable energy sources (solar and wind) and would house **automated instruments**.

#### Importance of the Antarctica Region

- **World's Natural Laboratory:** It is the **5<sup>th</sup> largest continent**, holds key to understanding Earth's climate and ocean systems, acting as a **natural tracker** of global climate change.
- **Natural Resources:** Holds nearly **75 percent of the earth's freshwater reserves** and houses abundance of edible algae, more than 200 species of fish including the discovery of iron and copper.
- **Geopolitical Significance:** Overlapping territorial claims, China's expansion with **dual-use critical infrastructures** raises global concerns.

## India's initiatives in Antarctica



**Research Initiatives:** India operates two Antarctic research stations – **Maitri (1989)** and **Bharati (2012)**; **Dakshin Gangotri** (1983–1990) was the first.



**Institution:** The **National Centre for Polar and Ocean Research (NCPOR)**, under the Ministry of Earth Sciences, manages India's polar missions.



**Legal Framework:** The **Indian Antarctic Act, 2022** provides national measures to protect the Antarctic environment and ecosystem.



**Global Commitment:** India has been a Consultative Party to the **Antarctic Treaty** since 1983; the 1959 Treaty promotes peaceful use and scientific cooperation in Antarctica.

### 5.3.20. MUD VOLCANO

India's only **Mud Volcano in Baratang Island** in Andamans and Nicobar Islands erupts after 20 years.

#### About Mud Volcano

- It is a geological formation where a **mixture of mud, water, and gases** (mainly methane, sometimes carbon dioxide or nitrogen) **erupts to the surface**, creating cone-like structures that resemble true volcanoes without molten lava.
- Mud volcanoes are generally **encountered in areas where natural gas is present**.
- Eruptions are caused by the pressure from **Earth's tectonic forces or by accumulation of hydrocarbon gases**.



## Lakshya Prelims & Mains Integrated Mentoring Program 2026

(A 9.5 Months Strategic Revision, Practice, and Mentoring Program for UPSC Prelims and Mains Examination 2026)

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

#### Highlights of the Program

- Coverage of the entire UPSC Prelims and Mains Syllabus
- Highly experienced and qualified team of senior mentors
- Emphasis on themes for Prelims & Mains with High-Scoring Potential
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- Access to Lakshya Prelims Practice Tests (LPPT) and Lakshya Mains Practice Test (LMPT)
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- Special emphasis to Essay & Ethics
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Date	Duration	Medium	Mode
14 November	9.5 Months	English & Hindi	Offline & Online

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# 6. SOCIAL ISSUES

## 6.1. STATE OF SOCIAL JUSTICE

### Why in the News?

Recently, the International Labour Organization (ILO) released a report titled '**The state of social justice: A work in progress**'.

### More on the News

- The report has been released ahead of the **Second World Summit for Social Development in Doha** (November, 2025) that marks 30 years of the landmark **1995 Copenhagen Summit on Social Development held in Denmark**.
  - The summit adopted the **Copenhagen Declaration on Social Development** and the **Copenhagen Programme of Action**.
  - These documents outlined **ten key commitments** e.g., Eradicating poverty, Achieving full and productive employment, Promoting social integration and Equality between men and women etc.
- The 2025 report provides an extensive **overview of the state of social justice globally**, examining progress and persistent challenges across several key pillars.

### What is Social Justice?

- It means that "all human beings, irrespective of **race, caste, creed or sex**, have the **right to pursue** both their **material well-being** and their **spiritual development** in conditions of freedom and dignity, of economic security and equal opportunity".
- It helps build **trust**, enhances **legitimacy** and **unlocks productive potential** for sustained inclusive growth, peace and stability.

### Four foundational pillars of Social Justice



**Fundamental human rights and capabilities**  
(Ensuring basic freedoms and entitlements are realized)



**Equal access to opportunities** (Removing impediments in education, training, and work to enable decent living)



**Fair distribution**  
(Guaranteeing a just share of economic growth benefits, particularly for the most disadvantaged)



**Fair transitions**  
(Managing major structural societal shifts (environmental, digital, demographic) justly)

### Key Achievements in social Justice (According to Report)

- Decline in Extreme Poverty:** From 39% (1995) to 10% (2025) while working poverty dropped from 28% to 7%.
- Increased Social Protection Coverage:** For the **first time in history**, more than half the world's population is covered by at least one **social protection scheme**.
- Reduced Gender gap in Labour Force Participation:** From 26% to 24% points from 2005 to 2025.
- Decline in Inequality:** Inequality between countries has been falling since the early 2000s, due to **rising worker productivity** in middle-income countries.
- Child Labour:** Declined from 20.6% in 1995 to 7.8% in 2024.

### Know the term

- Extreme Poverty:** According to World Bank, the people in extreme poverty are who live on **less than \$3 per day**.
- Working Poverty:** The working poor are employed but lives in households whose **income falls below** the **poverty line**.
- Living Wage:** It is the wage level that is necessary to afford a decent standard of living.

### Key Achievements in Social Justice in India:

- **Extreme Poverty:** Fell sharply from 16.2% in 2011-12 to just 2.3% in 2022-23.
- **Female Labour Force participation:** Rose significantly in 2024, with the rate increasing to 41.7 % in 2023-24 from 23.3 % in 2017-18.
- **Increased Social Protection Coverage:** India's social security coverage has increased from 19% in 2015 to 64.3% in 2025.
- **Decline in Inequality:** India ranks **fourth globally** after the Slovak Republic, Slovenia and Belarus in income equality with a **Gini score of 25.5**.
- **Access to basic services:** E.g. Jal Jeevan Mission (JJM) has significantly increased rural household access to tap water, with over 15.72 crore households now connected.

### Key Concerns to Achieve Social Justice in recent times:

- **Challenges related to Fundamental human rights:**
  - **Wage Gap:** In 2025, the earnings ratio between men and women is 78%.  
    > At the current rate, the wage gap will take 50–100 years to close.
  - **Child Labour:** 138 million children aged 5–17 are child labour, with almost 50% engaged in hazardous labour.
  - **Forced Labour:** People in **forced labour** from 2016 to 2021 have risen from 24.9 million to 27.6 million.
- **Challenges related to Equal access to opportunities:**
  - **Inequality:** The top 1% of people still controls 20% of income and 38% of wealth.
  - **Informal employment:** It accounts for approximately 58 % of total employment.
  - **Accessibility to basic Services:** E.g., 1 in 4 lacks access to clean water
- **Challenges related to Fair transitions:**
  - **Environmental transition:** Measures needed to limit global warming to a maximum of 2°C may lead to job losses of around 6 million (Primarily in fossil fuel sector).
  - **Digital transition:** The **latest ILO research** indicates that around **one in four jobs** will likely be transformed by generative AI.
  - **Demographic transition:** In labour markets, improving productivity and access to decent jobs (**In most low- and upper-middle-income countries**) remain paramount as well as addressing needs of an ageing workforce (**In high- and upper-middle-income countries**).

### Key Initiatives for Social Justice

- **Global:**
  - **Global Coalition for Social Justice:** Launched by the ILO in 2023, this initiative unites governments, worker and employer organizations, and other partners for social justice.
  - **Decent Work Agenda:** ILO's Decent Work Agenda promotes opportunities for all people to obtain productive work with fair income, security, and social protection.
  - **ILO Declaration on Social Justice for a Fair Globalization:** Adopted in 2008, this declaration places the Decent Work Agenda at centre of ILO's policies.
  - **Universal Declaration of Human Rights (1948):** Sets out the fundamental human rights that every person is entitled to.
  - **Other Initiatives:** The International Covenant on Economic, Social and Cultural Rights (1966), Global Alliance against Hunger and Poverty (G20), Sustainable Development Goals (SDGs) etc.
- **India**
  - **Constitutional Measures:** E.g., **Preamble** ensures **social, economic, and political justice**, Fundamental Rights (E.g. Article 23), Directive Principles of State Policy (Article 38), etc.
  - **Legislative Measures:** E.g., Protection of Civil Rights Act, 1955, Rights of Persons with Disabilities Act, 2016, SC and ST (Prevention of Atrocities) Act, 1989 etc.
  - **Institutional Measures:** E.g., National Commission for Scheduled Castes (NCSC), National Commission for Women (NCW), etc.
  - **Welfare Measures:** E.g., PM Awas Yojana, Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PM-JAY), etc.

## Way Forward

- **Fair distribution**
  - Effective recognition of the right to **collective bargaining**, Update **minimum wage policies** and **operationalize a living wage** through a wage-setting process in line with ILO principles.
  - Increase the efficacy of **non-discrimination policies** and enhance the sustainability, coverage and adequacy of **social protection systems**.
- **Equal access to opportunities**
  - Strengthen **Active labour market policies (ALMPs)**, including training and labour intermediation.
  - Support **sustainable enterprise measures** and **offer formalization pathways** for micro- and small enterprises.
  - The government shall provide **employment subsidies**, such as **wage subsidies** and **hiring incentives**.
  - Implement well-designed **public employment programmes**. E.g., India's Mahatma Gandhi National Rural Employment Guarantee Act (NREGA).
- **Fair Transition**
  - Adopt **place-based strategies**, such as investing in renewable energies in geographic areas where other energy production has been reduced.
  - Need for policies like **partial retirement and anti-age discrimination laws** to retain older workers and support economic participation.
  - Expansion in the provisions of **paid leave** to care for ageing family members.

## Conclusion

Despite notable gains in poverty reduction, education, and gender inclusion, social justice remains an unfinished agenda. To sustain progress, nations must focus on reducing structural inequalities, expanding social protection, and ensuring that economic growth translates into dignity and opportunity for all.

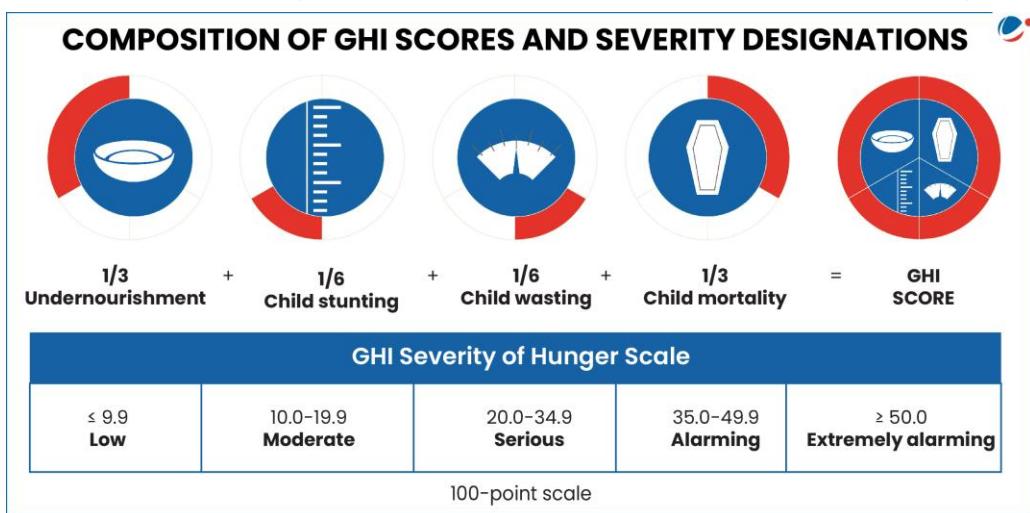
## 6.2. GLOBAL HUNGER INDEX

### Why in the news?

Global Hunger Index (GHI), 2025 ranks India under '**serious**' category.

### About Global Hunger Index (GHI)

- Index has been released by **Irish humanitarian organization 'Concern Worldwide'** and **German aid agency 'Welthungerhilfe'** (with FAO, UNICEF, WHO, IFPRI).
- Purpose of Index is to **track hunger globally using nutrition & mortality indicators**.
- Each country's GHI score is calculated based on a formula (See image) **that combines four indicators:**
  - Undernourishment (Insufficient caloric intake);
  - Child stunting (Children with low height under age 5);



- Child wasting: (Children with low weight for their height under age 5);
- Child mortality: (Children who die before their fifth birthday).

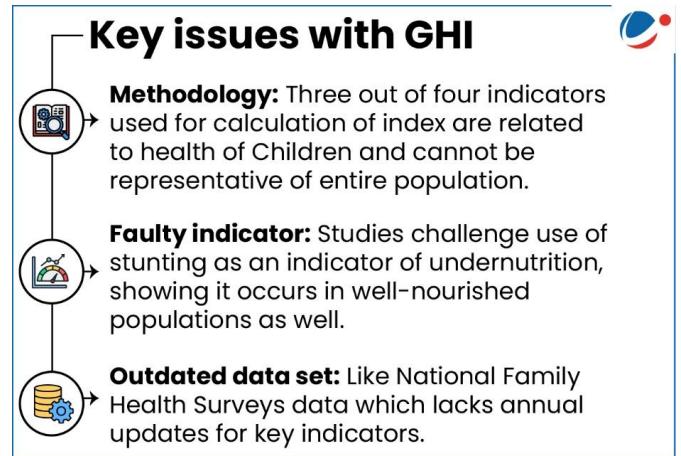
### Key Findings of the report

- **India Related Findings:**
  - **India's Position:** India is **ranked 102nd among the 123** countries assessed with a GHI score of 25.8, which is classified as serious.
  - **Child Nutrition Crisis:** **1 in 3 Indian children** is stunted. Undernourishment affects **172 million people**, 13.5 million more than in 2016.
- **Global Findings:**
  - **Achieving Zero Hunger:** At current rates, **SDG-2 (Zero Hunger by 2030)** is out of reach. **At least 56 countries** are not on track to achieve even low hunger by 2030.
  - **Global Status:** 2025 global GHI score is **18.3** (moderate category), showing only marginal improvement from 19.0 in 2016.
  - **Regional Disparities:** **Serious hunger** in Africa, South Asia, and **alarming hunger** in 7 countries, like Somalia (worst), DRC, and South Sudan, etc.
  - **Drivers of Rising Hunger:**
    - > **Globally:** Armed conflicts, climate shocks, economic fragility, and declining political and financial commitment.
    - > **India:** Intergenerational Cycle of malnutrition, reduced productivity, and Poverty; Persistent poor maternal nutrition and uneven access to child-health service; High Chronic Malnutrition; Poverty and Inequality; etc.

### Consequences of Hunger

- **Higher child mortality:** Under-nutrition is responsible for 45% of deaths among children under the age of five.
- **Lower productivity:** Hunger reduces physical capacity and cognitive efficiency, lowering **workforce productivity and national economic growth**.
- **Rising healthcare burden:** Malnutrition increases illness, putting **pressure on public health systems** and raising preventable healthcare costs.
- **Other Consequences:** Poor learning outcomes, Violation of Human Right to adequate food, Famine and Catastrophe & Deepening inequalities etc.

### Key issues with GHI



### Initiatives taken for Tackling Hunger in India

- **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)** launched to provide food grains free of costs to 80 crore poor.
- **Pradhan Mantri Matru Vandana Yojna:** Registered women were provided Rs 5000/- on the birth of their first child for wage support and nutritious food during pregnancy and post-delivery period.
- **POSHAN Abhiyan (National Nutrition Mission):** Aims to achieve improvement in key nutrition parameters for children and women.
- **Eat Right Movement:** Aims to transform the country's food system to ensure safe, healthy and sustainable food.
- **Integrated child development scheme (ICDS):** Supplementary Nutrition is one of the six services provided under the ICDS. It is intended primarily to bridge gap between Recommended Dietary Allowance and Average Daily Intake.
- **National Food Security Act (NFSA), 2013:** NFSA is an Act of the Parliament of India intended to provide subsidised food grains to approximately two-thirds of India's 1.2 billion people, Recognizes the right to food as a statutory right.

## Way Forward

- Ensure political commitment and good governance:** Treat food security as a right, not charity; strengthen accountability, coordination, and transparent monitoring.
- Increase and diversify financing:** Reverse recent funding cuts, ensure timely and flexible financing, and align aid with national priorities through results-based mechanisms.
- Build resilient and inclusive food systems:** Promote climate-resilient agriculture, restore ecosystems, secure land and water rights, empower smallholders and women, and integrate nutrition with agriculture.
- Adopt multisectoral, locally led strategies:** Link hunger reduction with health, education, WASH and social protection; empower local governments and communities to design solutions.
- Other Ways for Zero Hunger:** Strengthen social safety nets, connect farmers to markets, reduce food loss, and prevent maternal-child malnutrition.

## Conclusion

Hunger is not merely a lack of food, but a result of poverty, conflict, climate shocks, and policy gaps. Addressing it requires resilient food systems, targeted nutrition support, empowered communities, and global cooperation to ensure the right to food for all.

## 6.3. NEWS IN SHORTS

### 6.3.1. VITAL STATISTICS OF INDIA BASED ON CIVIL REGISTRATION SYSTEM (CRS) REPORT (2023) RELEASED

The report is compiled by the Registrar General of India (RGI), Ministry of Home Affairs.

#### Key highlights of the report

- Sex Ratio at Birth (SRB):** (excluding Sikkim) was 928 females per 1000 males.
  - Highest - Arunachal Pradesh** (1,085)
  - Lowest – Jharkhand** (899)
- Share of institutional Deaths and Births** (excluding Sikkim)- 74.7% and 24%.
- Births:** Number of registered births decreased by 0.9% from 2022.
  - Level of Registration of Births (LoR)**- 98.4%
  - Births registered in **urban areas** was higher than in rural areas.
- Deaths:** Number of registered deaths increased by 0.1% from 2022
  - Level of Registration of Deaths (LoR)**- 97.2%
  - Deaths registered in **rural areas** was higher in urban areas.
- Infant deaths increased** from 2022
- 21 and 19 States/UTs have achieved 100% level** of registration of births and deaths respectively.
  - Birth and death registrations for males** was higher than females in both rural and urban areas.

### Civil Registration System (CRS)



#### Overview:

A unified system for recording vital events such as births, deaths, and stillbirths (excluding marriages and divorces).



#### Legal Basis:

Governed by the **Registration of Births and Deaths (RBD) Act, 1969**, which mandates reporting to the Registrar.



#### Recent Update:

The 2023 amendment introduced digital registration and creation of national and state-level databases.

### 6.3.2. CHILDREN IN INDIA 2025 REPORT

Recently, the **Ministry of Statistics and Programme Implementation (MoSPI)** released the 4<sup>th</sup> issue of the Children in India 2025 Report.

- The report provides details on **children's education, health, nutrition, protection**, etc. to guide **evidence-based policies** to improve children's rights and well-being.

#### Key Highlights of the Report

- Infant Mortality Rate (IMR): Decreased** from 44 (2011) to **25 (2023)**.
  - IMR is the number of deaths of infants (children below 1 year of age) per 1,000 live births in a given year.
- Under-Five Mortality Rate (U5MR): Declined** from 30 (2022) to **29 (2023)**.
  - U5MR is the probability of a child dying before reaching the age of five, expressed as the number of deaths per 1,000 live births in a given year.
- Birth Rate:** Declined to **18.4 per 1,000 population** in 2023 ; Rural: 20.3, Urban: 14.9
- Dropout Rate (2022-23 to 2024-25):**
  - Preparatory stage:** Dropped from 8.7% to **2.3%**.
  - Middle level:** Declined from 8.1% to **3.5%**.
  - Secondary level:** Reduced from 13.8% to **8.2%**.
- Child Marriage** (Women aged 20-24 married before 18): Reduced from 26.8% (2015-16) to **23.3% (2019-21)**.
- Adoption Statistics:** Total adoptions increased from 3,927 (2017-18) to **4,515 (2024-25)**.
  - In-country adoptions:** 4,155; **Inter-country adoptions:** 360–653 annually.
- Gender Parity Index (GPI):** Achieved parity across all education stages in 2024-25.

### 6.3.3. WHO GLOBAL REPORT ON TRENDS IN PREVALENCE OF TOBACCO USE 2000–2024

#### Key Highlights

- Decline in Global Tobacco Use:** The global prevalence of current tobacco use among adults significantly dropped from **26.2% (2010)** to **19.5% (2024)**.
  - Despite this reduction, **1 in 5 adult's** worldwide remains hooked on tobacco.
- Rising Popularity of E-Cigarettes:** More than 100 million people worldwide use e-cigarettes.

#### India's Progress and Status

- Tobacco Use in India (2024):** In 2024, India accounted for approximately **243.48 million** tobacco users aged 15 and older.
- India on Track to Meet WHO NCD Target:** India's expected relative reduction in tobacco use prevalence between 2010 and 2025 is substantially high, projected at **43%**.
  - WHO NCD Target** to achieve a 30% reduction in tobacco use by 2025.

#### India's Steps to Curb Tobacco Use

- Cigarettes & Other Tobacco Products Act (COTPA), 2003:** Prohibits smoking in public places; ban on sale of tobacco products to minors, etc.
- Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2022:** Provided images for display on package with health warnings.
- National Tobacco Control Programme:** To create awareness & reduce the production and supply of tobacco products.
- Prohibition of Electronic Cigarettes Act, 2019.**

## Tobacco (*Nicotiana tabacum*)



**Origin:** Native to South America.



**Climatic Conditions:** Requires a frost-free period of 90–120 days, ideal temperature range of 20°C–30°C, at least 500 mm rainfall, and well-drained sandy loam or alluvial soils.



**India's Status:** Second-largest producer after China and second-largest exporter after Brazil.



**Major Producing States:** Gujarat (30% share), Andhra Pradesh, Karnataka, Uttar Pradesh, and Bihar.

### 6.3.4. SWACHH SHEHAR JODI

The **Ministry of Housing and Urban Affairs (MoHUA)** has launched the Swachh Shehar Jodi (SSJ) initiative.

- It will be implemented under the **Swachh Bharat Mission- Urban (SBM-U)**.

#### About SSJ initiative:

- It is a **structured mentorship and collaborative action** program involving 72 mentor cities and around 200 mentee cities.
  - The mentee cities will get direct exposure to well performing cities to replicate their best practices.
- Aim:** Foster knowledge and experience sharing, peer learning and transforming best practices in sanitation and waste management across urban India.

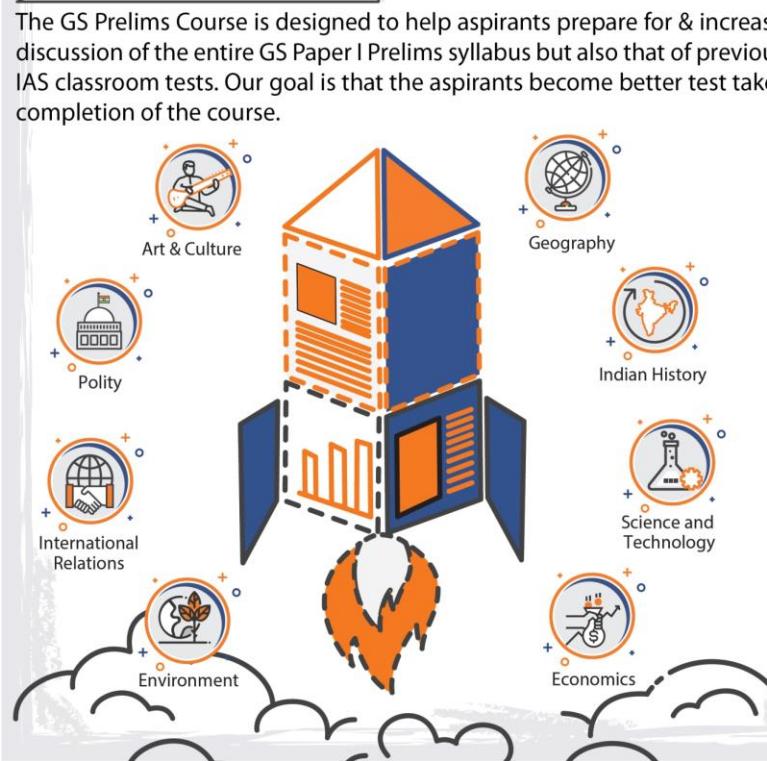
# FAST TRACK COURSE 2026

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# 7. SCIENCE AND TECHNOLOGY

## 7.1. NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE 2025

### Why in the News?

**Mary E. Brunkow, Fred Ramsdell and Shimon Sakaguchi have been awarded** Nobel Prize in Physiology or Medicine 2025 for their discoveries concerning peripheral immune tolerance.

### More on news

- Our **immune system** protects the body from harmful pathogens like viruses, bacteria, and fungi.
- However, it must also make sure **not to attack its own cells** — this balance is very important for healthy body function.
- The immune system uses **two types of tolerance** to achieve this — **central tolerance** and **peripheral tolerance**.

### Central Tolerance

- This process happens in the **thymus**, a small gland in the lymphatic system that produces and trains T cells (a type of white blood cell).
- During training, the thymus removes **self-reactive T cells**—these are harmful cells that could attack the body's own proteins.(see infographic)
- However, this process is not perfect. Some of these self-reactive T cells **escape from the thymus** and enter the body's circulation and tissues, known as the **periphery**.

### Peripheral Tolerance

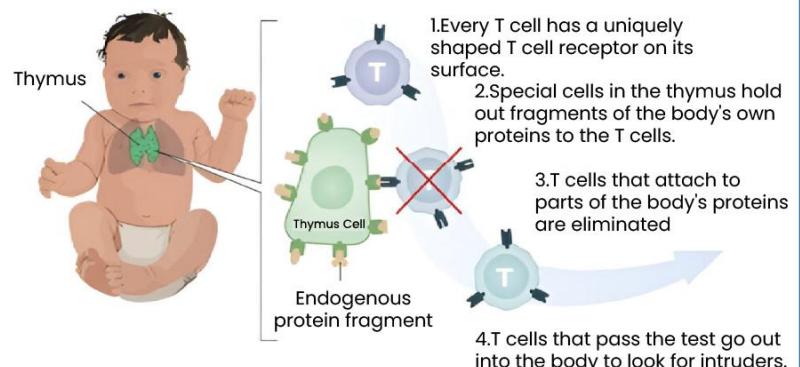
- Once in the periphery, **additional control** is needed to prevent escaped self-reactive T cells from attacking the body.
- Here, **Regulatory T cells (Treg cells)** play a key role.
  - Shimon Sakaguchi** discovered this special class of T cells.
- These patrolling regulatory T cells **identify self-reactive T cells** and **stop them** from attacking our own tissues.(see infographic)
- In this way, Treg cells act as a **security guard**, protecting the body from its own overactive immune responses.

### Role of the FOXP3 Gene

- Mary Brunkow and Fred Ramsdell** discovered the **FOXP3 gene**, which **controls the development and function** of regulatory T cells in human body.
- If there is a **mutation in the FOXP3 gene**, regulatory T cells do not form properly.
- This can cause a **rare autoimmune disease called IPEX**, where the immune system attacks the body's own tissues.

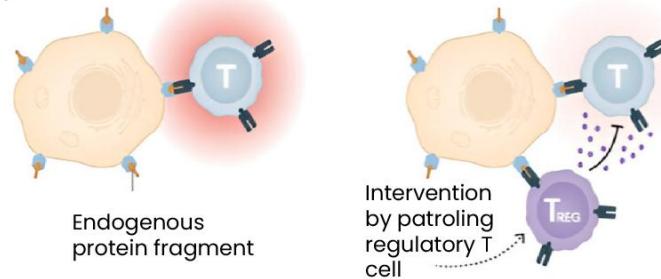
## How harmful T cells are eliminated

T cells mature in the thymus. The ones that recognise the body's own proteins are sorted and removed. This process is called **central tolerance**



## How regulatory T cells protect us

- A T cell that has slipped through the test in the **thymus** reacts to a fragment from one of the body's proteins
- Regulatory T cells discover that the attack is a mistake and calm it down. This prevents **autoimmune diseases**.



## Significance of the Discovery

- **Treatment of Autoimmune Diseases:** In autoimmune diseases the body's immune system starts to attack itself.
  - In a patient suffering from such diseases, increasing the number of regulatory T cells can significantly suppress the self-attacking behaviour of immune system.
- **Providing Cancer Treatment:** In cancer, regulatory T cells are often found in large numbers around tumours, where they suppress the activity of immune cells (like killer T cells) that would otherwise attack the cancer.
  - This means too many regulatory T cells can protect the tumour, allowing it to grow. In many cancers, therapies try to reduce or block regulatory T cells inside the tumour.
  - This helps free the immune system to attack and kill cancer cells more effectively

### Other Similar Applications

- Preventing organ transplant rejection.
- Type 1 diabetes
- Asthma
- Skin related diseases

### T cells

- T cells are a type of white blood cell that protects our body from infections.
- Types of T cells: There are two main types of T cells-
  - **Cytotoxic T cells:** Cytotoxic T cells kill cells infected with viruses and bacteria, and they also destroy tumour cells.
  - **Helper T cells:** Unlike cytotoxic T cells, helper T cells don't kill cells directly. Instead, they send signals that tell other cells in your immune system how to coordinate an attack against invaders.
- **Regulatory T cells:** Although they're not considered one of the main T cell types, regulatory T cells play an essential role in our immune system. These cells reduce the activity of other T cells when necessary. They can prevent T cells from attacking our body's healthy cells.
- All T cells possess **T-cell receptors (TCRs)** — surface proteins that act as sensors, enabling them to detect whether the body is under attack.

## 7.2. NOBEL PRIZE IN CHEMISTRY 2025

### Why in the News?

**Susumu Kitagawa, Richard Robson and Omar M. Yaghi** are awarded the Nobel Prize in Chemistry 2025 for the development of **metal–organic frameworks**.

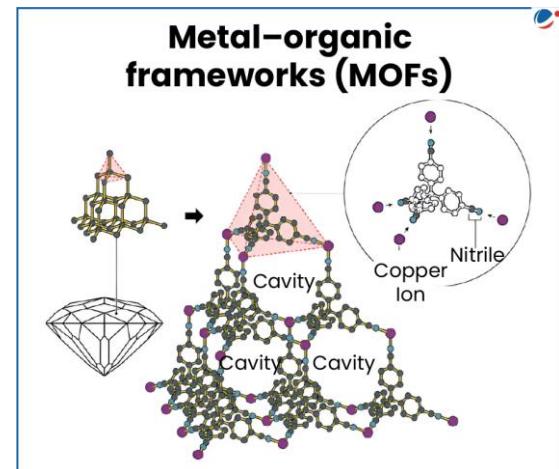
### More on the News

- The laureates have created molecular building blocks called **metal organic frameworks (MOFs)** having large spaces through which gases and other chemicals can flow.

### What is Metal–Organic Framework (MOF)?

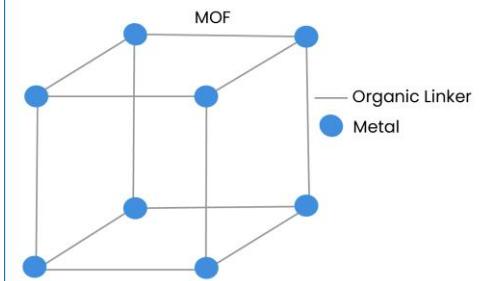
MOFs are special materials made up of **two parts**:

- **Metal ions (such as copper, zinc etc.)** – this act like the “joints” or “connecting points”
- **Organic molecules (carbon based molecules like coal, glucose etc.)** – these act like the “links” or “bridges” that connect the metal parts together.
- When **metal ions** and **organic molecules** join through chemical bonds, they form a **network structure**.
- **The network structure** can be in one, two, or three dimensions — just like lines, sheets, or 3D frameworks with a lot of **empty spaces or cavities** between them.
- The cavities inside the network make the material **highly porous**- full of tiny holes inside.



- **For example (see infographic):** Copper metal (shown as dot) combines with the organic molecule (shown as honeycomb like structure) to produce a 3D chain like framework with cavities.
- **Another example(see infographic)-** The metals are like *bricks* in a wall and organic molecules are like *pillars* which connect one brick to another.
  - > When *bricks* and *pillars* are arranged periodically they form spacious molecular rooms.
  - > The size and shape of these molecular rooms can be changed by changing the bricks (metals) and pillars (organic molecules).

### Schematic of Metal Organic Framework



#### Origin of the Idea of MOF

- The idea to create MOFs came from studying the **structure of diamond** - in which each carbon atom connects to four others, forming a small pyramid-like pattern.
- **Scientists used a similar concept** but replaced carbon with metal atoms and organic molecules to create these new porous materials.

#### Key Features

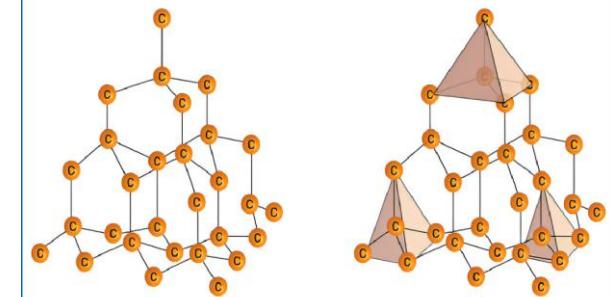
- The **pores or cavities** inside MOFs can be made **bigger or smaller** by changing the metals or the organic molecules used.
- **This means MOFs** can be **customized** to absorb or trap specific kinds of materials like gases, water, or chemicals.
- One gram of MOF can have an **internal surface area** roughly equal to **two football fields** - showing how spacious it is inside.
- Because of their large cavities and surface area, MOFs are **more absorbent** than many other porous materials (like zeolites).
- They act like **molecular storehouses**, storing gases, liquids, or other materials inside their pores.

#### Key Applications

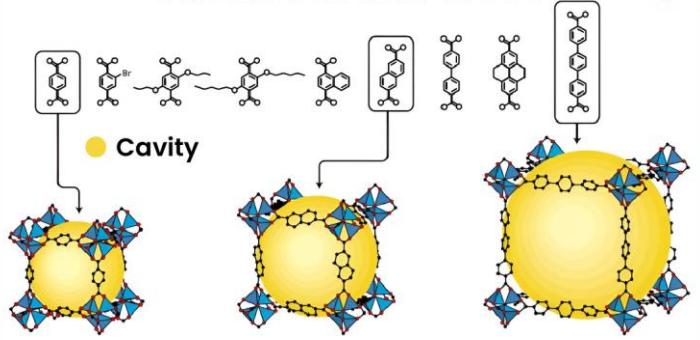
Their ability to trap, store, or release molecules makes them useful for:

- **Water collection from dry air**
  - Water in desert regions is scarce. The concentration of water in the air is low which makes several existing methods of water collection from air ineffective.
  - MOFs have large cavities with good absorption capacity. Membranes made of MOF material can absorb large quantity of water.
  - After the absorption, liquid water can be efficiently extracted by slightly heating the MOF membrane. Thus, MOFs can solve the problem of water shortage in desert areas.
- **Food Processing**
  - Fruits and vegetables release ethylene gas (it is a hormone) which causes ripening. After the harvesting, the release of ethylene is significantly increased which causes their spoilage.

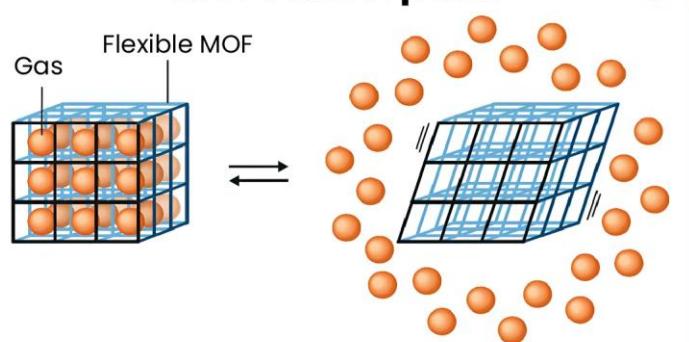
### Diamond



### Cavities inside MOFs



### MOFs Absorption



- MOF based packaging materials have strong absorption capacity which stores the ethylene gas into its cavity.
- This absorption reduces the concentration of ethylene and increases the shelf life of fruits and vegetables.

### Other Similar Applications

- **Pollution control:** Extracting pollutants, such as separating PFAS, antibiotics etc. from polluted water.
- **Rare-Earth Elements:** Experimentally mining rare-earth elements from wastewater.
- **Gas storage:** Storing gases such as hydrogen, carbon dioxide, methane etc.

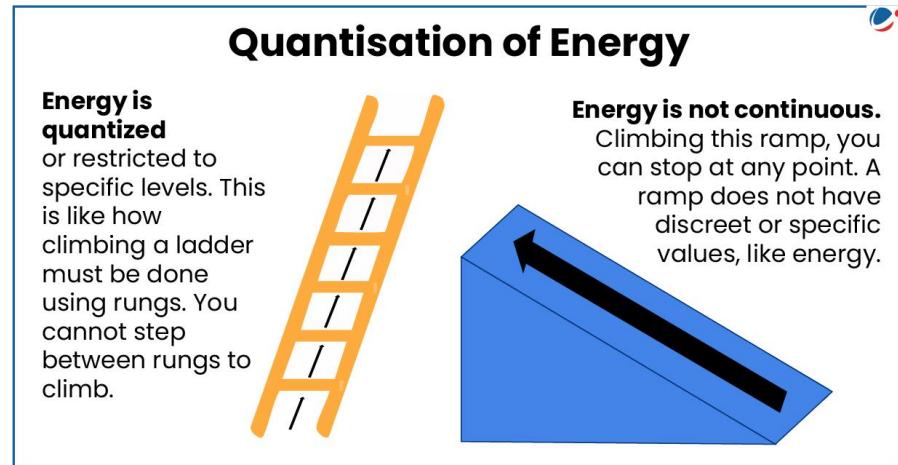
## 7.3. NOBEL PRIZE IN PHYSICS 2025

### Why in the News?

**John Clarke, Michel H. Devoret and John M. Martinis** have been awarded Nobel Prize in Physics 2025 for the discovery of macroscopic quantum mechanical tunnelling and energy quantisation in an electric circuit.

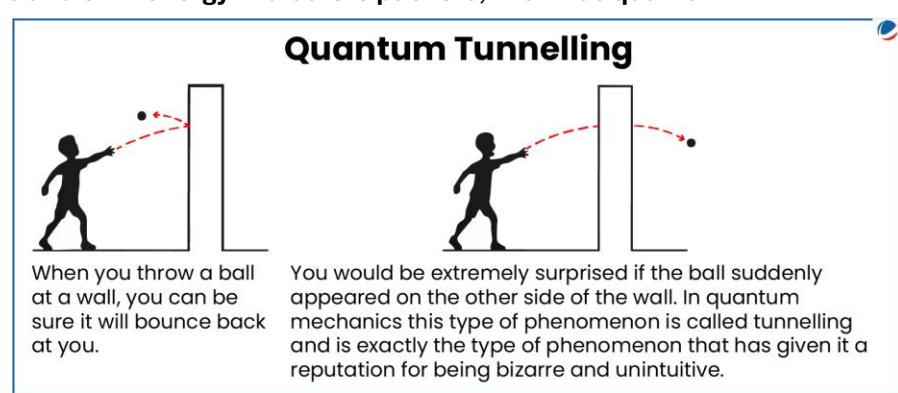
### Background

- **Quantum Physics** deals with the behavior of particles at the microscopic level — such as atoms, electrons, and nuclei.
- At this scale, particles exhibit **dual nature**, behaving both as **particles and waves**.
- The **wave-like behaviour** of these particles leads to several intriguing phenomena, including:
  - **Quantization** of energy and angular momentum
  - **Quantum tunnelling**
- These quantum effects, prominent at the microscopic level, **vanish at the macroscopic scale** (e.g., in everyday objects like a cricket ball).
- For decades, scientists have been intrigued by the question: **What is the largest possible size of a system that can still exhibit quantum behavior?**
- The **2025 Nobel Prize in Physics** honors experiments that demonstrated how quantum phenomena—such as **energy quantization** and **quantum tunnelling**—can also be **observed in macroscopic systems** involving many particles.



### Quantisation of Energy

- At the microscopic level, particles **absorb and emit energy in discrete packets**, known as **quanta**.
- This concept can be visualized as **climbing a ladder** — one can stand only on specific rungs, not in between them.
- Likewise, particles such as **atoms, electrons, and protons** can exist only in certain **fixed energy levels**, and not in between.
- This phenomenon is known as the **quantisation of energy**.



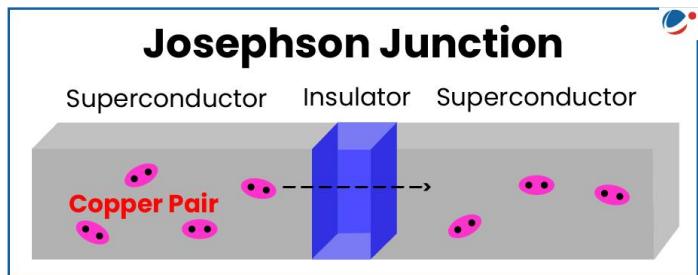
### Quantum Tunnelling

- When we throw a cricket ball at a wall, it naturally bounces back — a familiar, everyday observation.

- In contrast, **quantum physics** reveals a surprising phenomenon: when a **particle encounters a barrier** (a wall of potential energy), there exists a **finite probability** that it may **pass through the barrier** and appear on the other side.
- This strange behavior, known as **quantum tunnelling**, occurred only at the **microscopic scale**.
- A classic example is **radioactive decay**, where part of an atomic nucleus escapes by tunnelling through its potential barrier — as seen in **alpha decay**.

### About the Experiment and Result

- In 1984–85, John Clarke, Michel Devoret, and John Martinis at UC Berkeley built an electric circuit using two superconductors separated by an insulator — a **Josephson Junction**. (see image)
- Although the circuit's voltage was initially set to zero, it unexpectedly shifted to a **finite value** due to **quantum tunnelling** from the zero-voltage state.
- They demonstrated that all charged particles in the circuit behaved collectively as a **single quantum particle**.
- They also demonstrated the quantisation of energy in the circuit.



### Significance of the discovery

- The discovery revealed a **macroscopic quantum state**, enabling experiments that apply **quantum phenomena to large-scale systems**.
- The **Josephson Junction** acts as an **artificial atom**, allowing researchers to simulate and study complex quantum systems.
- This principle was later used to create **quantum bits (qubits)**, where quantised energy states represent 0 and 1, forming the basis of **superconducting quantum computers**.
- The work has advanced both **practical quantum technologies such as quantum computing, quantum cryptography and quantum sensors** and the **theoretical understanding of quantum physics**.

### Conclusion

Even after a century since its discovery, the quantum world surprises with its bizarre but fascinating behaviour. The theory which is fundamental for understanding the behaviour of nature at minute scale is also becoming the foundation of many modern technologies.

#### Related News

##### Quantum Echoes Algorithm

- Google Quantum AI has demonstrated the **Quantum Echoes algorithm** on its **Willow quantum processor (105 qubits)**, achieving what it calls the **first verifiable quantum advantage**— result can be cross-benchmarked and verified by another quantum computer of similar quality.
  - **Performance:** Achieved a **~13,000x speed-up** over the best classical algorithms on top supercomputers.
  - **Working:** This new technique functions like an advanced quantum “echo,” similar to how a bat locates its prey by interpreting returning sound waves.
  - **Application:** This new achievement brings quantum computers closer to becoming tools for practical applications— medicine, material science, sensors etc.

## 7.4. ASTROSAT

### Why in the News?

India's first dedicated space observatory, AstroSat, has completed 10 years since its launch.

## About AstroSat

- Objective:** India's first dedicated astronomy mission, designed to study celestial objects **across X-ray, ultraviolet, and optical wavelengths simultaneously**, offering a holistic view of cosmic phenomena.
- Launch:** Launched on **September 28, 2015**, aboard **PSLV-C30** from Sriharikota.
- Orbit:** Placed in a **low Earth orbit at 650 km altitude** for a minimum lifespan of 5 years.
- Spectral Range:** The mission spans a broad energy band **from 0.3 keV to 100 keV**, covering near and far UV regions, enabling exploration of **both high-energy and faint astronomical sources**.

## Scientific Objectives of AstroSat

- Study High-Energy Phenomena:** To understand high-energy processes **in binary star systems containing neutron stars and black holes**, offering insights into **extreme cosmic environments**.
- Measure Magnetic Fields:** To estimate the magnetic fields of **neutron stars**, aiding in the study of their structure and evolution.
- Explore Star Formation:** To **study star birth regions** and high-energy activities in star systems beyond our galaxy, expanding the understanding of **galactic evolution**.
- Detect Transient X-ray Sources:** To identify **new, short-lived X-ray sources**, helping track sudden cosmic events.
- Ultraviolet Universe Survey:** To conduct a limited deep-field survey of the universe in the **ultraviolet spectrum**, enhancing data on distant and faint celestial bodies.

## Significance for India

- Scientific Leadership:** Established India as a **global leader in multi-wavelength astronomy** (Satellites capable of simultaneous X-ray, UV, and optical observations).
- Indigenous Capability:** Showcased India's ability to design and operate a complex space observatory.
- Research and Academic Growth:** Enabled frontline research in astrophysics across India.
- Global Collaboration:** Enhancing India's scientific reputation and fostering international partnerships in astronomy.

## Other Space and Ground observatories of India

- XPoSat:** First dedicated satellite from ISRO to carry out research and **measure X-ray emission** from celestial sources.
- Aditya-L1:** Launched in September 2023, India's first solar mission orbits the Sun-Earth L1 point for continuous solar observation.
- Indian Astronomical Observatory (IAO), Hanle (Ladakh):** it hosts optical, infrared, and gamma-ray telescopes for astronomical and atmospheric studies.
- Kodaikanal Solar Observatory (Tamil Nadu):** One of India's oldest solar observatories, known for long-term solar observations.

AstroSat marks a **milestone** in India's space research, deepening multi-wavelength astronomy and strengthening global scientific collaboration while reflecting the **nation's growing self-reliance in space science**.

## 7.5. NON-COMMUNICABLE DISEASES

### Why in the News?

India's Disease Burden has been shifted to Non-Communicable Diseases (NCDs) according to Global Burden of Disease (GBD) Report.

### More on the News

- The Global Burden of Disease (GBD) Report has been released by the **Institute for Health Metrics and Evaluation (IHME)** at the **World Health Summit, Berlin**.

## Findings of the report:

- **Shift toward NCDs:** According to report, NCDs remain the **largest contributor to global disease burden**, accounting for **1.80 billion global DALYs (Disability-Adjusted Life Years)** in 2023, an increase from 1.45 billion in 2010.
  - NCDs accounted for **nearly two-thirds of global DALYs** in 2023. While Infectious diseases have declined due to better healthcare access, immunization, and sanitation.
- **Leading NCD Causes:** The leading Level 3 NCDs globally were **ischaemic heart disease, stroke and diabetes**.
- **Fastest Growing NCDs:** The largest increases in age-standardized rates since 2010 occurred **for anxiety disorders, depressive disorders, and diabetes**.

## Know the term

○ **Disability-adjusted life years (DALYs):** It is a measure of the overall burden of disease that combines years of life lost due to premature mortality (YLLs) and years lived in a state of less than full health due to disability (YLDs)

## Causes of the Rising Burden of Non-communicable Diseases

- **Epidemiological & Demographic Transition:** India is **shifting from communicable to lifestyle-related chronic diseases** due to urbanization, aging population e.g. **growth of tier 1 and 2 cities**.
- **Unhealthy Lifestyle:**
  - **Dietary Changes:** Shift from traditional, **fiber-rich diets to high-calorie**, processed foods with excess fat, salt, and sugar e.g. **fast food culture**.
  - **Physical Inactivity:** Sedentary lifestyles, mechanized transport, and reduced physical activity (e.g. **due to quick delivery apps**) increase metabolic and cardiovascular risks.
  - **Tobacco & Alcohol Use:** Rising consumption, particularly among **youth and lower socioeconomic groups**, contributes to cancers, liver, heart, and metabolic disorders.
- **Environmental Risk Factors:**
  - **Air Pollution (Indoor & Outdoor):** High **PM2.5 exposure** from industry, fossil fuels, and biomass burning causes chronic respiratory and cardiovascular diseases e.g. **Cities like Delhi**.
- **Biological Risk Outcomes:**
  - **Overweight/Obesity and Raised Blood Pressure:** all resulting from unhealthy lifestyles and environmental exposures.
  - **Hereditary Predisposition** also increases individual vulnerability.
- **Psychosocial and Mental Health Factors:** **Stress, urban pressures, job insecurity, and social isolation** indirectly worsen NCD risks by promoting unhealthy coping behaviors e.g. **FOMO Culture (Social Media)**.
- **Socioeconomic Factors:** Income growth, urban migration, and educational disparities influence health behaviors, leading to unequal NCD burden across populations. E.g. **tobacco use is normal in rural areas**.

## Impact of Non-communicable Diseases on India

- **Leading Cause of Death:** NCDs account for **63–65% of all deaths in India (2023)**, with cardiovascular diseases, cancers, chronic respiratory illnesses, and diabetes as major contributors.
- **Premature Mortality:** NCDs contribute significantly to deaths occurring between **ages 30–70**.
- **Morbidity & Disability:** NCDs **cause long-term illness, disability, and dependence**, affecting quality of life across urban and rural areas and all socioeconomic groups.
- **Economic Impact:** India may lose **USD 4.58 trillion by 2030** due to NCDs and mental health conditions (World Economic Forum).
- **Strain on Health System:** Rising NCD burden increases demand for **diagnostic infrastructure, medicines, chronic care, and diverts public expenditure** from other development priorities.
- **Socioeconomic & Developmental Challenges:**
  - **NCDs undermine SDG progress**, including health equity, poverty reduction, and gender equality.
  - Long-term disabilities reduce **labor productivity and exacerbate income inequality**.

### Steps taken by Government

- **National Program for Prevention and Control of NCDs (NP-NCD):** Strengthens healthcare infrastructure, trains personnel, ensures early diagnosis, and spreads awareness.
- **Community Screening:** Nationwide checks for **diabetes, hypertension, and cancers** bring care closer to people's homes.
- **Health Infrastructure:** District NCD Clinics, Day Care Centers, Cardiac Care Units, and CHC NCD Clinics improve treatment access.
- **Lifestyle Promotion:** Campaigns like **Eat Right India, Fit India Movement, and Yoga initiatives** encourage citizens to adopt healthier routines.
- **GST Reforms: Sin tax** on high sugar products like Cold Drinks. (**40% Tax Slab**)
- **National Tobacco Control Program (NTCP):** Launched in 2007-08 for creating awareness about the harmful effects of tobacco consumption; reducing production, etc.
- **National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS):** Launched in 2010 to combat NCDs.

### Way Forward

- **Health Promotion:** Encouraging healthy lifestyles through **awareness, diet, exercise, tobacco cessation, and reduced alcohol use.**
- **Early Detection:** Screening **adults 30+** for diabetes, hypertension, and cancers to ensure timely care.
- **Healthcare Strengthening:** Expanding **NCD clinics, critical care**, referral services, and training healthcare workers for better management.
- **Digital Health:** Using teleconsultation, digital portals, and data systems for monitoring, decision-making, and remote specialist access, leveraging **the National Digital Health Mission.**
- **Leveraging fiscal tools:** To reduce risk factors e.g. raising taxes on tobacco, Salt, sugar etc.
- **Sustainable Financing:** Ensuring regular medicines, diagnostics, and funding, aligned with **SDG 3.4** to cut premature NCD deaths by one-third by 2030.

## 7.6. ANTIMICROBIAL RESISTANCE (AMR)

### Why in the News?

The World Health Organization (WHO) released the **Global Antibiotic Resistance Surveillance Report 2025**.

### Key Findings of the Report

- **Antibiotic Resistance:** In 2023, approximately 1 in 6 bacterial infections worldwide was caused by **antibiotic-resistant bacteria**.
  - **Antibiotic Resistance** rose in more than 40% of the **bacteria-drug combinations** tracked between 2018 and 2023.
  - **Gram-negative bacteria** pose a severe threat. These are pathogens that are hard to kill and resistant to multiple drugs. E.g., Escherichia coli (E.coli)
- **Regional Hotspots:** AMR was most frequent in Southeast Asia and the Eastern Mediterranean.
- **India Related Finding:** Around 41% of bloodstream infection reports came from China, India, and Pakistan combined.
- **Improvement in Surveillance:** Country participation in the **WHO's Global Antimicrobial Resistance and Use Surveillance System (GLASS)** has increased four-fold since 2016.
  - GLAAS (2015) is a comprehensive global system **designed to monitor antimicrobial resistance and support appropriate use of antibiotics worldwide.**

### What is meant by Antimicrobial Resistance (AMR)?

- AMR occurs when **bacteria, viruses, fungi, and parasites** evolve to **withstand the drugs designed to kill them**.
  - Strains of bacteria, viruses, parasites, and fungi that are resistant to most **antimicrobials** are called **Superbugs**.

- Due to **drug resistance**, **antimicrobial** medicines become **ineffective**, and **infections** become difficult or **impossible to treat**. E.g., Multi-Drug-Resistant Tuberculosis (MDR-TB)
  - This increases the risk of disease spread, severe illness, disability, and death.
- AMR is a **natural process** that happens over time through **genetic changes in pathogens**.
  - However, its emergence and spread are accelerated due to several anthropogenic factors.
- WHO recognized AMR as one of the **top ten global health threats**.
  - It is often described as a **silent pandemic**.

### Why is AMR a Global Health Threat?

- **Mortality and Morbidity:** Bacterial AMR was directly responsible for 1.27 million deaths in 2019 and contributed to nearly five million deaths globally.
- **Economic Impact:** Resistant infections could cause an estimated \$3 trillion in global GDP losses per year by 2030.
- **Outpacing advances in modern medicine:** It makes infections increasingly difficult to treat and renders medical procedures such as surgery far riskier.
- **Threat to Food Security:** Drug-resistant infections impact the health of animals and plants, reducing productivity in farms.

### Key Drivers of AMR



#### Misuse and overuse of antibiotics in humans

- Patients frequently self-prescribe antibiotics (owing to their over-the-counter availability)



#### Pharmaceutical Manufacturing

- Industrial waste from the production of Active Pharmaceutical Ingredients (APIs) for antibiotics



#### Poor Waste Management

- Landfill leachate, untreated wastewater, etc.



#### Agriculture & Allied Sector

- Use of antimicrobials in intensive farming and the Livestock sector used as growth-promoters)



#### Healthcare Facilities

- Improper management of unused medications, patient excretion, and disposal of expired drugs



#### Other

- Prematurely discontinue treatment courses, etc.

### Measures taken to address AMR

#### National

- **National Program on AMR containment:** Launched during the 12th FYP in 2012-17 to carry out surveillance of antimicrobial usage in healthcare settings.
  - It is coordinated by the **National Centre for Disease Control (NCDC), Ministry of Health and Family Welfare**.
- **National Action Plan on AMR (NAP-AMR), 2017:** Focuses on the **One Health approach** and involves various stakeholder ministries/departments.
- **Drugs and Cosmetics Rules, 1945:** Antibiotics included in Schedule H1 of the rules are required to be sold by retail only under the prescription of a Registered Medical Practitioner.
- **Red Line awareness campaign:** Urging people not to use medicines marked with a red vertical line, including antibiotics, without a doctor's prescription.
- **Other:** Ban on inappropriate **fixed dose combinations (FDCs)**, **Operation AMRITH (AMR Intervention for Total Health)** was launched by Kerala to detect the over-the-counter sales of antibiotics without a doctor's prescription.

#### Global

- **Global Action Plan (GAP), 2015:** Adopted by the World Health Assembly of WHO.
- **Quadrilateral Joint Secretariat on AMR:** It includes **WHO, Food and Agriculture Organization (FAO), the UN Environment Programme (UNEP), and the World Organisation for Animal Health (WOAH)**.
- **United Nations General Assembly Political Declaration on AMR (2024):** It aims to reduce deaths associated with bacterial AMR by at least 10% and ensure that at least 70% of overall human antibiotic use is from the WHO AWaRe Access group.
- **Other:** World Antimicrobial Awareness Week (WAAW), AWaRe (Access, Watch, Reserve) classification of antibiotics (by WHO), etc.

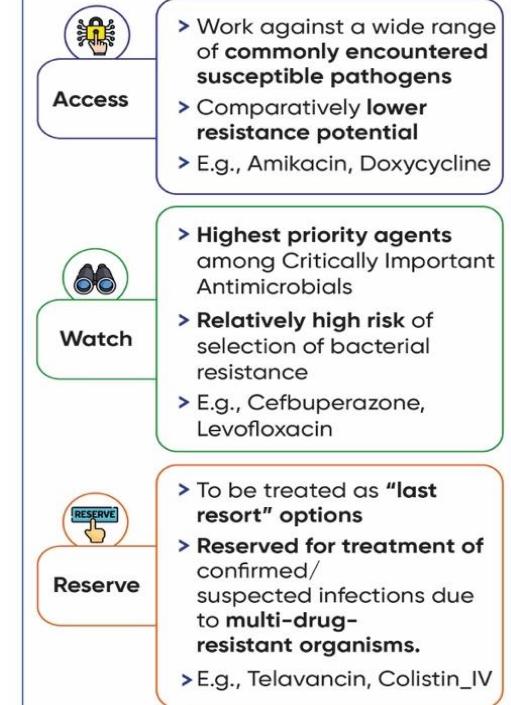
## Way Forward

- **Implement integrated intervention packages:** It includes infection prevention and control, water, sanitation and hygiene, vaccination, antimicrobial stewardship, and strengthening of the laboratory.
  - **Antimicrobial stewardship** aims to educate and support healthcare professionals to follow evidence-based guidelines for prescribing and administering antimicrobials.
- **Strict implementations of Drugs and Cosmetics Rules, 1945:** All pharmacist associations shall adhere to the rules and sell antibiotics only with valid prescriptions.
- **Enhancing Monitoring:** Generating reliable surveillance data, especially from underserved areas.
- **Appropriate Antibiotic selection:** Reduce use of AWaRe Watch antibiotics and increase the use of Access antibiotics
- **Other:** Enforce stricter controls on antibiotic use in Agriculture and Veterinary.
  - Expand social protection, such as Universal health coverage (UHC).

## Conclusion

AMR poses a grave threat to global health, food security, and sustainable development. Combating it requires a coordinated One Health approach that integrates human, animal, and environmental health efforts. Strengthened surveillance, rational antibiotic use, and global cooperation are essential to preserve the effectiveness of existing antimicrobials and safeguard future generations.

## WHO Access, Watch, Reserve (AWaRe) classification of antibiotics



## 7.7. NEWS IN SHORTS

### 7.7.1. MAHI BANSWARA RAJASTHAN ATOMIC POWER PROJECT

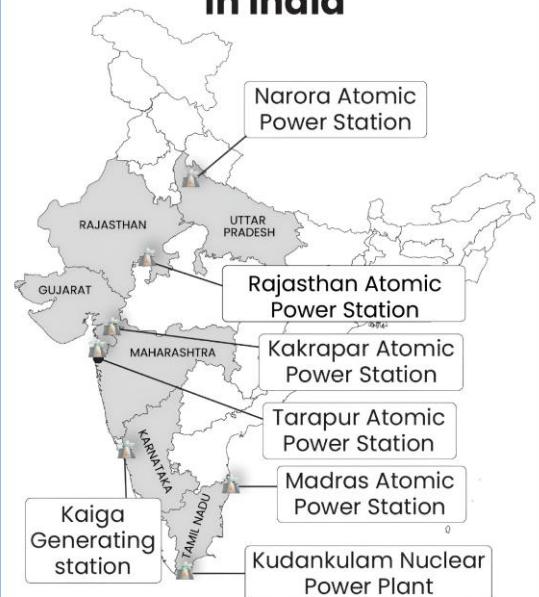
PM laid the foundation of the Mahi Banswara Rajasthan Atomic Power Project (MBRAPP).

- **Location:** Banswara, Rajasthan near the Mahi Dam on River Mahi.
- **Capacity:** 4 x 700 MWe PHWR (4 nuclear power units of Indigenous PHWRs (Pressurized Heavy Water Reactors)).
- It will be developed by **Anushakti Vidhyut Nigam (ASHVINI)**, a joint venture between Nuclear Power Corporation India Limited (NPCIL) and National Thermal Power Corporation Limited (NTPC).
- The project is part of India's "**fleet mode**" initiative.
  - Under this **Initiative**, ten identical 700 MW reactors are being built across India under uniform design and procurement plans.

### Nuclear Power Capacity in India

- India currently has **24 reactors across 7 power plants** with **installed nuclear energy capacity of 8180 MW** (January 30, 2025).
  - The government plans to increase this to **22,480 MW by 2031-32**.

## Nuclear Power Plants in India



- **Nuclear power** accounts for 3.61% of India's total electricity generation in 2022-23, making it fifth-largest Non-fossil fuel source of electricity.
- India is currently in the **1st stage** of its three-stage Nuclear Power Programme (NPP).
  - The **1st Stage** is based on **uranium fuelled PHWRs**.
  - The **2nd Stage** and **3rd stage** are based on **Fast Breeder Reactors (FBRs)** utilising plutonium-based fuel and **Thorium**, respectively.

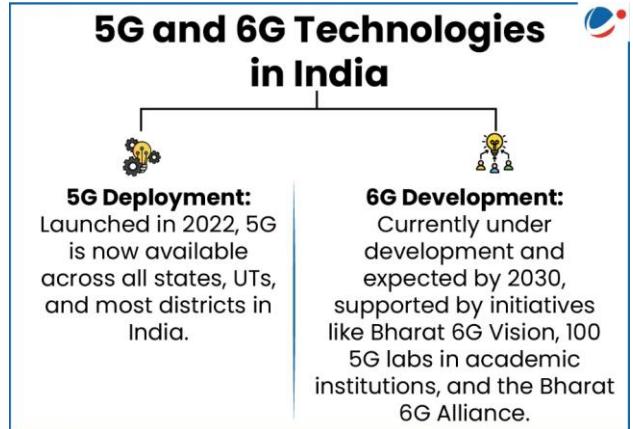
### 7.7.2. LAUNCH OF FIRST FULLY INDIGENOUS 4G (5G-READY) NETWORK

India's first fully indigenous 4G (5G-ready) network has been **deployed by BSNL** and developed through collaboration between C-DOT, Tejas and TCS.

- This provides India the capability to quickly develop technologies for **fast tracking adoption of 5G and laying foundation for 6G**.

#### Significance of indigenous 4G Stack

- **Strategic Autonomy:** Empowers India to control its telecom infrastructure, therefore reducing dependency on foreign technologies and foreign vendors, and enhancing national security.
- **Cloud native:** Enables rapid upgrades, scalability and easier future migration path to 5G.
- **Improving Accessibility:** Expected to benefit tribal regions, remote villages, and hilly areas by providing access to quality digital services.
- **Supply Chain Development:** Localised manufacturing and deployment are creating employment, strengthening supplier ecosystems, and nurturing a skilled domestic workforce.
- **Technological Capability:** With this, India is now among the **select five nations globally** with the capability to launch fully indigenous 4G services.



### 7.7.3. GUIDELINES AND SPECIAL PURPOSE FUND (SPF) FOR RESEARCH DEVELOPMENT AND INNOVATION (RDI) SCHEME APPROVED

It was approved by the **Executive Council** of the **Anusandhan National Research Foundation (ANRF)** ensuring seamless **scheme execution**, effective private sector participation and long term innovation.

- ANRF was established with **Anusandhan National Research Foundation (ANRF) Act, 2023**.
- It acts as an **apex body** to provide high-level strategic direction of scientific research.
- **Science and Engineering Research Board (SERB)** established by 2008 Act has been subsumed into ANRF.

#### RDI Scheme

- **About:** Establishes ₹1 Lakh crore RDI Fund approved by the Union Cabinet on July 1, 2025.
- **Nodal Department:** Department of Science & Technology (DST)
- **Funding Structure:** Two Tiered
  - **Special Purpose Fund (SPF):** Being set up under the **Anusandhan National Research Foundation (ANRF)** to serve as the **first-level custodian**.
  - **Second-Level Fund Managers (SLFMs):** Alternate Investment Funds (AIFs), Development Finance Institutions (DFIs), Non-Banking Financial Companies (NBFCs), or Focused Research Organizations (FROs) like Technology



Development Board (TDB), Biotechnology Industry Research Assistance Council (BIRAC), IIT Research Parks, etc.

- **Exclusions:** Grants and short-term loans are not supported.
- **Coverage:** Financing can cover up to **50% of assessed project cost** for transformative RDI projects at Technology Readiness Levels (TRLs) 4 and above.

## Key Objectives of the RDI Scheme



Incentivize **active private sector participation** in cutting-edge research and innovation.



Promoting **Strategic Technologies** including '**Deep technologies**' like quantum computing, robotics and space, etc.



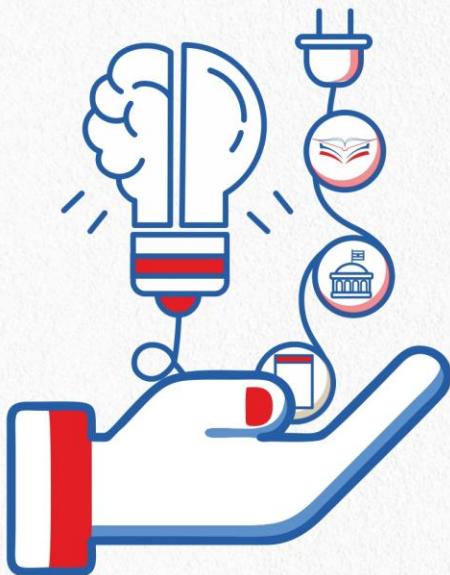
Fostering **Self-Reliance and Economic Security** for strategic or economic reasons.



**Ensure Flexibility in Sectoral Support** for any additional sectors or technologies essential for public interest.



# OPTIONAL SUBJECT CLASSES 2026



» Geography   » Sociology  
 » Political Science and International Relations  
 » Anthropology

**18 SEPT, 2 PM**

» Public Administration

**25 SEPT**

» History      **28 OCT**

» Hindi Literature

**COMING SOON**

» Physics

**ADMISSION OPEN**

# 8. CULTURE

## 8.1. SREE NARAYANA GURU

### Why in the News?

The President inaugurated the observance of the **Mahasamadhi centenary of Sree Narayana Guru** in Kerala.

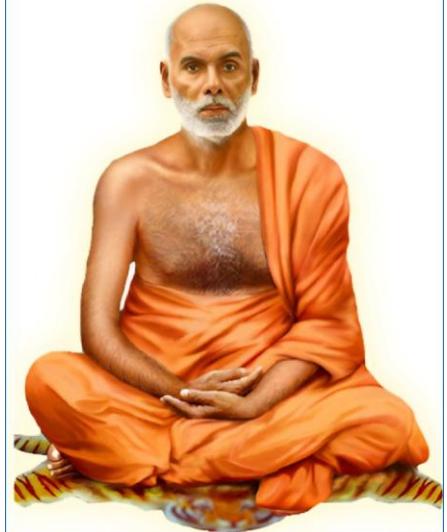
### About Sree Narayana Guru (1856–1928)

- **Birthplace:** He was born in **Chempazhanthy** (near present-day Thiruvananthapuram) to Ezhava family.
  - Ezhava is a **backward untouchable community** which faced social injustice in the caste-ridden Kerala society.
- **Key Details:**
  - He was a **saint, philosopher, poet, spiritual leader and social reformer** who revolted against caste system.
  - He was commonly known as **Guru Devan** among his followers.

### Key Contributions

- **Teachings and principles:**
  - He emphasized **self-purification, simplicity, and universal love**.
  - Emphasized the principle of "**One caste, One Religion, One God for all human beings.**"
  - **Real liberation** comes from **knowledge and compassion**, not from blind faith.
  - He considered **education as the only means to human progress and prosperity** and the supreme panacea for all social evils like superstitions and unhealthy tradition.
    - > He advocated equal opportunity for women and began the number of schools all over Kerala.
  - He founded the **Advaita Ashram at Aluva** in 1913.
    - > This Ashram was dedicated to Om Sahodaryam Sarvatra (all men are equal in the eyes of God).
- **Key Contributions:**
  - **Temple Entry:** He launched the **Aruvipuram movement** for equal rights to temple entry.
    - > In 1888, Sree Narayana Guru took a plunge into the Neyyar River and emerged with a Sivalinga.
    - > He consecrated it in a makeshift temple, **breaking the centuries-old barriers of caste-based discrimination in worship**.
    - > This symbolized the **empowerment of marginalized communities**, granting them the right to worship.
  - **Ezhava Community:** He established an organization, later called the **Sri Narayana Dharma Paripalana Yogam** for upliftment of Ezhava community in 1903.
    - > This movement was based on the approach of **reinterpreting Hindu religion** in search of self-determination.
    - > The new ideology was based on the **principle of self-respect, honour and worth of individual**.
    - > It was an ideology of **protest against the Brahminical values system** of hierarchy and pollution.
    - > He established a **parallel source of legitimacy** by establishing new institutions like temple priest, monk and monasteries.
  - **Vaikom Satyagraha:** He lent support to **Vaikom Satyagraha for temple entry (1924-25)** in Travancore.
    - > It was a historic **non-violent temple entry** protest that began in Vaikom, a town in the princely state of Travancore (Kerala region) against untouchability and caste discrimination.
    - > It was in a response to the discriminatory **exclusion of "lower caste" Hindus** from accessing the Vaikom Mahadeva temple.
    - > **T.K. Madhavan, K.P. Kesava Menon and K. Kelappan** (also known as Kerala Gandhi) are considered the pioneers of the Vaikom Satyagraha movement.
- **Works:** Anukamba Dasakam, Brahmavidya Panchakam, Asramam, Bhadrakaliashtakam, Atmopadesa Satakam, Advaitha Deepika, Daiva Dasakam, etc.

**Sree Narayan Guru**



## Conclusion

Sree Narayana Guru's life and teachings stand as a symbol of **social equality, spiritual enlightenment, and human dignity**. Through his reformist movements, temple-entry initiatives he challenged entrenched **caste hierarchies** and inspired generations toward justice and harmony.

## 8.2. NEWS IN SHORTS

### 8.2.1. VANDE MATARAM

The Union Cabinet announced nationwide celebration of **150th anniversary** of the national song 'Vande Mataram'.

#### About Vande Mataram

- **Origin:** Composed in **Sanskrit** by **Bankim Chandra Chatterjee** and first published in Anandamath (1882).
- On 24th January 1950, it was declared that Vande Mataram would have equal status with the **National Anthem (Jana-gana-mana)**.
  - Jana Gana Mana, originally composed in Bengali by Rabindranath Tagore, was adopted in Hindi version by the Constituent Assembly on January 24, 1950.
- **Theme: Pays tribute to Mother India**, inspiring devotion, courage, and unity.
- It was recited by **Rabindranath Tagore** in 1896 at the annual session of the Indian National Congress.

### 8.2.2. BAMIYAN BUDDHAS

Bamiyan Buddhas statues were in the news recently.

#### About Bamiyan Buddhas statues

- **Location:** sandstone cliffs of the Bamiyan valley in central Afghanistan.
- **Period:** Built in the 6th century
- **Artistic Significance:** Exemplified Gandharan Buddhist art.
  - Closely connected with spread of Buddhism across Central Asia
- **Destruction:** Destroyed by the Taliban in 2001
- **UNESCO Recognition:** Bamiyan Valley declared a World Heritage Site in 2003.

### Bamiyan Buddhas statues



### 8.2.3. BATHUKAMMA FESTIVAL

Bathukamma Festival celebrations in **Telangana** create 2 Guinness World Records.

#### About Bathukamma Festival

- It is a **floral festival** celebrated by the **women folk of Telangana and some parts of Andhra Pradesh**.
- It is celebrated every year for **nine days** during **Durga Navratri**.
- It involves preparation of **Bathukamma** - the traditional art of flower arrangement using **seasonal flowers** with **medicinal values**.
- **Bathukamma** means “**come back to life-Mother**” and it is dedicated to **Goddess Parvati**.
- It is declared as **Telangana State Festival**.

### 8.2.4. NOBEL PEACE PRIZE 2025

Nobel Peace Prize for 2025 is awarded to **Maria Corina Machado**.

- It is awarded for her struggle to achieve a just and **peaceful transition from dictatorship to democracy** in **Venezuela**.

## Nobel Peace Prize

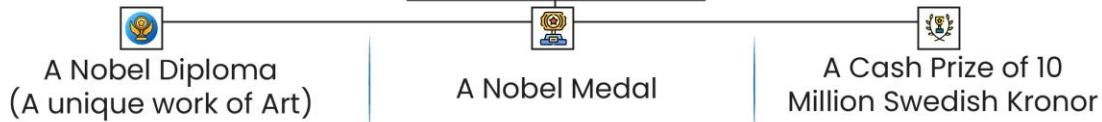
- Since WW-II, The Peace Prize (started in 1901) has been awarded to honour efforts in four main areas:
  - arms control and disarmament.
  - peace negotiation.
  - democracy and human rights.
  - work aimed at creating a better organized and more peaceful world.
- Indian citizen who won Nobel peace prize
  - Mother Teresa (1979)
  - Kailash Satyarthi (2014)

## Nobel Prize

An **international award** administered by the Nobel Foundation in Stockholm, Sweden, and based on the last will of **Alfred Nobel (in 1895)**.

Categories	Awarded By
Physics	<b>Royal Swedish Academy of Sciences</b>
Chemistry	
Economics	
Literature	Swedish Academy, Stockholm, Sweden
Medicine or Physiology	Nobel Assembly at Karolinska Institute, Stockholm, Sweden
Peace	Norwegian Nobel Committee

### Winners Receive



## 8.2.5. WORLD PARA ATHLETICS CHAMPIONSHIP

India won a **record 22 medals including 6 Gold**, marking its best-ever performance at World Para-Athletics Championships 2025.

- India (fourth Asian nation) hosted the World Para Athletics Championships for the **first time in 2025**.

### About World Para Athletics

- Para athletics is the biggest sport within the Paralympic Movement.
- The first Para athletics competition was held in 1952.
- Governed by the **International Paralympic Committee (IPC)**, it includes a wide range of competitions:
  - **Paralympic Games:** Held every four years.
  - **World Para Athletics Championships:** Held biennially.
  - **World Para Athletics Grand Prix:** Held annually in different cities since 2013.

# 9. ETHICS

## 9.1. INCLUSIVE GROWTH

### Introduction

Despite the World Bank's data showing that extreme poverty has dropped to 2.3% and a consumption-based Gini coefficient has fallen to 25.5, making India the **4<sup>th</sup> most equal country**, a rising income-based **Gini coefficient to 61** (according to the World Inequality Database) underscores persistent disparities. This contrast underscores the importance of examining how growth can embody **distributive justice and ensure universal access** to basic services, thereby making prosperity truly inclusive.

### Key Ethical Principles underlying Inclusive Growth

- **Gandhi's Principle**
  - **Trusteeship theory** –Business owners are urged to view their wealth as assets of society.
    - > They must act as trustees, retaining only a reasonable share and dedicating the rest to the welfare of the community.
  - **Gandhi's Talisman:** Asks to judge every decision by its impact on the poorest and weakest.
  - **Gandhi's Sarvodaya:** Calls for development that uplifts all sections of society, not just a privileged few.
- **Categorical Imperative:** Kant's principle of universal law demands that actions be morally valid only if they can be willed as universal.
  - Excluding the marginalised from development would fail this ethical test, as inequality cannot be universalised without contradiction.
- **Rawls' difference principle:** Any inequality that is permitted in society should only be permitted on the basis that it benefits the least favoured in society.
  - E.g. **Progressive taxation and corporate social responsibility (CSR)**, where extra taxes on well-off people fund welfare schemes for the upliftment of poor people.
- **Constitutional morality:** Adhering not just to the text of the Constitution but to its spirit, which embodies values like equality, justice, the dignity of every individual, etc.
- **Religious sanctions**
  - **Mahabharat:** With the surplus wealth, one must relieve the wants of the indigent (poor people). It is for this reason that the Creator ordained the practice of increasing one's wealth.
  - **Jainism:** The doctrine of **Aparigraha** (non-possession) discourages hoarding wealth and calls for sharing resources, supporting fairness and inclusivity.
  - **Islam:** The principle of **Zakat** (mandatory charity) ensures redistribution and social justice, reflecting inclusive growth through community welfare.
  - **Stewardship Principle:** Wealth and resources are gifts of God, to be managed responsibly for the benefit of all, not selfish accumulation.

### Key Stakeholders and their role

<b>Government</b>	<ul style="list-style-type: none"> <li>• <b>Serve Constitutional Duty:</b> Under the Directive Principles (Articles 38, 39, 46), the State is obliged to promote social justice, reduce inequalities, and uplift socially backward classes.</li> <li>• <b>Fulfil Policy Role:</b> Designing progressive taxation, welfare schemes like MGNREGA, and public services (education, healthcare, sanitation) that bridge disparities.</li> </ul>
<b>International Institutions</b>	<ul style="list-style-type: none"> <li>• <b>Reducing global inequalities:</b> Agencies like UNDP, World Bank, and IMF promote SDGs which align with equity, poverty reduction, and sustainability with a focus of <b>reducing gap between global north and south</b> <ul style="list-style-type: none"> <li>○ E.g. <b>Global financing facility of world bank</b> to reduce health gaps.</li> </ul> </li> </ul>

<b>Civil Society</b>	<ul style="list-style-type: none"> <li><b>Acting as Moral Voice:</b> NGOs, community organizations, and citizen groups act as watchdogs, ensuring marginalized voices are heard.</li> <li><b>Playing Advocacy Role:</b> Mobilizing public opinion, spreading awareness on rights, and demanding accountability for equitable development.</li> </ul>
<b>Corporates / Private Players</b>	<ul style="list-style-type: none"> <li>Interest changes with changing perspective           <ul style="list-style-type: none"> <li><b>Shareholder perspective:</b> Focused on profit maximization and returns on investment.(short term growth)</li> <li><b>Stakeholders' perspective:</b> Recognizes responsibility towards employees, communities, consumers, and the environment. (long term growth)</li> </ul> </li> </ul>

### Way to Inclusive Growth

- Accountability and transparency in governance:** Ensure that decision-making remains fair, ethical, and inclusive, preventing misuse of power.
  - E.g. CPGRAMS, which provides a digital platform for citizens to lodge and track complaints against government departments.
- Adopting the capability approach of Amartya Sen:** Focus on human development, e.g, access to education, skill-building, etc, to enhance the capability of people to lead a quality life.
  - E.g. **Pradhan Mantri Kaushal Vikas Yojna** by the Ministry of Skill Development and Entrepreneurship to enhance employability by giving skill training
- Promote Ethical Corporate Practices:** Encourage CSR, fair wages, and stakeholder-oriented governance
  - E.g. **Mahindra & Mahindra's – Project Nanhi Kali** supports the education of underprivileged girls.
- Sustainable Development:** By embedding environmental justice in growth policies to ensure intergenerational justice
  - E.g. **LiFE (Lifestyle for Environment) Movement** launched by India in 2021 at COP26, encouraging mindful consumption.
- Inculcating inclusive values:** such as empathy, social responsibility, equality, etc in children from a young age through schools and families
  - E.g., National Education policy 2020's focus on value-based education can be leveraged to form an inclusive society.

### Check your Ethical Aptitude

You are the District Collector of a semi-urban district where industries and IT parks are coming up rapidly. This is creating new jobs and giving more revenue to the government. But, at the same time, poor and marginalized communities are being displaced, income gaps are increasing, etc.

Some companies are spending money on schools and hospitals under CSR, but the benefits are not reaching everyone equally. People are angry and feel ignored. Civil society groups are blaming the administration for helping corporations more than the people. On the other hand, industrialists are unhappy with rules and delays, which they say slow down development.

The Chief Minister has asked you to make sure that growth in your district is not only fast but also fair and inclusive.

#### Answer the following questions:

- Identify the major ethical issues and dilemmas in ensuring inclusive growth in this situation.
- Suggest a set of practical and ethical policy measures you would take in your district to ensure growth is both economically vibrant and socially inclusive.

# 10. SCHEMES IN NEWS

## 10.1. MGNREGA (MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE ACT)

### Why in News?

The Centre has amended **Schedule-I of the MGNREGA Act**, prioritising water conservation and related works in rural blocks.

Core Objectives of the Scheme	Salient Features of the Scheme										
<ul style="list-style-type: none"> <li>• Providing <b>not &lt;100 days of unskilled manual work</b> as a guaranteed employment in a financial year to every household in rural areas as per demand.</li> <li>• Strengthening livelihood resource base of the poor</li> <li>• Proactively ensuring social inclusion</li> <li>• Strengthening Panchayati Raj Institutions</li> </ul>	<p><b>Major Amendments</b></p> <ul style="list-style-type: none"> <li>• Blocks classified as ‘Over-exploited’, ‘Critical’, ‘Semi-critical’, and ‘Safe’ will be treated as priority areas for action.</li> <li>• The District Programme Coordinator or Programme Officer must ensure that a minimum share of total project costs in these blocks is spent on water-related works as follows: <ul style="list-style-type: none"> <li>○ <b>65%</b> in <b>Over-exploited and Critical</b> rural blocks</li> <li>○ <b>40%</b> in <b>Semi-critical</b> rural blocks</li> <li>○ <b>30%</b> in <b>Safe</b> rural blocks</li> </ul> </li> <li>• <b>Categorisation of Assessment Units as per Dynamic Ground Water Resources Assessment Report (Central Ground Water Board)</b> <table border="1" data-bbox="556 952 1090 1220"> <thead> <tr> <th data-bbox="556 952 833 1028">Stage of Ground Water Extraction</th><th data-bbox="833 952 1090 1028">Category</th></tr> </thead> <tbody> <tr> <td data-bbox="556 1028 833 1079">≤ 70%</td><td data-bbox="833 1028 1090 1079">Safe</td></tr> <tr> <td data-bbox="556 1079 833 1129">&gt; 70% and ≤ 90%</td><td data-bbox="833 1079 1090 1129">Semi-Critical</td></tr> <tr> <td data-bbox="556 1129 833 1180">&gt; 90% and ≤ 100%</td><td data-bbox="833 1129 1090 1180">Critical</td></tr> <tr> <td data-bbox="556 1180 833 1220">&gt; 100%</td><td data-bbox="833 1180 1090 1220">Over Exploited</td></tr> </tbody> </table> </li> </ul> <p><b>About MGNREGA:</b></p> <ul style="list-style-type: none"> <li>• <b>Launch Year:</b> 2005</li> <li>• <b>Type:</b> Centrally Sponsored Scheme (<b>60:40 by Centre and States</b>)</li> <li>• <b>Ministry:</b> Ministry of Rural Development.</li> <li>• <b>Total Outlay:</b> ₹86,000 crore (Union Budget 2025)</li> <li>• <b>Beneficiaries:</b> All Household members aged more than 18 years and residing in rural area.</li> <li>• <b>Coverage:</b> Entire country except districts having 100 % urban populations.</li> <li>• <b>Monitoring:</b> Social Audit by the Gram Sabha</li> <li>• <b>Basis for Wage Rates:</b> <ul style="list-style-type: none"> <li>○ <b>CPI-AL (Consumer Price Index-Agriculture Labour)</b></li> <li>○ Each State/UT can provide wage over and above the wage rate notified by the Central Government.</li> </ul> </li> <li>• <b>Additional 50 days</b> of unskilled wage employment in a financial year during:- <ul style="list-style-type: none"> <li>○ <b>drought/natural calamity affected notified rural areas</b> and</li> <li>○ For <b>ST Household</b> in a forest area, provided that these households <b>have no other private property except for the land rights provided under Forest Rights Act (FRA), 2006.</b></li> </ul> </li> </ul>	Stage of Ground Water Extraction	Category	≤ 70%	Safe	> 70% and ≤ 90%	Semi-Critical	> 90% and ≤ 100%	Critical	> 100%	Over Exploited
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> 90% and ≤ 100%	Critical										
> 100%	Over Exploited										

	<ul style="list-style-type: none"> <li>○ <b>State Governments</b> may make provision for providing <b>additional days of employment</b> beyond the period guaranteed under the Act <b>from their own funds</b>.</li> <li>● Right to <b>unemployment allowance</b> and the payment is to be made in <b>15 days</b>. <ul style="list-style-type: none"> <li>○ Delay compensation at a rate of <b>0.05% of unpaid wages per day</b> for duration of delay beyond 16<sup>th</sup> day of the closure of Muster Roll.</li> </ul> </li> <li>● <b>Special Category of Workers (Vulnerable Groups) under MGNREGA</b> <ul style="list-style-type: none"> <li>○ It includes <b>Persons with disabilities</b>, Primitive Tribal Groups, Nomadic Tribal Groups, De-notified Tribes, <b>Women in special circumstances</b>, Senior citizens(&gt;65 years of age), <b>HIV positive persons</b>, Internally displaced persons &amp; Rehabilitated bonded labour</li> </ul> </li> <li>● <b>Key procedural features of MGNREGS:</b> <ul style="list-style-type: none"> <li>○ <b>Wage to material ratio</b> to be maintained at <b>60:40</b> at <b>Gram Panchayat</b> level.</li> <li>○ At least <b>1/3<sup>rd</sup> of the beneficiaries shall be women</b> who have registered and requested for work under this Act.</li> </ul> </li> <li>● <b>Other Key features:</b> <ul style="list-style-type: none"> <li>○ <b>GeoNREGA</b>: tracks creation of assets by geotagging it, at “Before”, “During” and “After” stages of the asset creation.</li> <li>○ <b>Project 'UNNATI'</b>: aims to skill MGNREGS beneficiaries so that they can move from the current partial employment to full-time employment.</li> </ul> </li> </ul> <p><b>Achievements</b></p> <ul style="list-style-type: none"> <li>● MGNREGA has become <b>the world's largest social welfare</b> programme.</li> <li>● Women's participation has risen from <b>48% in 2014 to 58% in 2025</b>.</li> </ul>
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# DAKSHA MAINS MENTORING PROGRAM 2026

(A Strategic Revision, Practice, and Enrichment Mentoring Program for Mains Examination 2026)

DATE	DURATION
 <b>15 November</b>	<b>5 Months</b>

**HIGHLIGHTS OF THE PROGRAMME**

 Highly experienced and qualified team of mentors	 Emphasis on score maximization and performance improvement
 Scheduled group sessions for strategy discussions, live practice, and peer interaction	 Personalized one-to-one sessions with mentors
 Well-structured revision and practice plan for GS Mains, Essay & Ethics	 Subject-wise strategy documents based on thorough research
 Access to Daksha Mains Practice Tests	 Continuous performance assessment, monitoring and smart interventions



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# WEEKLY FOCUS

Holistic coverage of the issue every week

ISSUE	DESCRIPTION	LEARN MORE
<b>Semiconductors: The 'New Oil' of the Digital Economy and India's Quest for Global Resilience</b>	Semiconductors, the hidden engines of modern technology, face fragile global supply chains and rising geopolitical risks. As nations compete for dominance, India is shifting from consumer to creator. This article explores India's bold push to build a self-reliant chip ecosystem and its implications for growth, security, and global standing.	
<b>India's Energy Security: Balancing Growth and Sustainability</b>	India's rapid growth and climate commitments make energy security a national priority. The article explains its significance, examines key challenges like import dependence and infrastructure gaps, reviews current initiatives, and outlines strategies to build a resilient, sustainable, and self-reliant energy future	
<b>UN@80: Reimagining Global Governance for the 21st Century</b>	As the United Nations marks its 80th year, questions arise about its relevance in today's complex world. The article traces its evolution, achievements, and shortcomings, explores the urgent need for reform, examines India's role and vision, and outlines pathways for a more inclusive and effective global governance system.	
<b>A Decade of Action: Reflecting on 10 Years of the SDGs</b>	As the world marks ten years of the Sustainable Development Goals, the article reviews global and national progress toward the 2030 Agenda. It examines achievements and setbacks, India's success stories and localization efforts, persistent challenges like financing and inequality, and outlines strategies to accelerate inclusive, climate-resilient, and accountable development.	

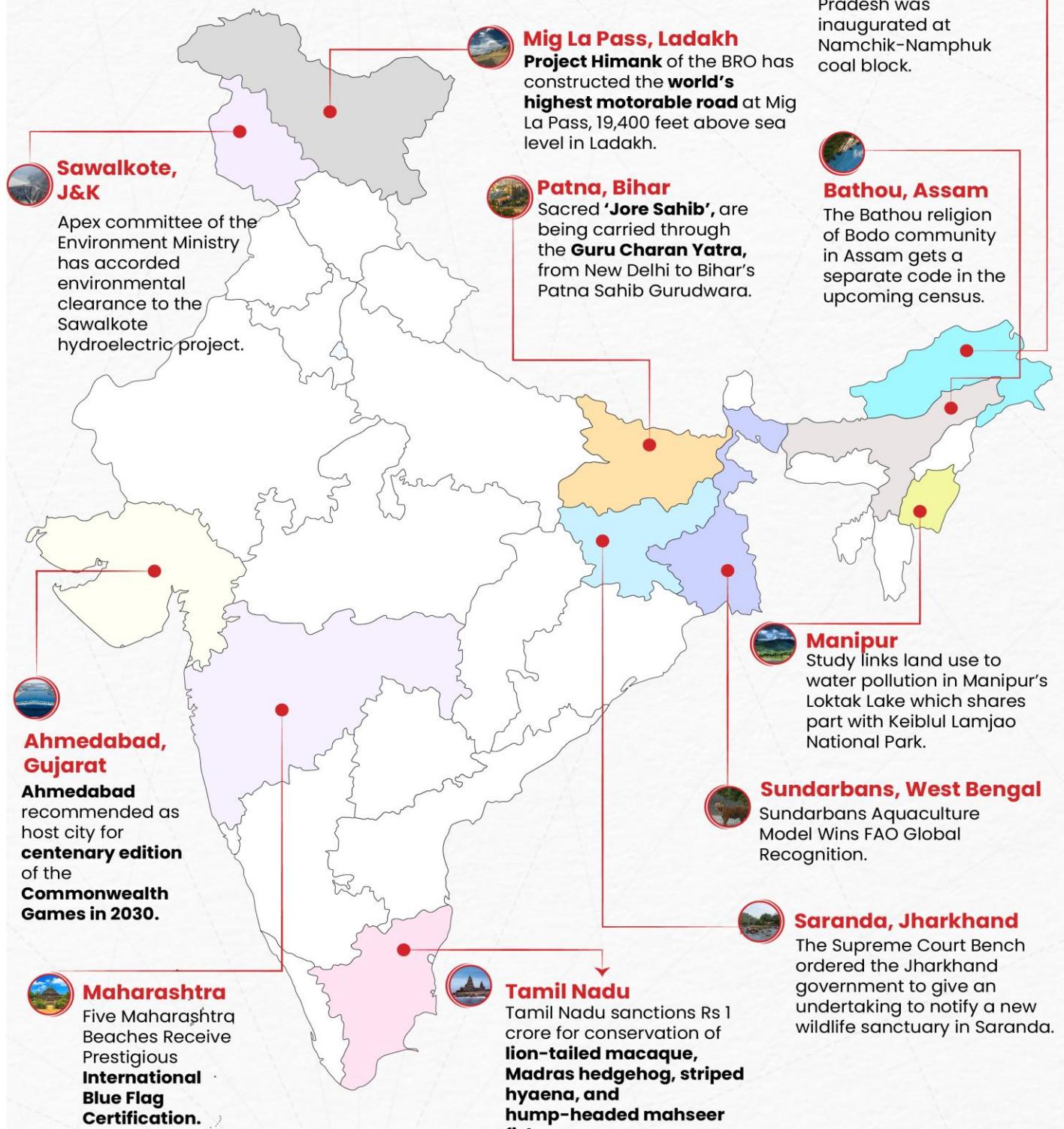
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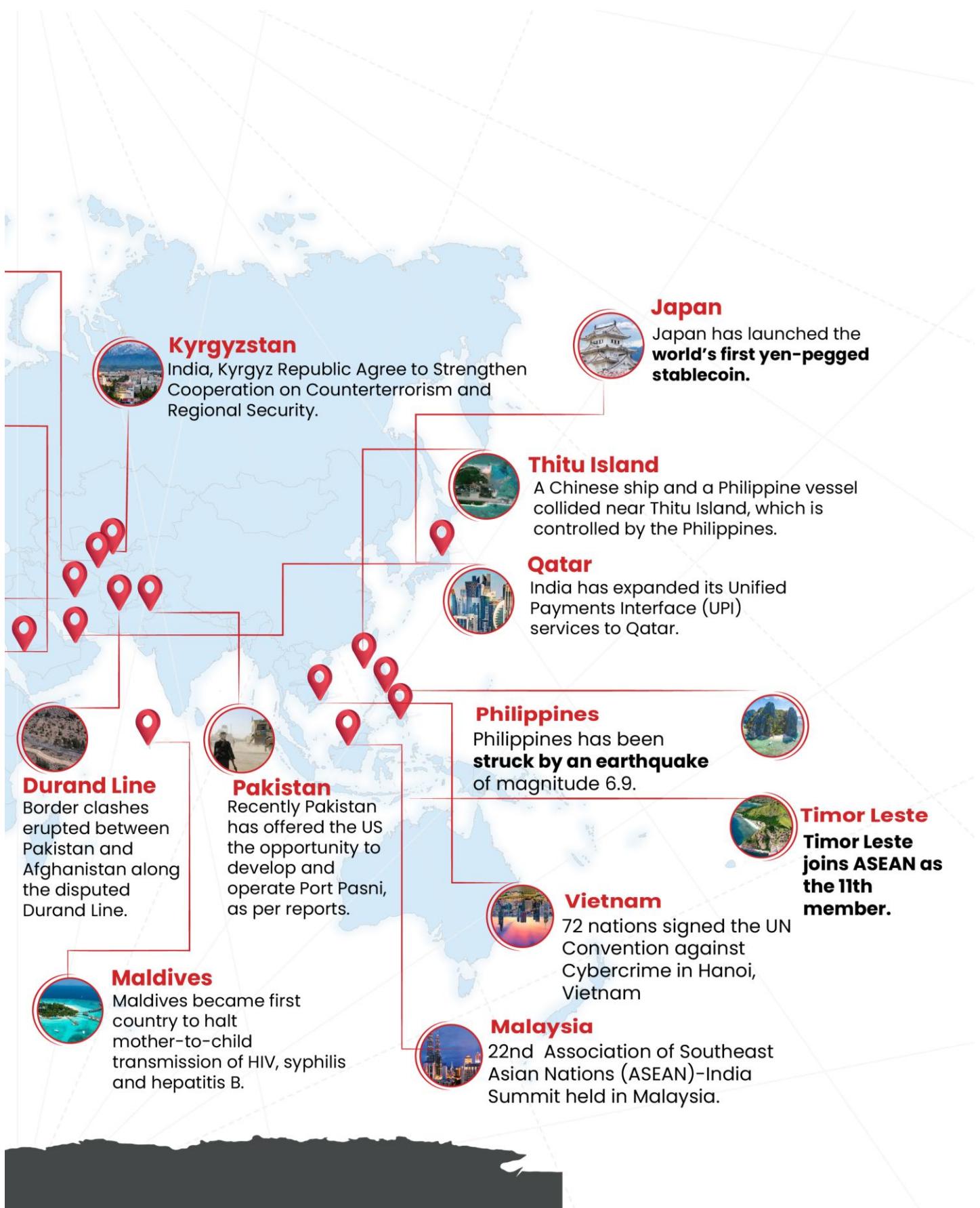
## India



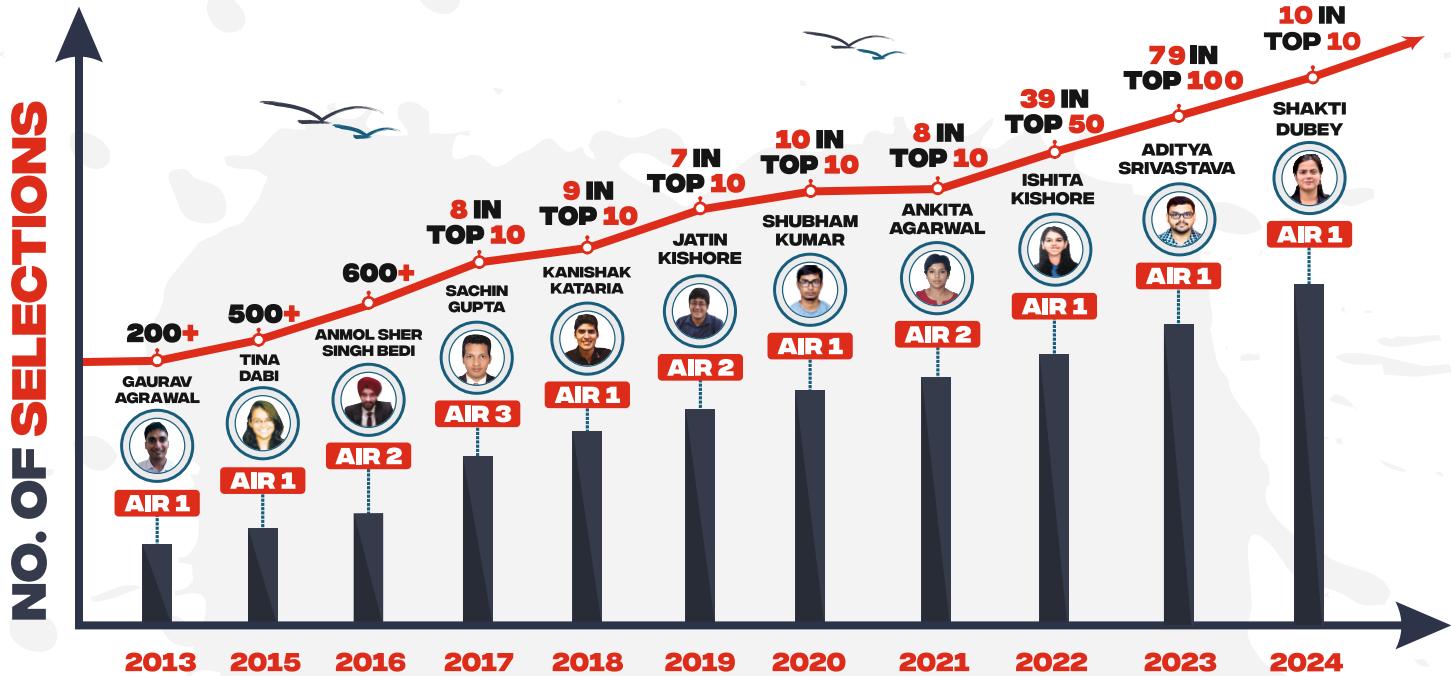
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## World





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## Foundation Course GENERAL STUDIES PRELIMS cum MAINS

2027, 2028 & 2029

**DELHI : 12 NOVEMBER, 8 AM | 25 NOVEMBER, 5 PM**

BENGALURU: 8 DEC

BHOPAL: 25 NOV

HYDERABAD: 5 NOV

JAIPUR: 21 NOV

JODHPUR: 10 NOV

LUCKNOW: 25 NOV

## फाउंडेशन कोर्स सामान्य अध्ययन 2026

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

**DELHI: 25 नवंबर, 11 AM**

**JAIPUR : 7 नवंबर**

**JODHPUR : 10 नवंबर**



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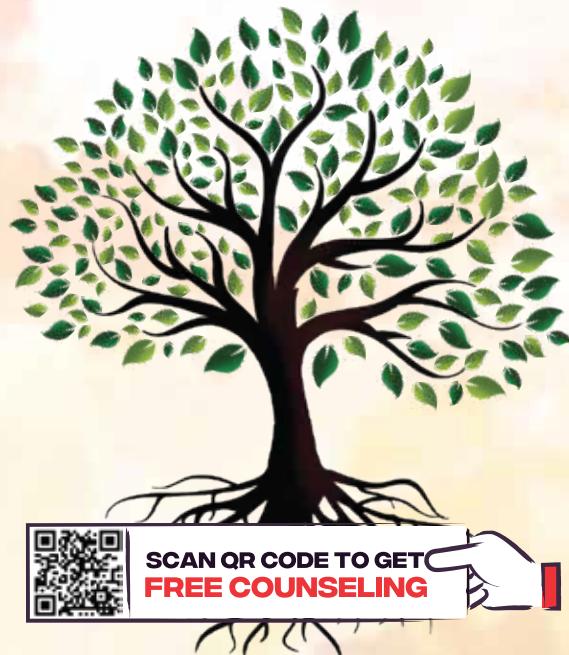
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## Foundation Course GENERAL STUDIES

PRELIMS CUM MAINS

2027, 2028 & 2029

12 NOVEMBER, 8 AM | 25 NOVEMBER, 5 PM

AHMEDABAD  
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BENGALURU  
2027  
8 DECEMBER

BHOPAL  
2027  
25 NOVEMBER

CHANDIGARH  
ADMISSION OPEN

HYDERABAD  
2027  
5 NOVEMBER

JAIPUR  
2027  
21 NOVEMBER

JODHPUR  
2027  
10 NOVEMBER

LUCKNOW  
2027  
25 NOVEMBER

PUNE  
ADMISSION OPEN

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.

 <ul style="list-style-type: none"><li>○ <b>Continuous Individual Assessment</b> Students are provided personalized, specific &amp; concrete feedback and attention through regular tutorials, mini tests and All India Test Series</li></ul>	 <ul style="list-style-type: none"><li>○ <b>Read by All, Recommended by All</b> Relevant &amp; up-to-date study material in the form of magazines compiled by a dedicated team of experts</li></ul>	 <ul style="list-style-type: none"><li>○ <b>Personal Guidance Simplified</b> Receive one-to-one guidance on a regular basis to resolve your queries &amp; stay motivated</li></ul>
 <ul style="list-style-type: none"><li>○ <b>All India Test Series</b> Opted by every 2 out of 3 selected candidates. The VisionIAS Post Test Analysis provides corrective measures and also continuous performance improvement</li></ul>	 <ul style="list-style-type: none"><li>○ <b>Never Miss a Class</b> Technological support to access recorded classes, resources, track your Absolute &amp; Relative performance through your own student portal</li></ul>	 <ul style="list-style-type: none"><li>○ <b>Preparation Uninterrupted</b> Organize all your lectures and study material effectively &amp; access them from anywhere, anytime</li></ul>



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to all Successful Candidates

**10**

in TOP 10 Selections in CSE 2024

from various programs of Vision IAS

**1**  
**AIR**

**Shakti Dubey**



**Harshita Goyal**  
GS Foundation  
Classroom Student



**Dongre Archit Parag**  
GS Foundation  
Classroom Student



**Shah Margi Chirag**



**Aakash Garg**



**Komal Punia**



**Ayushi Bansal**



**Raj Krishna Jha**



**Aditya Vikram Agarwal**



**Mayank Tripathi**

**79**  
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in TOP 100  
in CSE 2023



**Aditya Srivastava**



**Animesh Pradhan**



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