Current Affairs
(CONSOLIDATION)

JULY 2024
(PART – II)

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9th Governing Council Meeting of NITI Aayog

Why in News?

Recently, the 9th Governing Council Meeting of **NITI Aayog**, chaired by the **Prime Minister**, convened leaders from 20 states and 6 union territories to discuss the **"Viksit Bharat @2047"** theme, aiming to establish a framework for India's development as a developed nation by 2047.

What are the Key Outcomes of the Meeting?

➢ **Vision of a USD 30 Trillion Economy**: India aims to become the **world's third-largest economy by 2047**, with a **GDP** target of USD 30 trillion. This ambition highlights the country's focus on **sustained economic growth, innovation,** and **global competitiveness.**

➢ **State Visions for 2047**: The meeting encouraged **each state and district to formulate its vision for 2047**, aligning with the national vision of a developed India.

  ○ Emphasising the importance of states in achieving national goals, the Prime Minister reiterated that developed **states are crucial for a developed India.**

➢ **Zero Poverty Objective**: A significant takeaway from the meeting was the **emphasis on eradicating poverty** at an individual level. The concept of **'zero poverty'** villages was discussed, aiming for **holistic development** starting at the grassroots.

➢ **Infrastructure and Investment**: The Prime Minister stressed the **importance of infrastructure, law and order, and good governance** as key factors in attracting investments.

  ○ An **'Investment-friendly Charter'** was proposed to **encourage states to create an investor-friendly environment**, monitored through parameters fostering healthy competition among states.

➢ **Education and Skill Development**: There was a **strong emphasis on skilling the youth to make them employment-ready**, leveraging India's demographic dividend as a global skilled resource hub.

➢ **Agricultural Productivity and Natural Farming**: Enhancing productivity, **diversifying agriculture, and promoting natural farming practices** were discussed as means to improve soil fertility, reduce costs, and access global markets.

➢ **Ease of Living**: Recommendations from the **3rd National Conference of Chief Secretaries were considered**, focusing on **5 key themes such as drinking water, electricity, health, schooling, and land/property management.**

  ○ The Prime Minister encouraged States to **initiate Demographic Management Plans** to address the issues of population ageing in the future.

Note:

- ❍ The Prime Minister asked the States to **take up capacity building of government officials** at all levels and encouraged them to collaborate with the **Capacity Building Commission** for the same.

- ❍ The Prime Minister encouraged the **creation of River Grids** at the State level for the effective utilisation of water resources.

➢ **Cybersecurity** and **AI in Governance**: The integration of technology in governance, **addressing cybersecurity challenges, and leveraging AI** for efficient governance were highlighted as critical areas for future readiness.

Note:

➢ Under the overarching **theme of 'Ease of Living'**, recommendations were made during the **3rd National Conference of Chief Secretaries** on the following **five key themes:**
  - ❍ **Drinking Water:** Access, Quantity, and Quality
  - ❍ **Electricity:** Quality, Efficiency, and Reliability
  - ❍ **Health:** Accessibility, Affordability, and Quality of Care
  - ❍ **Schooling:** Access and Quality
  - ❍ **Land and Property:** Accessibility, Digitization, Registration, and Mutation

What is the Governing Council of NITI Aayog?

➢ **About:**
  - ❍ The **Governing Council** is the premier body tasked with **evolving a shared vision of national priorities** and strategies, with the active involvement of States, in **shaping the development narrative.**
  - ❍ The Governing Council, which embodies the **objectives of cooperative federalism,** presents a platform to discuss inter-sectoral, inter-departmental and federal issues to accelerate the implementation of the national development agenda.

➢ **Members:**
  - ❍ Prime Minister of India (Chairperson)
  - ❍ Chief Ministers(States and Union Territories with legislature)
  - ❍ Lt Governors of other UTs
  - ❍ Ex-Officio Members

- ❍ Vice Chairman, NITI Aayog
- ❍ Full-Time Members, NITI Aayog
- ❍ Special Invitees

➢ **Functions:**
  - ❍ The **Governing Council Secretariat (GCS)** coordinates the meetings of the Governing Council.
    - • It also **coordinates the activities of all the Verticals**, Divisions and Units of NITI Aayog.
  - ❍ GCS acts as the nodal division for coordinating matters related to the Annual Report of NITI Aayog for circulation in the Parliament.
  - ❍ The Division also **handles Parliament Questions**, **Standing Committee** matters, **RTI** queries, **CPGRAMS** grievances, pertaining to GCS.

What is NITI Aayog?

➢ **About:**
  - ❍ The **Planning Commission** was replaced by a new institution called **NITI Aayog** on 1st January 2015 with an emphasis on **a 'Bottom–Up' approach** to envisage the **vision of Maximum Governance and minimum Government,** echoing the spirit of **'Cooperative Federalism'.**
  - ❍ It has two Hubs:
    - • **Team India Hub** acts as an interface between States and the Centre.
    - • **Knowledge and Innovation Hub** builds the think-tank acumen of NITI Aayog.

➢ **Initiatives:**
  - ❍ **SDG India Index**
  - ❍ **Composite Water Management Index**
  - ❍ **Atal Innovation Mission**
  - ❍ **SATH Project.**
  - ❍ **Aspirational District Programme**
  - ❍ **School Education Quality Index**
  - ❍ **District Hospital Index**
  - ❍ **Health Index**
  - ❍ **Agriculture Marketing And Farmer-Friendly Reform Index**
  - ❍ **India Innovation Index**
  - ❍ **Women Transforming India Awards**
  - ❍ **Good Governance Index**

Note:

NITI Aayog
(National Institution for Transforming India)

HISTORY- PLANNING COMMISSION

Set up in 1950 to direct investment activity

Replaced by NITI Aayog on January 1, 2015

Composition of #NITIaayog

Chairperson
Prime Minister

Governing Council
CMs (States) and Lt Governors (UTs)

Regional Councils
Formed on need-basis, comprising CMs and Lt Govs of the region

Members
Full-time basis

Part-time Members
Max 2, rotational, from relevant institutions

Ex-officio Members
Max 4 from Council of Ministers, nominated by PM

Special Inviters
Experts, specialists, practitioners with domain knowledge

Chief Executive Officer
Appointed by PM for fixed tenure (Secy rank)

Secretariat
As deemed necessary

Major Initiatives

- SDG India Index
- Atal Innovation Mission
- e-AMRIT Portal (electric vehicles)
- Good Governance Index
- India Innovation Index
- Aspirational District Programme
- 'Methanol Economy' programme

OBJECTIVES

- Foster **cooperative federalism**
- Develop mechanisms to **formulate credible plans (village level)**
- Interests of **national security** in economic strategy and policy
- Special **attention to weaker sections**
- Provide advice and encouragement to partnerships between **key stakeholders, national-international Think Tanks, research institutions**
- Create **knowledge, innovation and entrepreneurial support system**
- **Platform for** inter-sectoral and inter-departmental **issues resolution**
- Maintain **state-of-the-art Resource Centre**

NITI Aayog vs Planning Commission

NITI Aayog	Planning Commission
Advisory Think Tank	Extra-constitutional body
Wider expertise	Limited expertise
Secretaries (CEO) appointed by PM	Secretaries appointed by usual process
Bottom-up approach	Top-Down approach
No Mandate to impose policies	Imposed policies on states
No power to allocate funds	Allocated funds to ministries/state govts

Issues

- **No powers** in granting **discretionary funds** to states
- Only an **advisory body**
- **No role in influencing private or public** investment
- **Politicisation of the organisation**
- **Lacks the requisite power** to bring positive change

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Karnataka High Court Quashes POCSO Case

Why in News?

The **Karnataka High Court** has recently quashed proceedings under the **Protection of Children from Sexual Offences (POCSO) Act, 2012** against a 23-year-old man accused of raping a minor, who he subsequently married.

➢ This decision includes a caveat allowing the **criminal proceedings to be revived if the man abandons his wife and child in the future.** This condition is aimed at ensuring the welfare and protection of the mother and child.

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How did the Court Justify the Quashing of the Case?

➢ **Accused's Counsel:** Argued that the accused and the victim were in love and the crime was registered after the parents agreed to the marriage. Highlighted that both families had come forward to support the marriage.

➢ **State's Counsel:** Argued that the case should not be quashed due to the heinous nature of the offence, which is punishable by ten years in prison. Emphasised the importance of taking the matter to trial.

➢ **Court's Decision:**
  ○ **Protection of the Victim and Child:** The court emphasised that releasing the petitioner without resolving the issue would leave the mother and child vulnerable, facing **societal ignominy and potential jeopardy.**
  ○ **Victim's Potential Hostility:** The court noted that the victim would likely turn **hostile**, making the conviction of the petitioner highly unlikely.
  ○ Justice highlighted the importance of considering the ground realities, stating that prolonging the criminal trial would cause undue agony and overshadow any eventual acquittal.

What is the Protection of Children from Sexual Offences (POCSO) Act, 2012?

➢ **About:** The Protection of Children from Sexual Offences Act, 2012 (POCSO Act, 2012) was enacted to protect children from sexual abuse, filling a significant legislative gap in India despite the **United Nations'** adoption of **the Convention on the Rights of the Child in 1989.**
  ○ This Act imposes severe penalties, including **up to 20 years of imprisonment** and the death penalty for aggravated penetrative sexual assault.

➢ **Need:** Before the POCSO Act, 2012, India's only child protection legislation was the **Goa Children's Act, 2003.** The **Indian Penal Code (IPC)** Sections 375, 354, **and 377** were inadequate as they **did not cover male children or provide clear definitions of 'modesty' and 'unnatural offence'.**
  ○ The rising cases of child sexual abuse necessitated a specific law, leading to the enforcement of the POCSO Act, driven by the **Ministry of Women and Child Development.**

➢ **General principles:**
  ○ **Right to be Treated with Dignity:** Reflecting the importance of treating children with compassion and respect.
  ○ **Right to Life and Survival:** Ensuring children are protected as provided by **Article 21** and raised in a secure environment.
  ○ **Right Against Discrimination:** Fair and just procedures without discrimination based on sex, religion, or culture.
  ○ **Right to Preventive Measures:** Training children to recognise and prevent abuse.
  ○ **Right to be Informed:** Keeping the child informed about legal proceedings.
  ○ **Right to Privacy:** Maintaining confidentiality of the proceedings to protect the **child's privacy.**

➢ **Trial of Offences:** Special courts can take cognisance without the accused being committed to trial. Efforts must be made to prevent the child from being exposed to the accused.
  ○ **Evidence must be recorded within 30 days,** and trials should be completed within a year of taking cognisance.
  ○ Emphasises the importance of medical examination, but notes that physical injuries may not always be present.
  ○ Section 42A ensures that POCSO **provisions override any conflicting laws.**

➢ **Shortcomings of the POCSO Act:**
  ○ **Application of Last Seen Theory:** The Supreme Court in *Anjan Kumar Sarma v. State of Assam, 2017* ruled that this theory is weak without corroborative evidence, risking wrongful convictions.
    • This theory states that if someone is the **last person seen with the victim before a crime** and cannot provide a credible explanation, there is a strong **presumption that they are responsible for the crime.**
  ○ **Consensual Sexual Activities:** The Act prosecutes a **non-minor partner in consensual sex with a minor,** as minors' consent is deemed irrelevant.
  ○ **False Complaints by Children**: Section 22 exempts children from punishment for false complaints, leading to potential misuse.
  ○ **Two-Finger Test:** Despite being banned in 2012, this test is still conducted, violating the victim's privacy and dignity, as noted in *Lillu @ Rajesh v. State of Haryana, 2013.*
    • The **Supreme Court,** in 2022 reaffirmed that **conducting invasive 'two-finger' or 'three-finger' vaginal tests on rape or sexual assault survivors is considered misconduct.** The tests are deemed regressive and are used to determine if the survivor was "habituated" to sexual intercourse.
  ○ **Unprepared Investigation Machinery:** The Bombay High Court in the case of the *Addl. Sessions Judge, Hoingoli and Ors. v. Bhawat and Ors., 2017* acquitted the accused due to unsealed evidence, highlighting faulty investigation procedures.

Note:

➤ **Punishment for Offences:**

Punishment for offences covered in the POCSO Act, 2012

Punishment for the above offences is specified in the table:

Name of the offence	Relevant provision of the POCSO Act	Punishment
Penetrative sexual assault on a child of 16 to 18 years of age	Section 4	Minimum imprisonment of 10 years which may extend to imprisonment for life plus fine
Penetrative sexual assault on a child below 16 years of age	Section 4	Minimum imprisonment of 20 years which may extend to imprisonment for the remainder of natural life plus fine
Aggravated penetrative sexual assault	Section 6	Minimum rigorous imprisonment of 20 years which may extend to imprisonment for the remainder of natural life plus fine or death
Sexual assault	Section 8	Imprisonment of 3 to 5 years plus fine
Aggravated sexual assault	Section 10	Imprisonment of 5 to 7 years plus fine
Sexual harassment	Section 12	Imprisonment which can extend upto 3 years plus a fine.
Use of a child for pornography	Section 14(1)	First conviction- imprisonment extending up to 5 years second or further convictions- imprisonment extending up to 7 years plus fine
Use of a child for pornography while committing an offence under Section 3	Section 14(2)	Minimum imprisonment of 10 years extending up to imprisonment for life plus fine
Use of a child for pornography while committing an offence under Section 5	Section 14(3)	Rigorous imprisonment for life plus fine
Use of a child for pornographic purposes while committing an offence under Section 7	Section 14(4)	Imprisonment of 6 to 8 years plus fine
Use of a child for pornographic purposes while committing an offence under Section 9.	Section 14(5)	Imprisonment of 8 to 10 years plus fine
Offence of storing pornographic material involving a child for commercial purposes	Section 15	Imprisonment extending upto 3 years or fine or both

Note:

Significant Judicial Pronouncements on the POCSO Act, 2012

➤ *Bijoy v. The State of West Bengal, 2017:* In this case, the Calcutta High Court issued **directives to protect the dignity of child victims of sexual assault.**

  ❍ Police must register FIRs under Section 19 of the POCSO Act and inform victims and their parents about legal aid rights.

  ❍ **Immediate medical examination of the child** post-First Information Report (FIR) registration as per Section 27 of the POCSO Act.

  ❍ Victims identified as **'children in need of care and protection'** under the Juvenile Justice Act must be forwarded to the Child Welfare Committee (CWC). **Victim identities are to be kept confidential.**

  ❍ Compensation can be awarded at the interim stage by the Special Court, independent of the convict's compensation post-conviction, aimed at relief and rehabilitation of the child victim.

➤ *Vishnu Kumar v. State of Chhattisgarh, 2017:* The Chhattisgarh High Court highlighted the need for compliance with Section 36 of the POCSO Act. Guidelines included:

  ❍ Ensuring child **witnesses are comfortable** during proceedings, possibly through in-camera sessions and engaging them personally.

  ❍ Flexibility in **evidence rules to prioritise truth over strict adherence to procedures**. Recording child statements should allow for breaks to ensure comfort and accuracy.

➤ *Dinesh Kumar Maurya v. State of U.P. ,2016:* The Allahabad High Court set aside a conviction due to lack of medical evidence. Important observations included:

  ❍ **Injuries are not necessary for proving sexual assault**; victim testimony is crucial.

  ❍ Courts must consider the potential for false allegations due to external influences on minors.

➤ *Sunderlal v. The State of M.P., 2017:* The Madhya Pradesh High Court addressed a petition for terminating a minor's pregnancy. Key directives:

  ❍ **Consent from the parent suffices for a minor; the minor's consent is not required.** The right to terminate pregnancy is derived from Article 21 of the Constitution.

  ● A committee of medical practitioners must evaluate the termination request. Post-termination, the Deoxyribonucleic Acid (DNA)Tests of the foetus must be preserved according to legal procedures.

ADCs Raise Demand to Pass 125ᵗʰ Constitutional Amendment Bill

Why in News?

Recently, the Chief Executive Magistrates (CEMs) of 10 **Autonomous District Councils (ADCs)** from northeastern states of **Assam, Meghalaya and Mizoram and Tripura** met the Union Home Minister, putting forward the demand of passing of the 125ᵗʰ Constitutional Amendment Bill.

➤ In this context, the Union government decided to form a committee headed by the **Minister of State for Home Affairs** to resolve the issues related to the Bill.

What are the Proposed Amendments in the 125th Constitutional Amendment Bill?

➤ The Bill aims to grant more **financial, executive and administrative powers** to tribal autonomous councils under the Sixth Schedule of the Constitution.

➤ Village and Municipal Councils:

  ❍ The proposal includes the creation of Village and Municipal Councils alongside the existing District and Regional Councils.

  ❍ **Village Councils** will be set up for individual villages or clusters of villages in rural areas, while Municipal Councils will be established in urban areas within each district.

Note:

➢ **District Councils** will have the authority to enact laws regarding:

  ❍ The number and composition of Village and Municipal Councils.

  ❍ The delimitation of constituencies for elections to these councils.

  ❍ The powers and functions of the Village and Municipal Councils.

➢ **Rules for Devolution of Powers:** The **Governor** will have the authority to create rules for the devolution of powers and responsibilities to Village and Municipal Councils.

  ❍ These rules may cover:

    • The preparation of economic development plans.

    • The implementation of land reforms.

    • Urban and town planning.

    • Regulation of land use, among other responsibilities.

  ❍ The Bill proposes that the Governor may also establish rules for the disqualification of council members based on defection.

➢ **State Finance Commission:** The Bill provides for the appointment of a **Finance Commission** in these states to assess the financial status of **District, Village, and Municipal Councils.** The Commission will make recommendations on:

  ❍ The distribution of taxes between states and District Councils.

  ❍ Grants-in-aid to District, Village, and Municipal Councils from the **state's Consolidated Fund**.

➢ **Elections to Councils:** Elections for District Councils, Regional Councils, Village Councils, and Municipal Councils will be overseen by the **State Election Commission**, which is appointed by the Governor for these four states.

➢ Current Status of the Bill:

  ❍ The Constitution (125th Amendment) Bill 2019, was **introduced in the Rajya Sabha** and was subsequently referred to the Departmental-Related Standing Committee on Home Affairs.

  ❍ The **committee raised several concerns about the Bill in its 2020 report,** and it has remained **pending since then**.

What is the Sixth Schedule of the Constitution?

➢ **Scope**: Provides for governance of **tribal areas in Assam, Meghalaya, Tripura, and Mizoram** to protect tribal rights.

➢ **Constitutional Basis**: **Article 244 (2)** (provisions of the Sixth Schedule shall apply to the administration of the tribal areas in the States of Assam Meghalaya, Tripura and Mizoram) **and Article 275 (1)** (it guarantees grants-in-aid from the Consolidated Fund of India).

➢ **Autonomy:** Provides for governance through **Autonomous District Councils (ADCs)**, which can legislate on land, forest, cultivation, inheritance, customs, and taxes.

➢ **Governance**: ADCs function like miniature states with **legislative, executive, and judicial powers.**

What are Autonomous District Councils (ADCs)?

➢ **About:** ADCs are constitutional devices created under the **Sixth Schedule** of the **Constitution (Article 244)** in Northeast India. Their purpose is to protect cultural identities and preservation of natural resources of the tribal people.

  ❍ **Governor's Authority**: Can organise, reorganise, and modify autonomous districts, including their areas and boundaries.

  ❍ **Tribal Distribution**: If multiple tribes are present, the governor can create autonomous regions within the district.

➢ **Composition:**

  ❍ **District Council**: Each district has a council of 30 members (4 nominated by the governor, 26 elected), serving a five-year term.

  ❍ **Regional Council**: Each autonomous region has its own council.

  ❍ **Administration**: District and regional councils manage their jurisdictions and may establish village councils or courts for tribal disputes. Appeals are heard as specified by the Governor.

➢ As of now, **10 autonomous councils exist** - three each in Assam, Meghalaya, and Mizoram, and one in Tripura.

Note:

SCHEDULES IN THE INDIAN CONSTITUTION

Originally (1949), the Constitution had 8 schedules. Now, it comprises 12 Schedules; various amendments carried out since 1951 have added 4 Schedules (9th, 10th, 11th and 12th).

First Schedule
- Articles: 1 & 4
- States and Union Territories with their territorial jurisdiction

Second Schedule
- Articles: 59, 65, 75, 97, 125, 148, 158, 164, 186 & 221
- Emoluments, allowances and privileges of various constitutional posts (President, Governor, Judges of the SC & High Courts, CAG etc.)

Third Schedule
- Articles: 75, 84, 99, 124, 146, 173, 188 & 219
- Forms of oaths or affirmations (Union ministers, MPs, Judges of the SC & High Courts, CAG etc.)

Fourth Schedule
- Articles: 4 & 80
- Allocation of seats in the Rajya Sabha

Fifth Schedule
- Article: 244
- Administration and Control of scheduled areas and scheduled tribes

Sixth Schedule
- Articles: 244 & 275
- Administration of tribal areas in the states of Assam, Meghalaya, Tripura & Mizoram

Seventh Schedule
- Article: 246
- Union List (98 subjects), State List (59 subjects), & Concurrent List (52 subjects)

Eighth Schedule
- Articles: 344 & 351
- 22 recognised languages by the Constitution

Ninth Schedule (1st Amendment Act, 1951)
- Article: 31-B
- Validation of certain acts and regulations

Tenth Schedule (52nd Amendment Act, 1985)
- Articles: 102 & 191
- Anti-defection law

Eleventh Schedule (73rd Amendment Act, 1992)
- Article: 243-G
- Powers, authority and responsibilities of Panchayats

Twelfth Schedule (74th Amendment Act, 1992)
- Article: 243-W
- Powers, authority and responsibilities of Municipalities

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Read more: Indepth- 6th Schedule & ILP

Panchamasali Lingayats' Quota Demand

Why in News?

Recently, the **Panchamasali Lingayats**, a sub-caste within **Karnataka's dominant Lingayat community**, have been demanding **inclusion in Category 2A** of the **Other Backward Classes (OBC).**

➢ This move **aims to secure a 15% quota in government jobs** and educational admissions, **in contrast to the current 5% quota** under Category 3B of Karnataka's OBC quota matrix.

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What is the Panchamasali Lingayats' Quota Demand?

➢ **Panchamasali Lingayats:** The Lingayats, officially classified as the **Hindu sub-caste 'Veerashaiva Lingayats,'** are followers of the **12th-century philosopher-saint Basavanna.**

   ○ Basavanna initiated a **radical anti-caste movement**, advocating for a personal, affective relationship with God, specifically **Lord Shiva,** rejecting **orthodox Hindu practices.**

   ○ The Lingayat community **consists of various sub-castes**, with the **agriculturalist Panchamasalis** being the largest, making up **nearly 70% of the Lingayat population** and approximately 14% of Karnataka's total population.

➢ **Current OBC Quota Categories in Karnataka:**

   ○ The demand for **inclusion in Category 2A emerged prominently in 2020**.

   ○ **Karnataka's 32% OBC reservation** in government jobs and educational institutions is **divided among five categories.**

   ○ The Category 2A, which the Panchamasalis seek to join, includes 102 castes.

      ● The **complex categorization aims to prevent dominant OBC groups** from **monopolising the quota benefits**, ensuring equitable distribution based on relative marginalisation.

Table 1: Karnataka's current quota matrix

CATEGORY		QUOTA
Other Backward Classes (OBC)		32
Category 1	Backward Castes	4
Category 2A	Other Backward Classes	15
Category 2B	Muslims	4
Category 3A	Vokkaliga, etc.	4
Category 3B	Lingayat, etc.	5
Scheduled Castes (SC)		15
Scheduled Tribes (ST)		3
Economically Weaker Sections (EWS)		10
TOTAL RESERVATIONS		60

➢ **Earlier Steps By Government:**

   ○ The previous state government attempted to placate the Panchamasalis by **reallocating the 4% Muslim quota under Category 2B to the Vokkaligas and Lingayats**, creating new Categories 2C and 2D.

   ○ This **increased the Lingayat quota from 5% to 7% and the Vokkaliga quota from 4% to 6%**.

      ● However, the Panchamasalis insisted on inclusion in Category 2A, and the reallocation faced legal challenges.

Note:

➢ **Current Situation and Government's Stance:**
  ○ The **government has been awaiting a legal resolution from the** <u>Supreme Court</u>. The findings of the Karnataka Social, Economic, and Caste Survey, expected to impact future quota plans, are also pending.
  ○ The state government **might consider including all Lingayats in the** <u>central OBC list</u> **as a balancing act.**
    ● **Currently, only 16 Lingayat sub-castes who** are considered **"very backward" are provided reservations** under the OBC quota for central government jobs and college administrations.

Reservation for Economically Weaker Section

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Economically Weaker Section (EWS):
○ People in the **Unreserved** category having **annual income < 8 LPA**
○ **Owning property:** <5 acres (agricultural land); <200 m² (residential land)

EWS Quota:
○ Based on the recommendations of **S.R. Sinho Commission (2010)**
○ Introduced under the **103ʳᵈ Constitutional Amendment (2019) inserting Articles 15 (6) and 16 (6)**
○ Provides **reservation of 10% to EWS** in jobs and admissions in educational institutions
○ Both **Centre and States** can provide reservation to the EWS

Supreme Court's Stand on EWS:
○ SC **upheld the validity of 103ʳᵈ Amendment**
○ Majority view – EWS quota **doesn't violate Basic Structure** of the Constitution
○ Minority view – **Excludes poorest of the poor** among SCs, STs and OBCs

Caste-based Reservation in India:
○ **Constitutional Provisions:**
  ▪ Govt. Ed. Institutions - Article 15 – (4), (5), and (6)
  ▪ Govt. Jobs – Article 16 – (4) and (6)
  ▪ Legislatures (State/Union) – Article 334
○ **OBC Reservation** - introduced in **Mandal Commission Report (1991)**
○ Concept of **Creamy layer** exists only in OBC reservation (and not in SC/ST)
○ **Cap** on caste-based reservation – **50%** (in **Indra Sawhney case 1992**)
○ First major SC verdict on Reservation - **Champakam Dorairajan case 1951**
  ▪ It led to the **First Amendment in the Constitution** which added **Clause (4)** to Article 15

RSS: A Non-Political Organisation

Why in News?

Recently, the Indian government officially **lifted a ban** that prevented public servants from participating in the activities of the **Rashtriya Swayamsevak Sangh (RSS)**.

➢ This decision, issued by the **Department of Personnel and Training (DoPT)**, removed references to the RSS from official memorandums dating back to 1966, 1970, and 1980.

Note:
➢ This circular is **only for central government employees**.
➢ State governments have their own Conduct Rules for their employees, and issue such instructions from time to time.

What does the Rules Say on Government Employees Joining RSS?

➢ **DoPT's Directive:**
  ○ On 9ᵗʰ July 2024, the **DoPT** announced the **removal of references to the RSS** from **Official Memorandums (OM) issued in 1966, 1970, and 1980**.

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- The RSS is **no longer considered a "political" organisation**, allowing central government employees to participate in its activities without penalties under **Rule 5(1) of the Conduct Rules.**
  - However, this reclassification **does not apply to the Jamaat-e-Islami**, which remains a political organisation, prohibiting government officials from engaging in its activities.
  - **Rule 5 of the Central Civil Services (Conduct) Rules, 1964** prohibits government servants from being associated with political parties or engaging in political activities.

➤ **Official Memorandums (OM) of 1966, 1970, and 1980:**
  - **OM of 1966:** On **30th November 1966**, the **Ministry of Home Affairs (MHA)** issued a circular clarifying its stance on government employees' involvement with the RSS and Jamaat-e-Islami, labelling participation in these organisations as contrary to government policy.
    - The circular referenced **Rule 5 of the Central Civil Services (Conduct) Rules, 1964** and stated that those involved with these groups could face **disciplinary action.**
    - A similar rule is present in the **All India Services (Conduct) Rules, 1968**, applicable to **IAS, IPS, and Indian Forest Service officers**.
  - **OM of 1970:** On 25th July 1970, the MHA stressed that government employees should face disciplinary action for violating the instructions issued on 30th November 1966.
    - During the Emergency (1975 to 1977) government issued directives for action against members of various groups, including the **RSS, Jamaat-e-Islami, Ananda Marg**, and **CPI-ML**, whose activities were prohibited at that time.
  - **OM of 1980:** On 28th October 1980, government issued a directive emphasising the **importance of maintaining a secular perspective among government employees** and highlighted the critical need to **eliminate communal sentiments** and biases.

➤ **Position Before 1966:**
  - Prior to 1966, government employees in India were governed by the **Government Servants'** Conduct Rules of 1949, which **explicitly prohibited participation in political activities.**
  - This prohibition was reiterated in **Rule 23 of the 1949 rules**, aligning with **Rule 5 of the Central Civil Services (Conduct) Rules, 1964**, and the **All India Services (Conduct) Rules, 1968**.

➤ **Penalty for Violations of Rules:**
  - Violations of these rules (**Rule 5 of the Central Civil Services (Conduct) Rules, 1964**, and the **All India Services (Conduct) Rules, 1968**) can lead to serious consequences, including **dismissal from service**.
  - Both rules state that if there's any uncertainty about a party's political involvement or an activity's compliance, **the government's decision is final.**

What is Rashtriya Swayamsevak Sangh (RSS)?

➤ **About:**
  - The Rashtriya Swayamsevak Sangh (RSS) is a **Hindu nationalist volunteer organisation** founded in **1925** in **Nagpur** by Dr. K.B. Hedgewar in response to perceived threats to Hindu culture and society, particularly during British colonial rule.
  - It aims to **promote the idea of Hindutva**, which emphasises Hindu cultural and national identity.

➤ **Pre-Independence Era:**
  - The organization played a significant role in social and cultural mobilisation among Hindus. It focused on community service, education, and the promotion of Hindu values.

➤ **Post-Independence**:
  - After India's independence in 1947, the RSS faced scrutiny, especially after the **assassination of Mahatma Gandhi** by **Nathuram Godse** in 1948. The organisation was banned for a short period but was later reinstated.

➤ **Ideology:**
  - The central ideology of the RSS, articulated by Vinayak Damodar Savarkar, promotes the idea that India is fundamentally a **Hindu nation.**
  - The RSS emphasises the **importance of Indian culture and heritage**, aiming to unite people under a common national identity.

Note:

○ The organization engages in various **social service activities,** including education, health care, and disaster relief, promoting the idea of "Seva" (service) among its members.

➤ **Contribution to Freedom Struggle:**
   ○ RSS **did not** participate directly in the Indian independence movement, it contributed to the socio-political awakening of Hindus.

➤ **History of Ban of RSS:**
   ○ **1948:** Banned after Gandhi's assassination; lifted in 1949 after pledging loyalty to the Constitution.
   ○ **1966:** Government employees banned from joining RSS, reiterated in 1970 and 1980.
   ○ **1975-1977:** Banned during Indira Gandhi's Emergency; lifted in 1977.
   ○ **1992:** Banned post-Babri Masjid demolition, lifted in 1993 after a commission deemed the ban unjustified.

➤ **Structure and Functioning:**
   ○ The RSS operates through a network of **shakhas (branches)** across India and abroad, focusing on physical, intellectual, and cultural training.
   ○ It has inspired many other organizations, including the **Vishva Hindu Parishad (VHP), Bajrang Dal,** and **Akhil Bharatiya Vidyarthi Parishad (ABVP)**.

➤ **Political Influence:** It is considered the ideological **parent of the Bharatiya Janata Party (BJP)**, which has been a major political force in India since the 1990s.

Jamaat-e-Islami

➤ It is a socio-religious and political organization that was founded in **1941** in British India by **Abul A'la Maududi**.

➤ It aims to **promote Islamic values** and implement Islamic principles in society and governance.

➤ It advocates for the establishment **of an Islamic state governed by Sharia law.**

➤ The Government of India officially banned Jamaat-e-Islami Jammu and Kashmir in March 2019 under the **Unlawful Activities (Prevention) Act (UAPA).**

Ananda Marg

➤ It was founded by **Prabhat Ranjan Sarkar** in **1955,** is a **socio-spiritual organisation** known for its **Progressive Utilisation Theory (Prout).**
   ○ **Prout** is a socioeconomic alternative model that promotes the **welfare and development of every person, physically, mentally, and spiritually.**

➤ It gained popularity in the 1960s, leading to conflicts with the West Bengal government. Key events include the 1975 assassination of railway minister L N Mishra, for which four members were convicted, and Anandamurti's 1971 arrest for allegedly ordering a disciple's murder.

➤ **It was banned during the Emergency (1975-1977).**

Demand for Bhil Pradesh

Why in News?

Recently, the **demand for a separate Bhil state, "Bhil Pradesh,"** has been gaining momentum in **Rajasthan and neighbouring states.**

Who are Bhils and What are their Demands?

➤ **About Bhils:**
   ○ Bhils are considered as **one of the oldest tribe in India and** identified as one of the **Dravidian racial tribe of Western India** belonging to **Austroloid group of tribes.**
     ● They are a **cross section of great Munda race and a wild tribe of India** and speak a language **(Bhili) of Dravidian origin.**
     ● Once they were the ruler in parts of Rajasthan, Gujarat, Malwa, Madhya Pradesh and Bihar.
     ● As per Census 2011, there are **1.7 crore Bhils across the country.**
       ■ Their largest concentration is in **Madhya Pradesh** at about 60 lakh, followed by 42 lakh in **Gujarat**, 41 lakh in **Rajasthan** and 26 lakh in **Maharashtra.**
     ● **Bhils are Hindus by religion** and appease deities of forest and evil spirits beside pujas of Lord Shiva and Durga.
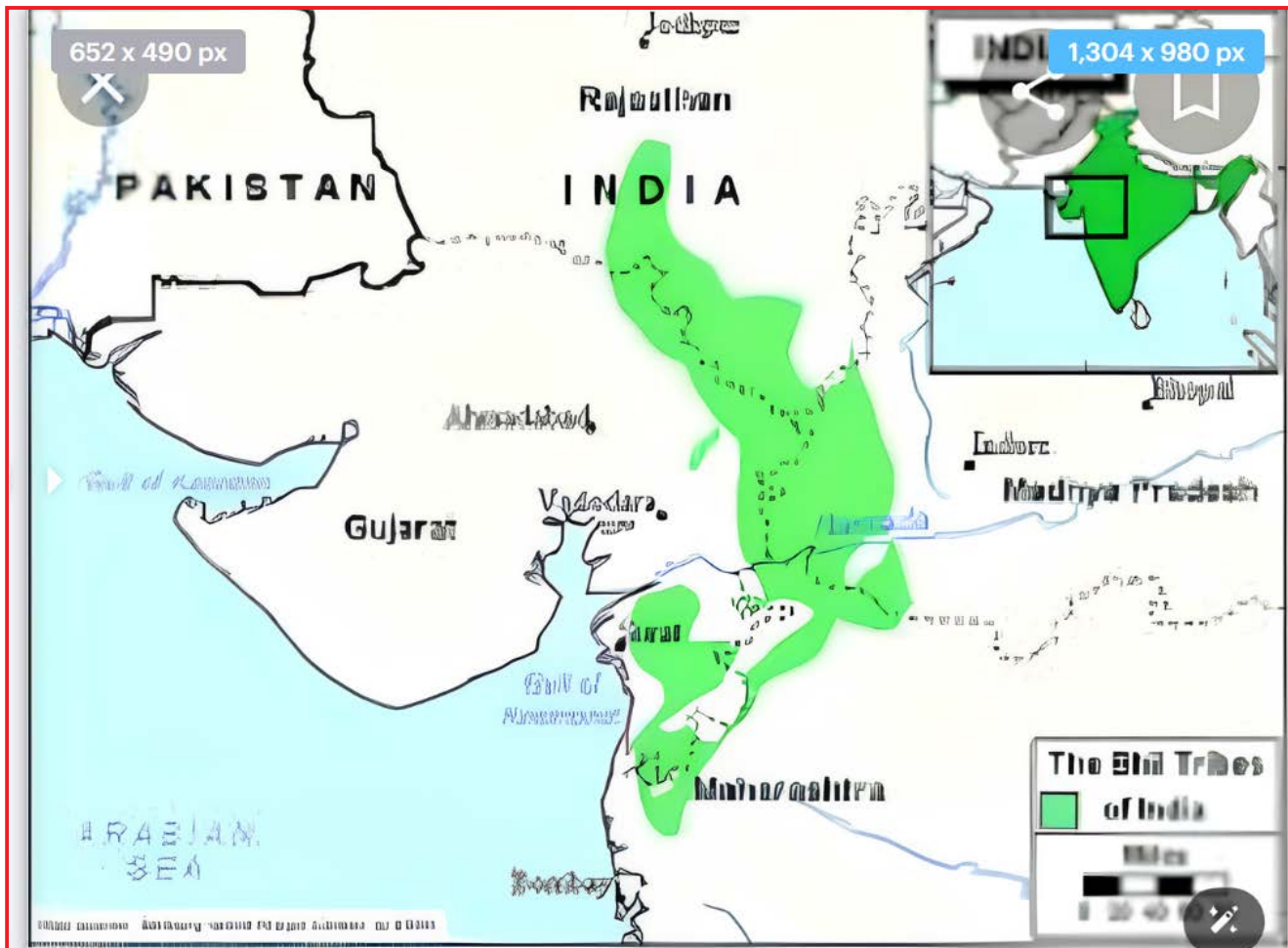
- ➢ **Demand of Bhil Pradesh:**
  - ○ The **demand for Bhil Pradesh dates back to 1913** when **Govind Giri Banjara**, a **tribal activist and social reformer**, first called for a separate Bhil state during a mobilisation at Mangarh Hill.
    - ● This was **followed by a tragic massacre** where British forces killed around 1,500 tribals.
    - ● Over the decades, various tribal leaders, including political figures, have periodically revived this demand.
    - ● The proposed Bhil Pradesh would cover 49 districts across four contiguous states including Rajasthan, Madhya Pradesh, Gujarat and Maharashtra. This would involve 12 districts from Rajasthan.
  - ● **Reasons for the Demand:**
  - ○ **Cultural and Linguistic Homogeneity:** The Bhil community **shares a common language, Bhili,** and cultural practices across the four states. Proponents argue that a separate state would better preserve and promote their cultural heritage.
    - ● The Fazl Ali Commission also considered **linguistic and cultural homogeneity** as one of the factors for the formation of the new states.
  - ○ **Geographic Considerations:** The proposed Bhil Pradesh would **encompass 49 districts across these four states**, with significant tribal populations. This region has historical and cultural ties that transcend current state boundaries.
  - ○ **Political Marginalisation:** Tribal leaders claim that existing political structures have failed to adequately address **the needs and aspirations of the Bhil community.**
    - ● A separate state is seen as a solution to ensure more focused governance and development.
  - ○ **Developmental Focus:** Proponents believe a separate state **would lead to more tailored development policies and better utilisation of resources** for tribal welfare.

Note:

- Historical neglect and slow implementation of laws like the <u>Panchayats (Extension to Scheduled Areas) Act, 1996</u>, highlight the need for more localised governance.

➢ **Criticism of Demand:**
  ○ Critics argue that creating states based on caste or community could lead to **further fragmentation and instability.**
    ● **The Fazl Ali Commission had** opined that the **unity of India should be regarded as the primary consideration** in any redrawing of the country's political units.
  ○ There is also **resistance from established political parties** which have complex stakes in maintaining the status quo.
  ○ Opponents argue that forming states based on tribal identity could **exacerbate social divisions.**

What are the Other Regions Demanding Separate States?

➢ **Vidarbha:** It comprises the **Amravati and Nagpur divisions** of eastern Maharashtra. The <u>State Reorganisation Act of 1956</u> recommended the creation of Vidarbha state with Nagpur as the capital.
  ○ However, to alleviate the fear of neglect among Vidarbha people after its inclusion in Maharashtra state, **Nagpur was designated as the second capital**.
  ○ The backwardness of the region due to the neglect of successive state governments is justified as the basis for the demand for a separate state of Vidarbha.

➢ **Bodoland:** The Bodos are the **largest ethnic and linguistic community in northern Assam.** The agitation for the creation of a separate Bodoland state resulted in an agreement in 2003 between the GoI, the Assam state government, and the <u>Bodo Liberation Tigers Force</u>.
  ○ According to the agreement, Bodos were granted the Bodoland

➢ There have been **demands from other quarters as well** for separate states including **Gorkhaland, Kukiland, and Mithila, etc.**

What are the Issues Arising due to the Creation of New States?

➢ Different statehoods may lead to the **hegemony of the dominant community/caste/tribe** over their power structures.
  ○ This can lead to the **emergence of intra-regional rivalries** among the sub-regions.

➢ The creation of new states may also lead to **certain negative political consequences** like a small group of legislators could make or break a government at will.

➢ There is also the **possibility of an increase in inter-state water**, power, and boundary disputes. For example disputes between **Delhi and Haryana over water sharing.**

➢ The division of states would **require huge funds for building new capitals** and maintaining a large number of Governors, Chief Ministers, Ministers, and administrators as the case in the division of Andhra Pradesh and Telangana

➢ The creation of smaller states **only transfers power from the old state capital to the new state capital without empowering already existing institutions** like Gram Panchayat, District Collector, etc. rather than diffusion of development in the backward areas of the states.

SC to Examine Governor's Immunity

Why in News?

Recently, the <u>Supreme Court (SC)</u> of India agreed to examine the **question of immunity** to <u>Governors</u> from any kind of criminal prosecution, granted under **Article 361** of the Constitution.

➢ This came after the <u>Chief Justice of India</u> heard a plea from a female Raj Bhavan employee who filed a sexual harassment complaint against the West Bengal Governor.

What are Immunities Provided to the Governor under Article 361?

➢ **Origin of Governer's Immunity:**
  ○ It is linked to the Latin maxim "*rex non potest peccare,*" or "the **king can do no wrong**".
  ○ During the **Constituent Assembly's discussion** on Article 361, member H V Kamath questions the **extent of criminal immunity for the President and Governors**, particularly regarding the initiation of proceedings against them for criminal acts.
    ● Despite these concerns, the **article was adopted without further debate.**

➢ **Immunities under Article 361:**
  ○ **Non-Answerable to Courts: Article 361(1)** states that the President or the Governor of a State is not answerable **to any court for the exercise of their powers and duties**, or for any act done in the exercise of those powers and duties.
    ● Article 361 is an **exception to** <u>Article 14</u> **(Right to Equality).**

Note:

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- ○ **Protection from Criminal Proceedings:** Under **Article 361(2)**, no criminal proceedings whatsoever shall be **instituted or continued against the President, or the Governor of a State**, in any court during his term of office.
- ○ **No Arrest:** Under **Article 361(3),** no arrest or imprisonment processes can be issued against the President or Governor during their term of office.
- ○ **Protection from Civil Proceedings:** Under **Article 361(4)**, no civil lawsuits can be filed against the President or Governor of a State during their term of office for any personal acts until two months after giving written notice.
  - ● The notice must include the nature of the proceedings, the cause of action, the party filing the lawsuit, and the relief being sought.

Governor

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Eligibility Criteria
- ○ Must be a **citizen of India**
- ○ At least **35 years** of age
- ○ Must **not be a member of (either) house** of Parliament/State Legislature
- ○ Must not hold any **office of profit**

'Dual Capacity'
- ○ **Constitutional head of the state** and **Representative of the Union government**

Appointment and Tenure (Part VI)
- ○ Appointed by President **(Article 153)**
- ○ One person can be appointed as Governor for **2+ States (7th Const. Amendment in 1956)**
- ○ Holds the office at the **Pleasure of the President** (maximum **5 years**)

Ending Tenure before 5 Years
- ○ **Dismissal by President** (on advice of the Council of Ministers headed by PM)
  - ▪ Dismissal of governors without a valid reason is not permitted
- ○ On grounds of **acts upheld by courts as unconstitutional** and malafide
- ○ **Resignation** by the governor

Powers (Part VI)
- ○ Article 161: **Pardoning powers**
- ○ Article 164: Power to **appoint the CM and other Ministers**
- ○ Article 176: **Special Address** by Governor
- ○ Article 200: Power to **(withhold) assent/reserve a bill** (Legislative Assembly)
- ○ Article 213: Power to **promulgate Ordinances**

Responsibilities
- ○ **Appoints** – CM, other Ministers, Advocate General of State, Members of State PSC, judges of HC and districts
- ○ Act as **ex-officio chancellor** of state Universities

Note:

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How have the Courts Interpreted Article 361?

➤ *Dr SC Barat And Anr vs. Hari Vinayak Pataskar Case, 1961:* In this, a distinction was made between the **Governor's official and personal conduct**. While complete immunity is granted for official actions, **civil proceedings can be initiated with the prior notice of 2 months** for the Governor's actions.

➤ *Rameshwar Prasad vs. Union of India Case, 2006:* The Supreme Court acknowledged the **Governor's "complete immunity"** under Article 361(1) for constitutional actions but **allowed judicial scrutiny for malafide actions.**

  ○ This case established that **while official actions are protected, there are mechanisms for accountability.**

➤ **Madhya Pradesh High Court, 2015:** In the *Vyapam scam case*, the court ruled that Governor Ram Naresh Yadav had **"absolute protection" under Article 361(2)** from malicious publicity **while in office**.

  ○ His name was removed from the investigation to prevent undue legal harassment, maintaining the integrity of the office.

➤ *State of UP vs. Kalyan Singh Case, 2017:* The Supreme Court held that Kalyan Singh, then Governor of Rajasthan, was entitled to immunity under **Article 361** while in office. Charges related to the **Babri Masjid demolition** would proceed once he ceased to be Governor, reinforcing the protection of the Governor's duties and dignity.

➤ **Telangana High Court Judgment (2024):** In this, HC observed that "there is no express or implicit bar in the Constitution which excludes the power of judicial review in respect of an action taken by the Governor".

  ○ Further, the court stated that **Article 361 immunity is personal** and **does not exclude judicial review.**

> **Note:**
> ➤ The **US Supreme Court** recently ruled that **former President Donald Trump**, like other former presidents, is **granted "absolute immunity" from criminal prosecution for actions taken in an official capacity**, but this immunity does **not extend to unofficial or personal actions.**

What are the Recommendations Regarding Reforms in the Office of the Governor?

➤ **Sarkaria Commission (1988):**

  ○ The Governor should be appointed by the President **after consulting the Chief Minister** of the respective state.

  ○ The Governor should be an individual of **eminence in public life** and should not belong to the state where they are appointed.

  ○ Governors **should not be removed before the completion of their term**, except under rare and compelling circumstances.

  ○ The Governor should **serve as a bridge between the Centre and the state**, rather than acting as an agent of the Centre.

  ○ Discretionary powers **should be exercised sparingly and judiciously**, avoiding any actions that might undermine the democratic process.

➤ **Venkatachaliah Commission or National Commission to Review the Working of the Constitution (NCRWC) (2002):**

  ○ The **appointment of Governors should be entrusted to a committee** comprising the prime minister, the home minister, the speaker of the Lok Sabha and the chief minister of the concerned state.

  ○ The governors should be **allowed to complete their five-year term** unless they resign or are removed by the President on the grounds of proven misbehaviour or incapacity.

  ○ The central government should **consult the Chief Minister** before taking any action to remove the governor.

  ○ The Governor **should not interfere in the day-to-day administration of the state**.

    ● He should act as a **friend, philosopher and guide to the state government** and use his discretionary powers sparingly.

➤ **Punchhi Commission (2010):**

  ○ The Commission recommended the deletion of the phrase **"during the pleasure of the President"** from the Constitution, which suggests that a Governor can be removed at the will of the central government.

  ○ It proposed that a Governor should only be **removed by a resolution of the state legislature,** thereby ensuring greater stability and autonomy for states.

Note:

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What are the Constitutional Provisions Related to the Governor?

➤ **Article 153:** There **shall be a Governor for each state**. A single person can be appointed as the Governor for two or more states (recommended by the Sarkaria Commission).

  ❍ The Governor is appointed by the **President and is a nominee of the Central Government.**

➤ **Dual Role:** It acts as the **constitutional head of the state**, bound by the advice of the Council of Ministers (CoM) and functions as a **vital link between the Union Government and the State Government.**

➤ **Articles 157 and 158:** Specify the eligibility requirements for the post of Governor.

➤ **Article 161:** The Governor has the **power to grant pardons, reprieves**, etc.

➤ **Article 163:** There is a Council of Ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions, **except in some conditions where discretion is allowed.**

➤ **Article 164:** The Governor appoints the Chief Minister and other Ministers.

➤ **Article 200:** The Governor assents, withholds assent, or reserves the bill for the consideration of the President passed by the Legislative Assembly.

➤ **Article 213:** The Governor may promulgate ordinances under certain circumstances.

Read more: Governor, The Governor's Role: Challenges and Reform Proposals, Governors in the Limelight: Calls for Reform in India, Governor's Role in State Legislature

Consent of States for CBI Investigations

Why in News?

The Government of Madhya Pradesh announced that the **Central Bureau of Investigation (CBI)** would now require written consent from the state government to initiate any inquiry against state officials.

➤ This move comes amidst a backdrop of **several states withdrawing general consent for CBI investigations,** prompting discussions about the need for new legislation to define the CBI's status, functions, and powers.

Why did Madhya Pradesh Mandate Prior Consent for CBI Inquiries?

➤ This decision considers changes in the **Bharatiya Nyaya Sanhita (BNS)** and recent consultations with the CBI.

  ❍ Also under **Section 17A of the Prevention of Corruption Act, 1988,** agencies need permission to conduct inquiries against government officials.

    ● It provides that **no enquiry or inquiry or investigation shall be conducted** by a police officer into any offence alleged to have been committed by a public servant under the PC Act **without prior approval from the appropriate authority.**

➤ All previous general consent for any other offences and any consent given by the state government on a case-by-case basis for any other offence will also continue to apply.

➤ Several states, including Meghalaya, Mizoram, West Bengal, Jharkhand, Kerala, and Punjab, have withdrawn general consent for CBI investigations.

➤ **Implications of Madhya Pradesh's Decision:**

  ❍ The requirement for written consent could slow down the process of initiating CBI inquiries against state officials.

  ❍ It may **increase the administrative burden on both the state government and the CBI,** potentially affecting the efficiency of corruption investigations.

  ❍ The decision reflects a broader trend of states asserting more control over central investigative agencies, impacting the **dynamics of federal governance in India.**

Note:

What are the Key Facts About the Central Bureau of Investigation?

➤ **About**: Following recommendations by the <u>Santhanam Committee on Prevention of Corruption (1962–1964)</u>, the CBI was officially established in 1963 by a resolution of the Ministry of Home Affairs.

○ It derives its investigative powers from the **Delhi Special Police Establishment Act, 1946.**

○ Operates under the **Ministry of Personnel, Public Grievances, and Pensions,** which falls under the Prime Minister's Office.

  ● Investigations under the **Prevention of Corruption Act,** CBI is supervised by the <u>Central Vigilance Commission.</u>

○ It acts as the **nodal police agency for coordinating investigations with Interpol member countries.**

○ The director of the CBI is also the **Inspector General of Police (IGP) of the Delhi Special Police Establishment (DSPE)** and is responsible for the administration of the organisation.

➤ **Appointment of CBI Director:** Initially appointed under the DSPE Act, 1946. Following the Supreme Court's recommendations in the *Vineet Narain case*, the process was revised in 2003.

○ Current System, under the Lokpal Act, 2014, a committee comprising the **Prime Minister, <u>Leader of the Opposition,</u> and <u>Chief Justice of India</u> (or a Supreme Court Judge)** recommends the appointment.

○ The Director enjoys a tenure security of two years, **extendable up to five years in the public interest.**

○ In 2021, the **President** issued two ordinances to extend the tenures of the directors of the CBI and the <u>Enforcement Directorate</u> from two years to up to five years.

  ● The chiefs of the CBI can now be given three annual extensions, as per the amendments made to the DSPE Act, 1946.

➤ **Legal Framework Governing the CBI's Jurisdiction:**

○ The CBI operates under the **Delhi Special Police Establishment (DSPE) Act, 1946.**

  ● Section 6 of the DSPE Act mandates that **CBI officers need state government consent to exercise powers in any state area,** excluding <u>Union Territories</u> or **railway** areas.

  ● The legal foundation of the CBI is based on **Entry 80 of the Union List**, allowing the **extension of police powers to other States** with their permission.

    ■ The CBI, being a force for Union Territories, can only investigate States with their consent, as determined in the *Advance Insurance Co. Ltd case in 1970.*

  ● **Consent can be either case-specific or general.** General consent is usually provided to facilitate investigations into corruption among central government employees within states, as 'police' is **Entry 2 in the State List under the <u>Seventh Schedule of the Constitution</u>.**

➤ **Primary Functions:**

○ **Anti-Corruption Crimes:** Investigates cases under the Prevention of Corruption Act against public officials, central government employees, and public sector undertakings.

○ **Economic Crimes:** Handles major financial scams, economic frauds, bank frauds, cyber crimes, and smuggling of narcotics, antiques, and other contraband items.

○ **Special Crimes:** Investigates serious and <u>organised crimes</u> such as terrorism, bomb blasts, kidnapping for ransom, and mafia-related activities.

○ **Suo Moto Cases:** Can initiate investigations in Union Territories and, with central government authorisation, in states with their consent. The Supreme Court and High Courts can also direct the CBI to investigate crimes anywhere in the country without state consent.

Note:

BHARATIYA NYAYA SANHITA (BNS), 2023

BNS 2023 replaced Indian Penal Code 1860, incorporating 358 sections (511 in IPC), maintaining most of the IPC provisions, introducing new offences, eliminating court- struck-down offences, and enhancing penalties for various offences.

New Offences

- **Promise to Marry:** Criminalising "deceitful" promises to marry
- **Mob Lynching:** Codify offences linked to mob lynching and hate-crime murders
- Ordinary criminal law now covers **Organized Crime** and **Terrorism**, including a broader scope for terror financing in BNS compared to UAPA
- **Attempt to Suicide:** Criminalises attempts to commit suicide with intent to compel or restrain any public servant from discharging official duty
- **Community Service:** Added as possible form of punishment

Other Modifications

- **Fake News:** Criminalisation of publishing false and misleading information
- **Sedition:** Introduced under a new name 'deshdroh' with wider definition
- **Mandatory Minimum Sentence:** In several provisions, mandatory minimum sentences prescribed which may limit scope for judicial discretion
- **Damage to Public Property:** Carry a graded fine (i.e. fine corresponding to the amount of damage caused)
- **Death by Negligence:** Elevates punishment for causing death by negligence from two to five years (for doctors - 2 yrs imprisonment)

Deletions

- **Unnatural Sexual Offences:** Section 377 of the IPC, which criminalised homosexuality among other "unnatural" sexual activities repealed completely
- **Adultery:** Offence of adultery omitted in consonance of apex court judgement
- **Thugs:** Section 310 of IPC fully omitted
- **Gender Neutrality:** Some laws dealing with children modified to bring gender neutrality

Key Issues

- **Criminal Responsibility Age Discrepancy:** Criminal responsibility starts at seven, extendable to 12 based on maturity, potentially conflicting with global recommendations
- **Inconsistencies in Child Offense Definitions:** It sets child age below 18, but age criteria for offenses like rape differ, causing inconsistency
- **Retention of IPC Provisions on Rape and Sexual Harassment:** Maintains IPC provisions on rape and sexual harassment, omitting **Justice Verma Committee's 2013** suggestions for gender-neutral rape and recognizing marital rape as an offense.

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What Issues Highlight the Need for New Legislation for the CBI?

➢ **Need for Clear Legislation:** A parliamentary panel in 2023 emphasised the need for new legislation to clearly define the CBI's status, functions, and powers.
- The current legislative framework complicates the CBI's ability to conduct investigations due to states' growing reluctance to provide general consent.

➢ **Staffing Issues:** There are around 1,700 vacant posts in the CBI against a sanctioned strength of 7,295. **Vacancies in executive ranks, law officers, and technical officers** are increasing the pendency of cases.
- The quality of investigations and overall effectiveness of the agency are impacted by these vacancies.

Note:

- ➢ **Transparency in CBI's Functioning:** The details of cases registered with the CBI, progress in their investigation, and outcomes are not publicly available. The annual report of CBI is also not accessible to the general public.
- ➢ **Criticism:** The CBI is still guided by the **DPSE Act 1946,** which hampers its accountability and autonomy. It has been criticised for being **politically biased and vulnerable to undue pressure**.
  - ❍ In 2013, the Guwahati HC deemed **CBI unconstitutional for lacking statutory backing,** but the **Supreme Court later stayed the decision.** Instances of corruption and nepotism have also been reported.

Foreigners Tribunals in Assam

Why in News?

Recently, the Assam government has asked the Border wing of the State's police **not to forward cases of non-Muslims who entered India illegally** before 2014 to the **Foreigners Tribunals (FTs)**.

- ➢ This was in keeping with the **Citizenship (Amendment) Act of 2019** which provides a **citizenship application window for** Hindus, Sikhs, Christians, Parsis, Jains, and Buddhists who allegedly fled persecution in Afghanistan, Bangladesh, and Pakistan.

What are Key Facts About the Foreigners Tribunals (FTs)?

- ➢ **About:**
  - ❍ The **FTs are quasi-judicial bodies** formed by the central government through the **Foreigners (Tribunals) Order of 1964** under **Section 3 of the Foreigners' Act of 1946**, to let local authorities in a State refer a person suspected to be a foreigner to tribunals.
- ➢ **Foreigners (Tribunals) Order (Amendment 2019):** The **2019 amendment to the Order,** only **lays down the modalities for the Tribunals** to decide on appeals made by persons not satisfied with the outcome of claims and objections filed against the NRC.
  - ❍ The **Ministry of Home Affairs (MHA)** has also **empowered district magistrates** in all States and Union Territories to set up tribunals.

- ❍ All these orders **apply to the whole country** and are not specific to any state.
  - ● However, the Foreigners Tribunals under this order have been **established only in Assam and in no other state of the country**, this amendment in effect is going to be relevant only to Assam at present.
  - ● Moreover, **cases of "illegal immigrants" are dealt with according to the Foreigners' Act** in other states.
- ➢ **Types of Cases:** The FTs get **two kinds of cases:**
  - ❍ Those against whom a "reference" has been made by border police.
  - ❍ Those whose names are in the electoral rolls have a D (Doubtful) against them.
    - ● **Cases of 'D' or doubtful voters** can also be **referred to an FT by the Election Commission of India**.
- ➢ **Composition:**
  - ❍ Each FT is **headed by a member drawn from judges**, advocates, and civil servants with judicial experience.
  - ❍ Judges/Advocates have been **appointed as members of FT under the Foreigners Tribunal Act, 1941,** and Foreigners Tribunal Order 1964 as per the guidelines issued by the government from time to time.
- ➢ **Function:**
  - ❍ According to the 1964 order, an FT has the **powers of a civil court** in certain matters such as **summoning and enforcing the attendance of any person**, examining him or her on oath, and requiring the production of any document.
  - ❍ A **tribunal is required to serve a notice in English** or the official language of the State to a person alleged to be a foreigner **within 10 days of receiving the reference** from the authority concerned.
  - ❍ An FT has to **dispose of a case within 60 days of reference.**
    - ● **Section 9 of the Foreigners Act** says that the onus of proving that such person is not a foreigner shall, notwithstanding anything mentioned in the **Indian Evidence Act, 1872, lie upon such person**.
    - ● If the person fails to provide any proof of citizenship, the **FT can send him or her to a detention centre**, now called a transit camp, for deportation later.

Note:

➢ **Appeal Against Order of FT:**
  ❍ The **review application can be filed within 30 days of the date of the order** and the FT will decide the case on merits.
  ❍ In case of an adverse order by the FT it can be **appealed against in the High Court** and subsequent appeal can be filed in **Supreme Court.**

Constitutional Provisions Related to Tribunals

➢ It was incorporated by the **42nd Amendment Act, 1976.**
  ❍ **Article 323-A** deals with Administrative Tribunals
  ❍ **Article 323-B** deals with tribunals for other matters

What is the Role of the Border Police of Assam?

➢ The **Assam Police Border Organisation** was established as a **part of the State Police's Special Branch in 1962** under the **Prevention of Infiltration of Pakistani (PIP) scheme.**

➢ The organisation was made an **independent wing in 1974**.

➢ The members of this wing are **tasked with detecting and deporting illegal foreigners and** patrolling the India-Bangladesh border with the **Border Security Force**.

Project ASMITA

Why in News?

Recently, project **ASMITA (Augmenting Study Materials in Indian languages through Translation and Academic Writing)** was launched to produce **22,000 books in Indian languages** in the **next five years.**

➢ It is **one of the several initiatives** taken by the government to promote Indian languages in the education system on the lines of the **National Education Policy (NEP) 2020.**

What is Project ASMITA?

➢ **About:**
  ❍ It was launched by the **Union Ministry of Education and the University Grants Commission (UGC).**
  ❍ It is a collaborative effort of the **UGC and the Bharatiya Bhasha Samiti** to promote Indian languages in education.
    ● The **UGC** was established in 1953 (became a statutory organisation in 1956), for the coordination, determination and maintenance of standards of teaching, examination and research in university education.

● **Bharatiya Bhasha Samiti** is a High Powered Committee for Promotion of Indian Languages constituted by the **Ministry of Education** in 2021.
  ❍ **13 nodal universities** along with member universities from various regions have been identified to lead this project.
  ❍ The **UGC** has created a **Standard Operating Procedure (SOP)** for the book-writing process in each assigned language.
  ❍ The project aims to produce **1,000 books in 22 languages** within **five years**, resulting in 22,000 books in Bharatiya Bhasha (Indian languages).
    ● Also, the commission aims to produce **1,800 textbooks covering Arts, Science and Commerce** streams by **June 2025**.

➢ **Other Initiatives Launched with Project ASMITA:**
  ❍ **Bahubhasha Shabdkosh:**
    ● Developed by the **Central Institute of Indian Languages (CIIL)** in collaboration with the **Bharatiya Bhasha Samiti,** it is a comprehensive **multilingual dictionary repository.**
    ● It will help in using **Bharatiya** words, phrases and sentences for various new age domains like **IT, Industry, Research, and Education**.
  ❍ **Real-time Translation Architecture:**
    ● Developed by **National Educational Technology Forum (NETF) and Bharatiya Bhasha Samiti**, it aims to make a framework for enhancing real-time translation in Indian languages.
      ■ **NETF** has been conceived as an autonomous body, incorporated as a Society that would facilitate decision making on the deployment, induction and use of technology for the realisation of **NEP** objectives.

➢ **Objective:**
  ❍ It will help to create a **comprehensive pool of academic resources in 22 scheduled languages**, bridge linguistic divide, foster social cohesion and unity and also transform the nation's youth into socially-responsible global citizens.

Note:
➢ The **Eighth Schedule** to the Indian Constitution consists of the following **22 languages**:   ❍ Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, Urdu, Bodo, Santhali, Maithili and Dogri.

4th Anniversary of NEP 2020

Why in News?

Recently, the **Union Ministry of Education** celebrated the **4th anniversary** of the **National Education Policy (NEP) 2020** with a week-long campaign called "**Shiksha Saptah**."

➤ This campaign is designed to promote and celebrate the achievements and objectives of **NEP 2020.**

What are Initiatives under Shiksha Saptah?

➤ **Vidyanjali Program:**
  - ○ **Launched in 2021,** it is an initiative by the **Department of School Education and Literacy that connects community members** and volunteers with government and government-aided schools **through an online portal.**
  - ○ The Vidyanjali portal enables alumni, teachers, scientists, and others to contribute services, materials, or expertise to schools across India, enhancing the learning environment by integrating schools, volunteers, and the community in line with **NEP 2020** objectives.

➤ **Tithi Bhojan:**
  - ○ Under this initiative, people from the community celebrate important days such as **childbirth, marriage, birthdays etc.** by contributing to the **Mid Day Meal Scheme.**
  - ○ **Tithi Bhojan** is not a substitute to **Mid Day Meal** but it supplements or complements Mid Day Meal.
  - ○ **Cooking competitions at Block,** District and State levels are organised to promote innovative menus.

What is National Education Policy 2020?

➤ **About:**
  - ○ The **National Education Policy (NEP) 2020** aims to address India's evolving development needs by overhauling the education system to meet 21st century goals and **Sustainable Development Goal 4 (SDG4)**, while preserving India's cultural heritage.
  - ○ It replaced the **National Policy on Education, 1986**, which was modified in 1992.

➤ **Salient Features:**
  - ○ **Universal Access:** Focuses on providing access to education from pre-school through secondary levels.

- ○ **Early Childhood Education:** Transitions from the 10+2 to a 5+3+3+4 system, including children aged 3-6 in the school curriculum with an emphasis on **Early Childhood Care and Education (ECCE)**.

- ○ **Multilingualism:** Promotes using mother tongues or regional languages as the medium of instruction up to Grade 5, with options for Sanskrit and other languages. **Indian Sign Language (ISL)** will be standardised.

- ○ **Inclusive Education: Emphasises support for Socially and Economically Disadvantaged Groups (SEDGs)**, children with disabilities, and the establishment of "**Bal Bhavans**."

- ○ **Gross Enrolment Ratio (GER) Enhancement:** Aim to raise the **Gross Enrolment Ratio** from 26.3% to 50% by 2035, adding 3.5 crore new seats.

- ○ **Research Focus:** Establishes the **National Research Foundation** to enhance research culture and capacity.

- ○ **Language Preservation:** Supports Indian languages through the **Institute of Translation and Interpretation (IITI)** and strengthens language departments.

- ○ **Internationalisation:** Encourages international collaborations and the entry of top-ranked foreign universities.
  - ● For example, in 2023 **UGC** released regulations to facilitate foreign universities to set up campuses in India.

- ○ **Funding:** Targets increasing public investment in education to **6% of GDP.**

- ○ **PARAKH Assessment Center:** Introduces **PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development)** for competency-based and holistic assessments.

- ○ **Gender Inclusion Fund:** Establishes a fund to promote gender equality in education and support initiatives for disadvantaged groups.

- ○ **Special Education Zones:** Creates **Special Education Zones** to cater to the needs of disadvantaged regions and groups, reinforcing the commitment to equitable access to quality education.

Note:

What are the Achievements of the NIPUN Bharat Mission?

➢ **About:**
- ❍ A major recommendation of **NEP 2020** was to ensure that children develop **foundational literacy and numeracy skills by Grade 3.**
- ❍ In pursuit of this goal, the Centre introduced the **NIPUN (National Initiative for Proficiency in Reading with Understanding and Numeracy) Bharat Mission** in 2021.

➢ **Demographic Trends:**
- ❍ Enrollment levels for children aged 6-14 have risen significantly, reaching over 90% in rural India by the early 2000s due to the **Sarva Shiksha Abhiyan.**
- ❍ Between 2010 and 2022, the percentage of mothers with children aged 4-8 who studied beyond Grade 5 increased **from 35% to nearly 60%.**
- ❍ The proportion of mothers with over 10 years of schooling also grew from under **10% to over 20%.**
- ❍ Despite increased education, **female labour force participation in India remains low at 37%,** with younger women (15-29 years) showing even lower participation rates.
- ❍ **Educated mothers** can significantly **support their children's learning**, especially given the high workforce participation of young men in rural areas.
- ❍ The **Covid-19** pandemic has increased parental involvement in education, setting a precedent for greater engagement.
- ❍ To achieve the goals of the **NIPUN Bharat Mission**, further encouragement of family, especially maternal involvement, is crucial for improving foundational literacy and numeracy in children.

Reservation for Locals in Private Sector

Why in News?

Recently, the Karnataka government has put on hold the "**Karnataka State Employment of Local Candidates in the Industries, Factories and Other Establishments Bill, 2024,**" mandating **reservations for locals in the private sector** after a huge backlash from the industry.

➢ The government has now decided to review the bill comprehensively before its reintroduction in the state assembly.

10% Agniveer Quota in Haryana

➢ Recently, the Haryana government has announced to provide employment opportunities for Agniveers, the recruits under the **Agnipath scheme** introduced by the central government in 2022. It provided for-
- ❍ 10% reservation in constable, mining guard, forest guard, jail warder, and SPO recruitments.
- ❍ Age relaxations for Group-B and Group-C posts.
- ❍ 5% reservation in Group-C and 1% in Group-B direct recruitments.
- ❍ Subsidies for private firms hiring Agniveers.
- ❍ Loan interest benefits for business startups.
- ❍ Priority in arms licenses and government jobs for Agniveers.

What is Karnataka's Reservation for Locals in the Private Sector Bill?

➢ **Reservation Policy:** The Bill mandates a substantial **reservation of 75% for 'local candidates'** in non-management positions and **50%** in management positions within private sector companies, industries, and enterprises in Karnataka.

➢ **Definition of 'Local Candidate':** It defines "**local candidates**" as individuals born in the state or living in Karnataka for at least **15 years**, and are capable of **speaking, reading, and writing Kannada.**

➢ **Job Categorisation:** It categorises jobs **into management and non-management** roles.
- ❍ **Management roles** would include supervisory, managerial, technical, operational, and administrative positions.
- ❍ **Non-management roles** will include clerical, unskilled, semi-skilled, and skilled positions in the **IT-ITES sector**.

➢ **Skill Development Provision:** Industries are required to provide training programs for local candidates **to address skill gaps, with a 3-year timeframe** for implementation in the absence of qualified local candidates.

Note:

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➢ **Flexibility Clause:** It introduces a provision for reducing the reservation quota to **50%** in non-management and **25%** in management positions under **specific circumstances.**

> **Note:**
> ➢ **Job reservation Bills or laws for domiciles** have also been announced **in other States including** Andhra Pradesh, Madhya Pradesh and Jharkhand.
> ➢ The **job quota Bill passed in the Andhra Pradesh** Legislative Assembly in 2019, also **reserved three-fourths of private jobs for locals.**

What are the Legal Challenges with Domicile-Based Reservations?

➢ **Balancing Equality and Affirmative Action:** Domicile-based reservations present a legal challenge under India's Constitution.

- ○ **Article 14** guarantees equality before the law, while **Articles 15 (Prohibition of Discrimination based on religion, race, caste, sex or place of birth)** and **Article 16 (Equality of Opportunity in Public Employment)** allow for special provisions benefiting backward classes**, without prejudice to non-domicile candidates.**

➢ **Supreme Court (SC) and High Court Judgments:**

- ○ In ***Dr. Pradeep Jain v. Union of India (1984)***, the Supreme Court (SC) held that while some preference could be given to domicile candidates, it should **not be absolute and should not exclude non-domicile candidates** altogether.
  - ● Supreme Court asks MP Govt to review its 75% domicile quota in B.Ed seats.
- ○ In November 2023, the **Punjab & Haryana High Court** deemed Haryana's law **mandating 75% reservation for locals in the private** sector **unconstitutional**. The court criticised the law for creating artificial divisions among citizens and disrupting laissez-faire principles. Subsequently, the Haryana government appealed the decision to the Supreme Court.

➢ **Limit on the Quota:** The Supreme Court ruling in the *Indra Sawhney case (1992)* established that total reservations, including domicile reservations, **should not surpass 50% of available seats or posts**. This limit applies to all categories of reservations, as emphasised in the judgement primarily addressing reservations for Other Backward Classes (OBCs).

What are the Arguments in Favour of the Private Sector Reservation Bill?

➢ **Local Employment Generation:** The policy aims to **increase job opportunities for local residents, reducing unemployment** and ensuring economic benefits are retained within the state.

➢ **Economic Equity and Balanced Regional Development:** The policy aims to **promote economic equity** by addressing disparities in resource distribution within the state.

- ○ Additionally, it **supports balanced regional development** by spreading economic opportunities across various areas, rather than concentrating them solely in a few urban centres.

➢ **Skill Development:** Mandatory training programs can **enhance the skills of the local workforce, making them more competitive** and better equipped to meet industry demands.

➢ **Social Stability:** Providing more job **opportunities to locals can foster a stronger sense of belonging** and reduce social tensions, promoting community harmony.

➢ **Talent Retention:** The policy can help **retain skilled individuals within the state**, **preventing brain drain** and ensuring their expertise contributes to the local economy.

➢ **Cultural Preservation:** The **language proficiency requirement helps preserve** and **promote the local language and culture**, fostering a stronger cultural identity.

What are the Arguments Against the Private Sector Reservation Bill?

➢ **Impact on Business Competitiveness:** The policy may limit companies' ability to hire the best talent, adversely affecting their **efficiency and competitiveness.**

➢ **Skill Shortages:** The local workforce may lack the necessary skills for specialised roles, leading to **operational inefficiencies and increased training costs.**

➢ **Investment Deterrence**: The local hiring restrictions could **deter domestic and international investors**, negatively impacting the state's economic development and job creation.

➢ **Legal and Administrative Burden:** Ensuring **compliance with the policy** could impose additional **legal and administrative costs** on companies.

Note:

➢ **Discrimination Concerns:** The policy has been **criticised for potentially discriminating against non-local candidates**, violating the principle of equal opportunity.

➢ **Economic Impact:** Domicile-based reservations may adversely affect a state's economic growth by deterring businesses and limiting job opportunities.

  ❍ Moreover, in regions experiencing significant inward migration, such policies could hinder national integration and economic mobility.

➢ **Social Tensions:** The policy could exacerbate **social tensions between local and non-local residents, creating a divisive environment** and undermining social cohesion.

DPDP Act 2023 and the Issue of Parental Consent

Why in News?

Recently, while the industry has largely welcomed the **Digital Personal Data Protection Act (DPDPA) 2023** for its straightforward compliance structure, the provision requiring verifiable parental consent before processing children's data has sparked division between industry and government.

What are the Salient Features of the Digital Personal Data Protection Act (DPDPA) 2023?

➢ **Right to Data Protection:** It empowers individuals with the right to know and control their personal data. This includes rights to access, correction, and erasure of their data, giving citizens greater control over their personal information.

➢ **Data Processing and Consent:** The Act mandates that personal data can only be processed with the explicit consent of the individual. Organisations must provide clear and specific consent forms and ensure that consent is obtained before data collection.

➢ **Data Localisation:** Certain types of sensitive personal data are required to be stored and processed within India. This provision aims to enhance data security and facilitate easier enforcement of data protection laws.

➢ **Regulatory Authority:** The Act establishes a Data Protection Board of India (DPBI) to oversee compliance and handle grievances. The Board is responsible for adjudicating disputes and imposing penalties for violations.

➢ **Data Breach Notification:** Organisations are required to notify individuals and the Data Protection Board of any data breaches that may compromise personal information. This provision aims to ensure transparency and prompt action in the event of data leaks.

➢ **Fines and Penalties:** It outlines stringent penalties for non-compliance, including significant fines for violations. This is intended to incentivize organisations to adhere to data protection standards.

What are the Issues with Obtaining the Parental Consent?

➢ **About:**

  ❍ Under **Section 9 of the DPDP**, **2023** data fiduciaries **must obtain verifiable consent from parents or guardians before processing children's data**.

    ● The Act also bans harmful data processing and ad targeting for minors.

  ❍ However, **some entities can be exempted from obtaining verifiable parental consent** and age gating requirements including healthcare and educational institutions.

  ❍ Also, some entities can be exempted **from the norms on a restricted basis**, that is, depending on the specific purpose for which they need to process a child's data.

➢ **Issues:**

  ❍ While the act introduces measures for child data protection, including parental consent, challenges remain regarding age verification and **defining what constitutes harm to children.**

  ❍ Handling situations where **parents revoke consent or children reach the age of consent** requires careful management.

  ❍ Issues like storing **biometric data**, and ensuring **compatibility across various devices can pose difficulties in implementation.**

Note:

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- ○ The **act itself does not suggest ways in which platforms can perform age-gating** leading to a major sticking point for the industry.
- ○ Another challenge is **how the relationship between a child and his/her parents can be reliably established.**
  - The **inability to arrive at a conclusive decision** on how to proceed with the verifiable parental consent provision is the biggest reason behind the delay in releasing the data protection rules without which the act cannot be operationalised (the DPDP Act depends **on at least 25 such provisions** to implement the modalities of the Act).
- ➤ **Likely Solution and Their Limitations:**
  - ○ Initially, the MeitY considered using **parents' DigiLocker app,** which relies on Aadhaar details. However, **scalability and privacy** concerns led to its dismissal.
  - ○ Another option was for the industry to **create an electronic token system**, authorised by the government. However, this approach also **faced practical limitations.**
  - ○ In a recent meeting between the MeitY and the Industry representatives, the latter suggested a graded approach based on risk, citing the **UK's Age Appropriate Design Code (AADC)** as a model.

> **Note: Global Practices on Parental Consent:**
> - ➤ Globally, **privacy legislations have not prescribed a technology** to gather verifiable parental consent, and **have left it to data collectors** to use relevant technology through which such consent can be gathered.
>   - ○ E.g., the **US Children's Online Privacy Protection Act (COPPA) doesn't specify the exact method** for obtaining parental consent but requires using a method that is "reasonably designed" given the available technology to confirm the identity of the child's parent.
> - ➤ The **European Union's General Data Protection Regulation (GDPR) requires data collectors to make "reasonable efforts"** using available technology to verify that consent provided on behalf of a child under the age of 13 has, in fact, been provided by the holder of parental responsibility for that child.

What are the Possible Suggestions for Addressing the Issue of Parental Consent?

- ➤ **Self-Declaration:** Companies can allow parents **to declare their relationship with the child during account setup**. However, this relies on honesty and lacks robust verification.
- ➤ **Two-Factor Authentication (2FA):** Implementing **2FA for parental accounts can enhance security.** Parents receive a code via SMS or email to confirm consent.
- ➤ **Biometric Verification:** Leveraging biometrics (such as fingerprint or facial recognition) for parental consent **can be secure and privacy-friendly.**
- ➤ **Proxy Consent: Parents could authorise a trusted third party** (like a school or paediatrician) to verify their relationship with the child.

Shadow Cabinets in Parliamentary Democracies

Why in News?

Recently, the **leader of the Opposition (LoP)** and president of Biju Janata Dal (BJD), has formed a **'shadow cabinet'** comprising 50 BJD **Members of the Legislative Assembly (MLAs)** in Odisha.

- ➤ This development comes in the wake of the Bharatiya Janata Party's recent electoral successes in the state and marks a significant shift in legislative dynamics.

What is a Shadow Cabinet?

- ➤ **About:** A shadow cabinet consists of opposition MLAs/MPs who mirror the portfolios of government ministers. Led by the LoP, the shadow cabinet **monitors and critiques the actions of the ruling government** across various departments and ministries.
  - ○ In parliamentary democracies around the world, the concept of a shadow cabinet plays a pivotal role in the dynamics of governance and opposition.
  - ○ Originating from the **Westminster system** and prominently used in countries like the United Kingdom, Australia, Canada, and New Zealand, the concept of a shadow cabinet offers a structured framework for opposition MPs to scrutinise and challenge the policies of the ruling government.

Note:

➢ **Benefits:**
- By shadowing specific ministries, MPs gain in-depth **knowledge and expertise,** enabling them to effectively challenge government policies during parliamentary debates.
- It provides an opportunity for opposition MPs to gain leadership experience, **preparing them for future ministerial roles** based on their performance in the shadow cabinet.
- Strengthens parliamentary democracy by **ensuring robust scrutiny of executive actions** and fostering informed debates on public policies.
  - By presenting a credible alternative to government policies, the shadow cabinet ensures that decisions are thoroughly debated and scrutinised, preventing hasty or arbitrary legislative actions.

➢ **Challenges and Criticisms:**
- In <u>India's multi-party system</u>, coordinating a unified shadow cabinet poses challenges due to **differing party priorities and ideologies.**
- Critics argue that focusing on specific ministries may limit MPs' holistic understanding of governance issues. However, proponents assert that **periodic reshuffles within the shadow cabinet can address this concern.**
- Despite being a statutory position, recognition of the LoP and institutionalisation of shadow cabinets can vary, impacting their effectiveness across different parliamentary sessions.

➢ **Potential Implications for Indian Democracy:**
- Institutionalising a shadow cabinet can fortify parliamentary oversight mechanisms, ensuring that all legislative actions are **thoroughly debated and justified.**
  - By presenting **coherent policy alternatives,** the shadow cabinet can enhance **public trust in parliamentary proceedings,** showcasing opposition parties as credible alternatives to governance.
- Encouraging a shift from **personality-driven politics to policy-focused debates,** a shadow cabinet promotes a more substantive discourse on governance and public policy.

➢ **International Examples:**
- **United Kingdom:** The Shadow Cabinet is appointed by the Leader of the Opposition to mirror the Government's Cabinet.
  - Each member leads on a specific policy area for their party and questions and challenges their counterpart in the Cabinet, presenting the Official Opposition as an alternative government-in-waiting.
- **Canada:** The opposition parties form **shadow cabinets,** groups of opposition MPs, called **critics, who are responsible for the same areas of expertise as the governing party's Cabinet ministers.**
  - Having them sit in a mirror image of each other is a reminder that one side can potentially replace the other at any time.

Experiments with Shadow Cabinets in India

➢ **Maharashtra, 2005 BJP-Shiv Sena Shadow Cabinet:**
- Formed to counter the Congress-NCP government.
- **Composition:** Included key opposition leaders from BJP and Shiv Sena, shadowing respective government ministries.
- **Impact:** Provided structured oppositional scrutiny and policy critiques in the state assembly.

➢ **Madhya Pradesh, 2014 Congress Shadow Cabinet:**
- **Composition:** Involved senior Congress leaders and legislators, shadowing government departments.
- **Outcome:** Enhanced opposition visibility and accountability in state legislative proceedings.

➢ **Goa, 2015 NGO-led Shadow Cabinet**
- Introduced by Gen Next, a non-governmental organisation. Analysed policies of the ruling government, despite not being an official opposition entity.
- Provided independent scrutiny and public discourse on governance issues.

➢ **Kerala, 2018 Civil Society Shadow Cabinet:**
- Led by civil society members to scrutinise policies. Included social activists and experts, not affiliated with the opposition UDF.
- **Impact:** Offered critical analysis and alternative perspectives on government policies and initiatives.

Note:

The **'inner Cabinet' or 'Kitchen Cabinet'** is a smaller informal group consisting of the Prime Minister and two to four trusted colleagues, who hold the true seat of power.

SC to Examine Use of Money Bills in Legislation

Why in News?

Recently, **Chief Justice of India (CJI)** has agreed to list petitions challenging the government's use of the **Money Bill** route to pass contentious amendments in the **Parliament.**

➢ This issue is crucial as it concerns the circumvention of the **Rajya Sabha** and potential violations of **Article 110 of the Constitution**.

What are the Concerns Regarding the Money Bill?

➢ **Circumventing the Rajya Sabha:** One of the primary concerns is that passing contentious amendments as a Money Bill allows the government **to circumvent the Rajya Sabha, undermining the bicameral nature of Parliament.**

○ The classification of a bill as a money bill limits the Rajya Sabha to **only recommending changes, without the power to amend or reject the bill.**

○ The Rajya Sabha, as the Upper House, provides additional scrutiny to legislation. Bypassing it reduces the opportunity for comprehensive debate and oversight.

➢ **Violation of Article 110:** It specifies what constitutes a Money Bill. There are concerns that certain amendments labelled as **Money Bills do not strictly adhere to these provisions.**

➢ **Speaker's Certification:** The Speaker of the Lok Sabha has the authority to certify a bill as a money bill under **Article 110 of the Constitution,** a decision that is not subject to **judicial review.**

○ This raises concerns about the potential misuse of this power, allowing for circumvention of legislative processes.

➢ **Specific Cases Highlighting Concerns:**

○ **Aadhaar Act:** The **Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016** was classified as a Money Bill under Article 110 (1), which led to widespread controversy.

● In 2018, the **Supreme Court** upheld the constitutionality of the Aadhaar law, with the majority ruling that the Act's main aim was to provide subsidies and benefits, which involves expenditure from the Consolidated Fund, and therefore qualified it to be passed as a Money Bill.

● However, Justice D.Y. Chandrachud (who was not the CJI at the time) dissented, observing that the use of the Money Bill route in this case was an **"abuse of the constitutional process".**

○ **Finance Act, 2017:** The **Finance Act, 2017** included amendments to a number of Acts, including empowering the government to notify rules regarding the service conditions of members of Tribunals.

● A host of petitioners argued that the Finance Act, 2017 must be struck down in its entirety as it **contained provisions that had no connection with the subjects listed in Article 110.**

● In 2019, in the case *Rojer Mathew vs South Indian Bank Ltd*, a five-judge Bench referred the Money Bill aspect to a larger **seven-judge Bench.**

○ **Prevention of Money Laundering Act (PMLA) Amendments:** Amendments to the **PMLA,** passed as Money Bills from 2015 onwards, gave the Enforcement Directorate extensive powers, including arrest and raids.

● Although the Supreme Court upheld the legality of these amendments, it left the question of whether they should have been passed as Money Bills to the seven-judge Bench.

● The broad powers granted through these amendments raised concerns about potential misuse and the bypassing of legislative scrutiny.

Developments Following the 2019 Ruling

➢ The seven-judge Bench (mentioned earlier) has **yet to address** key questions about what constitutes a valid Money Bill, impacting subsequent legislation.

➢ The court has avoided resolving the Money Bill question in cases related to the **Enforcement Directorate's powers and electoral laws,** awaiting the larger Bench's decision.

Note:

What are the Potential Consequences of Misclassifying Money Bills?

➢ **Legal Challenges:** Misclassifying bills as money bills can lead to prolonged legal battles, adding uncertainty to the legislative process.

➢ **Legislative Precedents:** If upheld by the judiciary, the use of money bills inappropriately could set a **precedent for future governments to bypass the Rajya Sabha.**

➢ **Public Trust:** Controversies surrounding money bills can erode public trust in the legislative process and the integrity of **parliamentary procedures.**

➢ Broader Implications for Indian Democracy:

  ○ The ongoing debates and judicial reviews surrounding money bills underscore the importance of maintaining a **balance of power** between the Lok Sabha and the Rajya Sabha.

  ○ Ensuring that the passage of significant legislation involves adequate scrutiny and debate is crucial for legislative transparency and accountability.

  ○ Upholding the constitutional provisions and preventing their misuse is essential for the integrity of India's democratic processes.

What is a Money Bill?

➢ **About:** Article 110 of the Constitution of India outlines the definition of a Money Bill, stating that a bill is considered a Money Bill if it contains only provisions dealing with specific financial matters. These include:

  ○ **Taxation Matters:** Imposition, abolition, remission, alteration, or regulation of any tax.

  ○ **Borrowing Regulation:** Regulation of the borrowing of money by the Union government.

  ○ **Custody of Funds:** Management of the **Consolidated Fund of India**(revenue received by the government through taxes and expenses incurred in the form of borrowings and loans) or the **contingency fund**(money to meet unforeseen expenditure).

  ○ **Appropriation of Funds:** Appropriation of money out of the Consolidated Fund.

  ○ **Expenditure Declaration:** Declaration of any expenditure charged on the Consolidated Fund.

  ○ **Receipt of Money:** Receipt of money related to the Consolidated Fund or public accounts.

  ○ **Other Matters:** Any matters incidental to the above provisions.

➢ **Speaker's Certification:** The decision on whether a bill is a **Money Bill rests with the Speaker of the Lok Sabha.** This decision is **final** and cannot be questioned in any court or by either House of Parliament, nor can it be contested by the President.

  ○ Upon certification, the **Speaker endorses the bill as a Money Bill** when it is transmitted to the Rajya Sabha for recommendations.

➢ **Legislative Procedure:** Money Bills can only be introduced in the Lok Sabha and must be recommended by the President. They are treated as **government bills and can only be introduced by a minister.**

  ○ After passing in the Lok Sabha, the bill is sent to the Rajya Sabha, which has limited powers: It cannot reject or amend a Money Bill, it can only make recommendations and must return the **bill within 14 days**, regardless of whether it makes recommendations or not.

  ○ The Lok Sabha can accept or reject the Rajya Sabha's recommendations. If the Lok Sabha accepts any recommendations, the bill is deemed passed in the modified form; if it rejects them, it passes in its original form.

➢ **Presidential Assent:** Once a Money Bill is presented to the **President, he can either give assent or withhold** it but cannot return it for reconsideration.

  ○ Generally, the President gives assent to Money Bills as they are introduced with his prior permission.

Note:

    A bill cannot be classified as a Money Bill simply **because it involves** Imposition of fines or pecuniary penalties, demand or payment of fees for licences or services, and taxation by local authorities for local purposes.

TYPES OF BILLS

Ordinary Bills
- Concerned with any matter other than financial subjects

Money Bills
- Concerned with financial matters like:
  - Taxation
  - Public expenditure
  - Regulation of borrowing of money by Union govt
  - Consolidated and Contingency Funds of India

Financial Bills
- Concerned with financial matters but different from money bills:
  - **FB (I)** – e.g. – a bill that contains a borrowing clause but does not exclusively deal with borrowing
  - **FB (II)** – Provisions involving expenditure from Consolidated Fund of India, but excluding matters mentioned Money bill

Constitution Amendment Bills
- Concerned with amending the provisions of Constitution

TYPES OF BILLS

Features	Ordinary	Money	Financial (I)	Financial (II)	Const. Amendment
Article	107, 108	110	117 (1)	117 (3)	368
Introduced in	Both LS & RS	Only LS	Only LS	Both LS & RS	Both LS & RS (but not state legislature)
Introduced by	Minister or pvt member	Only minister	Minister or pvt member	Minister or pvt member	Minister or pvt member
Recommendation of President (introduction)	Not required	Required	Required	Only req. for consideration	Not required
Amendment/ rejection by RS	Can do	Can only recommend (not binding)	Can do	Can do	Can do
Joint Sitting for deadlock	Summoned by President	No provision	Summoned by President	Summoned by President	No provision
President's Role	Reject/ approve/ return for reconsideration	Reject or approve but no return	Reject/approve/ return	Reject/ approve/ return	Must approve (can't reject/ return)

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Lack of Authority of States in Altering SC List

Why in News?

Recently, the **Supreme Court (SC)** ruled that states are not empowered to make changes to the **Scheduled Caste (SC)** list as published under **Article 341** of the Constitution.

➢ This decision came as the Court quashed a 2015 Bihar government notification that sought to categorise the **Tanti-Tantwa** community as **Scheduled Caste (SC)**, highlighting the importance of adhering strictly to the constitutional provisions governing such classifications.

Note:

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Note:

➢ **Tanti-Tantwa** is a **Hindu** caste belonging to a **weaving and cloth merchant** community in India. The community has a significant presence in states like **Gujarat, Maharashtra, Jharkhand, Bihar, Uttar Pradesh, West Bengal, Assam,** and **Odisha**.

What is the Background of the Case and Supreme Court's Judgment?

➢ **Background of Case:**
  ❍ The Tanti-Tantwa community had been earlier categorised as an **Extremely Backward Class (EBC)** under the **Bihar Reservation of Vacancies in Posts and Services (for Scheduled Castes, Scheduled Tribes, and other Backward Classes) Act, 1991**.
  ❍ On 1st July 2015, the Bihar government issued a resolution to **merge the Tanti-Tantwa community into the SC list** based on a recommendation from the **State Commission for Backward Classes (SCBC)**.
  ❍ This decision aimed to extend SC benefits to the Tanti-Tantwa community and was **upheld by the Patna High Court in 2017**, but later **challenged in the Supreme Court.**

➢ **Supreme Court's Judgment:**
  ❍ The court held that the state government has no authority to change the SC list published under **Article 341** of the Constitution.
    ● **Article 341(1) of the Indian Constitution** vests the power to specify SC in various states and union territories with the **President** of India.
    ● **Article 341(2)** empowers **Parliament** to modify this list. Thus, any change in the SC list necessitates an **amendment to the Constitution**.
  ❍ The court observed that the Bihar government had **not followed the due process** and consultation with the **Registrar General of India**, who had **not supported** the proposal to include Tanti-Tantwa in the SC list.
  ❍ The court termed the state government's notification as **"mala fide"** and an **unpardonable "mischief"**, depriving the genuine SC members of their rightful benefits.
  ❍ While the court quashed the resolution, it took a balanced approach regarding those who had already benefited from the resolution. It directed that such individuals should be accommodated under their original EBC category and that the SC quota posts they occupied should be returned to the SC category.

➢ **Implications of Supreme Court Judgment:**
  ❍ The judgement reaffirms the constitutional scheme where only the **Parliament** can make changes to the SC list, and **state governments cannot** unilaterally tinker with it.
  ❍ The judgement safeguards the interests of the **genuine SC members** by ensuring that the benefits meant for them are **not diverted** to other communities.
  ❍ The judgement upholds the **separation of power** by clearly **delineating the powers of the Legislature and Executive** with respect to the SC list.
  ❍ It can serve as a precedent for other states attempting to make unauthorised changes to the SC/ST lists, which is a common issue across the country.

What is the Procedure to Amend/Alter the SC List?

➢ **Process of Amending/Altering the SC List:**
  ❍ **Initiation and Scrutiny:** A **state government** proposes the inclusion or exclusion of a community from the SC list, which is **scrutinised by the Ministry of Social Justice and Empowerment**.
    ● Then the proposal undergoes evaluation based on socio-economic factors and historical data, with inputs from the **Registrar General of India**.
  ❍ **Expert Consultation and Cabinet Approval:** The **National Commission for Scheduled Castes (NCSC)** provides expert recommendations on the proposal.
    ● The Cabinet then reviews the proposal, considering NCSC recommendations and other factors, and grants approval for amendments.
  ❍ **Parliamentary Process:** A Constitutional Amendment Bill is introduced in **Parliament**, detailing the proposed changes to the SC list.
    ● The Bill requires a **special majority** i.e. the majority of the total membership of both Houses present and voting, as well as a majority of the total number of members in each House.
  ❍ **Presidential Assent and Implementation:** Upon passage by both Houses, the Bill is sent to the President for assent. Once the President gives assent, the amendments to the SC list are officially enacted.

➢ **Criteria for Inclusion in SC List:**
  ❍ Extreme social, educational and economic backwardness arising out of traditional practice of untouchability.

Registrar General of India

➢ The Registrar General of India was founded in **1961** by the Government of India under the **Ministry of Home Affairs**.

   ❍ It arranges, conducts, and analyses the results of the demographic surveys of India including the **Census of India** and **Linguistic Survey of India.**

➢ The position of Registrar is usually held by a civil servant holding the rank of **Joint Secretary.**

What are the Constitutional Provisions Related to Upliftment of SC?

➢ **Article 15(4)** mandates **special provisions** for the advancement of SCs.

➢ **Article 16(4A)** allows for **reservation in promotions** to posts in the state services for SCs/STs who are underrepresented.

➢ **Article 17** abolishes **Untouchability.**

➢ **Article 46** directs the State to promote the **educational and economic interests** of SCs and STs, protecting them from social injustice and exploitation.

➢ **Article 330** and **Article 332** provides for **reservation seats in Lok Sabha and state legislative assemblies** respectively for SCs and STs.

➢ **Article 335** ensures that while making appointments to government services, the **claims of SCs and STs** are considered without compromising administrative efficiency.

➢ **Part IX** (Panchayats) and **Part IXA** (Municipalities) provide for **reservations for SCs and STs in local governance bodies**.

   ❍ **Article 243D(4):** This provision mandates the reservation of seats for SCs in **Panchayats** (local self-government institutions) in proportion to their population in the area.

   ❍ **Article 243T(4):** This provision ensures the reservation of seats for SCs in **Municipalities** (urban local bodies) in proportion to their population in the area.

Breach of Privilege Notice

Why in News?

The main opposition party submitted a **breach of privilege** notice against the **Prime Minister** for making **"derogatory" remarks** against the **former vice president and Chairman** of the **Rajya Sabha.**

What is the Breach of Privilege?

➢ **About:**

   ❍ When any **individual or authority** undermines any of the privileges, rights, and immunities, either of the Members **individually** or of the **House in its collective capacity**, the offence is called a breach of privilege and is **punishable by the House.**

   ❍ Additionally, any actions that **disrespect the House's authority or dignity**, like ignoring its orders or insulting its members, committees, or officers, are considered breaches of privilege.

➢ **Contempt of House vs Points Of Propriety:**

   ❍ **Contempt of House:** It is defined generally as any **act** which **obstructs** either member or house of parliament in the performance of its duty and functions.

   ❍ **Points Of Propriety:** Parliament and its members must follow specific practices and conventions, and **violating these is considered 'impropriety'**.

➢ **Power of Parliament To Punish:**

   ❍ Each House of Parliament is the guardian of its own privileges.

   ❍ Courts of law in India have recognised that a **House of Parliament (or a State Legislature) is the sole authority to judge** as to whether or not there has been a breach of privilege of the House in a particular case.

   ❍ The **House may punish a person found guilty of breach of privileges or contempt of the House** either by **reprimand or admonition or by imprisonment for a specified period.**

   ● In addition, the house can punish its members in two other ways namely **suspension from its service and expulsion.**

   ● However, **in case of unconditional apology** by the member, house normally in interest of its dignity **avoids pursuing the matter further.**

➢ **Procedure:** The procedure for dealing with questions of privilege is laid down in Rules 187 to 203 of the **Rules of Procedure and Conduct of Business** in the Council of States (Rajya Sabha).

   ❍ A question of privilege may be raised in the House only after obtaining the consent of the Chairman.

   ❍ The question whether a matter is **actually a breach of privilege or contempt of the House** is entirely **for the House to decide**.

Note:

➢ **Breach of Privilege by Member of Another House:**
  ❍ According to the **1954 Joint Report of the Committees of Privileges**, when a breach of privilege involving House personnel is raised in either the **Lok Sabha** or Rajya Sabha, the **Presiding Officer** refers the case to the other House's Presiding Officer.
    ● The latter handles it in the same manner **as breach of their own House's privilege** and reports back on the enquiry and actions taken.

PARLIAMENTARY PRIVILEGES

Parliamentary privileges are special rights, immunities, and exemptions enjoyed by MPs, MLAs and their committees.

Constitutional Provision

◉ **Article 105:** For MP's   ◉ **Article 194:** For MP's

Grants only civil immunity for statements or acts performed in course of duty.

Sources of Power

◉ Constitutional provisions
◉ Various laws made by Parliament
◉ Rules of both Houses
◉ Parliamentary conventions
◉ Judicial interpretations

Privileges of Individual Members

◉ **Freedom of Speech** in Parliament
◉ MP/Committee **immune from legal proceedings** regarding statements or voting
◉ **Immune from court proceedings** regarding publication of reports, papers, votes, or proceedings by either House of Parliament
◉ Courts prohibited from questioning Parliamentary proceedings validity due to **alleged procedural irregularities**
◉ Members **immune from arrest in civil cases** during a House or Committee meeting and 40 days before or after its session

Collective Privilege of House

◉ House has **right to be promptly informed about a Member's arrest**, detention, conviction, imprisonment, and release
◉ **Immunity from arrest and service of legal process** within precincts of House without obtaining permission of Chairman/ Speaker
◉ Protection of publication of proceedings of secret sitting of House
◉ **Evidence** presented to Parliamentary Committee, along with report and proceedings, **must remain confidential** until officially laid on House's Table
◉ Members/officers of the **House require House's permission to present documents or testify in court** regarding House proceedings

Important Judgements

◉ *State of Kerala vs. K. Ajith Case (2021) -* SC emphasised that privileges and immunities should not be used to exempt individuals from the general criminal law applicable to all citizens
◉ In 2024, the 7-judge Constitution Bench overturned the 5-judge Bench decision in **P.V. Narasimha Rao v. State Case (1998)**, clarifying that the protection provided by Articles 105 and 194 of the Constitution do not extend to bribery cases

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Gram Nyayalayas

Why in News?

The **Supreme Court of India** has directed **States and High Courts** to submit comprehensive reports on the establishment and functioning of **gram nyayalayas.**

➢ This directive comes amidst concerns about the **slow implementation of these rural courts**.

Note:

What are the Supreme Court's Concerns Regarding Gram Nyayalayas?

➤ **Slow Implementation**: The **Gram Nyayalyas Act of 2008** was meant to de-clog courts and decentralise administration. It was emphasised that the purpose of gram nyayalayas was to **improve access to justice, but there are currently only about 450 out of the required 16,000 set up**, with only around 300 functioning.

➤ **Pending Cases**: With over **four crore cases pending in trial courts,** the lack of functional gram nyayalayas contributes to the backlog, **preventing the de-clogging of the judicial system.**

➤ **Access to Justice**: The Supreme Court is concerned that the slow establishment of gram nyayalayas hampers the **goal of providing speedy and affordable justice to rural citizens.**

➤ **Lack of Reporting**: States and High Courts have failed to submit the required affidavits detailing the **status of gram nyayalayas, reflecting a lack of compliance** and commitment.

➤ **Resistance in Tribal Areas**: Some States, such as Jharkhand and Bihar, have resisted establishing **gram nyayalayas in tribal** or scheduled areas, citing **conflicts with local or traditional laws.**

> **Other Associated Issues:** According to **Section 3 of the Gram Nyayalayas Act, 2008**, State Governments are responsible for establishing Gram Nyayalayas in consultation with the respective High Courts. **However, the Act does not make it mandatory to set up Gram Nyayalayas.**
>
> ➤ Resistance from states, especially in tribal areas, citing conflict with local laws.
>
> ➤ **Overlap with other specialised courts like Family and Labour courts** has led to confusion about their mandate.
> ○ Establishment of regular courts at the Taluk level has lessened the need for Gram Nyayalayas.
>
> ➤ **Low awareness among stakeholders** and reluctance from police officials, lawyers, and other functionaries to utilise Gram Nyayalayas.
>
> ➤ **Initial budget of Rs. 18 lakhs** per Nyayalaya and 50% recurring expense support for three years from the Central Government **has been insufficient.**

What are Gram Nyayalayas?

➤ **About:** The concept of Gram Nyayalayas was proposed by the **Law Commission of India** in its **114th Report** to provide **affordable and quick access to justice for citizens in rural areas**.

○ **Article 39A of the Indian Constitution** ensures that the legal system promotes justice and provides free legal aid to ensure **equal opportunities for all citizens, regardless of economic or other disabilities.**

○ This vision was realised with the passage of the Gram Nyayalayas Bill in 2008, and the subsequent implementation of the Gram Nyayalayas Act, in 2009.

○ Gram Nyayalayas are deemed to be a **Court of Judicial Magistrate of First Class with both civil and criminal jurisdiction** to settle petty disputes at the village level.

○ The Act extends to the whole of India, **excluding Nagaland, Arunachal Pradesh, Sikkim, and certain tribal areas in Assam, Meghalaya, Tripura, and Mizoram.**

➤ **Salient Features:**

○ **Establishment Criteria:** These courts are to be established for every Panchayat at the intermediate level or for a group of contiguous Gram Panchayats. The headquarters of Gram Nyayalayas are located at the **intermediate Panchayat level.**

○ **Presiding Officer:** The presiding officer, known as the Nyayadhikari, is appointed by the State Government in consultation with the High Court.

● Nyayadhikaris are strictly **judicial officers with the same salary and powers as First Class Magistrates** functioning under High Courts.

○ **Jurisdiction:** Gram Nyayalayas handle specified criminal cases, civil suits, claims, and disputes as listed in the **First and Second Schedules of the Act,** following summary procedures for criminal trials.

● A person accused of an offence has the option to file an application for plea bargaining, **allowing for negotiation of a lesser charge or sentence.**

○ **Conciliation Efforts:** These courts emphasise conciliation between parties to settle disputes, using appointed conciliators for this purpose.

Note:

- ❍ **Guided by Natural Justice:** While not bound by the rules of evidence in the **Indian Evidence Act, 1872 (replaced by Bharatiya Sakshya Adhiniyam),** Gram Nyayalayas follow **principles of natural justice** as guided by the High Court rules.
- ➢ **Operational Conditions:** The Gram Nyayalayas were initially proposed to be set up at the intermediate panchayat level with a one-time budget of Rs. 18 lakhs for non-recurring expenses. The **Central Government also covered 50% of recurring expenses for the first three years.**
  - ❍ The scheme has been extended until 31st March 2026, with a budget of Rs. 50 crores. Funds are now released **only after the Gram Nyayalayas are operational and Nyayadhikaris are appointed.**
  - ❍ A performance review is scheduled after one year to assess their effectiveness in providing speedy and affordable justice to the rural marginalised.

What are India's Initiatives to Address the Backlog of Cases in India?

- ➢ **Court Halls:** The number of court halls has increased from 15,818 in 2014 to 21,295 in 2023. Additionally, 2,488 court halls are currently under construction.
- ➢ **Information and Communication Technology (ICT) Integration:** The **e-Courts Mission Mode Project** has computerised 18,735 district and subordinate courts.
  - ❍ The **WAN Project under eCourts aims** to connect all District and Subordinate court complexes across the country. 99.4% of court complexes have WAN connectivity.
  - ❍ Video Conferencing enabled between 3,240 court complexes and 1,272 jails, enhancing remote legal proceedings.
  - ❍ **Tele-Law Programme** launched in 2017, connecting disadvantaged sections with **panel lawyers via video conferencing, telephone, and chat facilities available at Common Service Centres (CSCs)** in Gram Panchayats and through the Tele-Law mobile app.
- ➢ **National Judicial Data Grid (NJDG):** This platform allows access to information related to judicial proceedings and decisions for all stakeholders, including judicial officers.
- ➢ **Virtual Courts:** Established in 17 States/UTs, handling over 2.53 crore cases and collecting Rs. 359 crores in fines by January 2023.
- ➢ **Appointments:**
  - ❍ **Supreme Court Appointments**: 54 judges appointed from May 2014 to March 2023.
  - ❍ **High Courts Appointments**: 887 new judges and 646 additional judges made permanent; sanctioned strength increased from 906 to 1114 judges.
  - ❍ **District and Subordinate Courts**: Sanctioned strength increased from 19,500 in 2013 to over 25,000 in 2023.
- ➢ **Establishment of Fast Track Courts:** 843 Fast Track Courts operational for heinous crimes and crimes against women and children.
- ➢ **Fast Track Special Courts (FTSCs):** Approved for the expeditious disposal of rape cases and crimes under the **Protection of Children from Sexual Offences (POCSO) Act, 2012** with 28 States/UTs joining the scheme.
- ➢ **Legislative Reforms: Various laws amended to reduce pendency, including:**
  - ❍ **Negotiable Instruments (Amendment) Act, 2018**
  - ❍ **Commercial Courts (Amendment) Act, 2018**
  - ❍ **Arbitration and Conciliation (Amendment) Act, 2019**
  - ❍ **Criminal Laws (Amendment) Act, 2018**
- ➢ **Lok Adalats and Pro Bono Services:**
  - ❍ **Lok Adalats** organised under the Legal Services Authorities (LSA) Act, 1987, to provide final and binding awards without appeal.
  - ❍ *Pro Bono* **(for the public good)** Culture institutionalised through the **Nyaya Bandhu platform** with pro bono advocates registered and Pro Bono Clubs established in 69 law schools.

■■■

Note:

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Economic Scenario

Highlights

- Major Economics Committees
- Economic Survey 2023-24
- Union Budget 2024-2025
- Key Economic Reforms in the Budget 2024-25
- Schemes in Budget 2024 for Rural and Tribal Development
- Agriculture-Related Initiatives in Union Budget 2024-25
- India's Lithium Mining Challenges
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- Role of the Financial Sector in India's Development
- SEBI Proposes a New Asset Class
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- India's Role in Advancing Global DPI
- Lowest Paddy Sowing in Decade
- SC Verdict on GM Mustard Approval
- Programme on Science of Natural Farming
- Green Revolution in Maize

Major Economics Committees

MAJOR ECONOMIC COMMITTEES

An economic committee is a group of individuals or representatives tasked with overseeing, advising, and making decisions on economic policies, strategies, and issues.

Banking Sector

Narasimham Committee- I (1991)
- Establishing Asset Reconstruction Fund (ARF) Tribunal
- Removal of Dual Control of Ministry of Finance and RBI
- Reduction in Cash Reserve Ratio (CRR) & Statutory Liquidity Ratio (SLR)

R. H. Khan Committee (1997)
- Concept of 'Universal Banking'

Narasimham Committee- II (1998)
- Merger of Major Public Sector Banks
- Reform in the Role of RBI
- Reducing Non-Performing Assets (NPAs) to 3% by 2002

Raghuram Rajan Committee (2008)
- Promote Financial Inclusion and Financial Stability

P. J. Nayak Committee (2014)
- Reforming Governance Structure of PSBs

Nachiket Mor Committee (2014)
- Financial Services for Small Businesses & Low-Income Households and Concept of Payment Bank

Y. H. Malegam (2013)
- To Review the Microfinance Sector in India

Tax Reforms

Raja J. Chelliah Committee (1991)
- Reforms in the Indirect Tax Structure in India
- Introduction of Value Added Tax (VAT)

Kelkar Committee (2002)
- Task Force on Direct & Indirect Taxes

Fiscal and Monetary Policy

S.S. Tarapore Committee (1997)
- Liberalisation of Capital Account Transactions

N. K. Singh Committee (2016)
- To Review the Fiscal Responsibility & Budget Management (FRBM) Act, 2003

Urjit Patel Committee (2014)
- Form Monetary Policy Committee
- Use of CPI over WPI as a Measure for Inflation Targeting

Poverty

Alagh Committee (1979)
- To Estimate Poverty Line for Rural and Urban Areas

Lakdawala Committee (1993)
- Estimation of Proportion and Number of Poor

Tendulkar Committee (2009)
- Urban Poor- Daily Spending < ₹33
- Rural Poor- Daily Spending < ₹27

Rangarajan Committee (2012)
- Urban Poor- Daily Spending < ₹47
- Rural Poor- Daily Spending < ₹32

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Note:

Economic Survey 2023-24

Why in News?

The **Economic Survey** for 2023-24 was recently tabled by the **Union Minister for Finance** in the parliament. It offers a comprehensive view of India's economic performance and future prospects.

What is the Economic Survey?

➤ **About**: The **Economic Survey** is an annual document presented by the government ahead of the Union Budget to review the state of the economy.

  ❍ It is prepared by the **Economic Division of the Department of Economic Affairs** in the Ministry of Finance under the supervision of the **Chief Economic Adviser** (currently **V. Anantha Nageswaran).**

  ❍ It is tabled in **both houses of Parliament** by the Union Finance Minister

➤ **Purpose:**

  ❍ To review the developments in the Indian economy over the previous 12 months.

  ❍ To summarise the performance on major development programs

  ❍ To highlight the **policy initiatives of the government**

  ❍ To analyse the economic trends and provide an outlook for the coming year

➤ **Historical Context:**

  ❍ First presented in **1950-51.**

    ● Initially, it was a part of the budget documents.

  ❍ Became a **separate volume in 1964.**

What are the Key Takeaways from the Economic Survey for 2023-24?

➤ **State of the Economy:**

  ❍ **Real GDP Growth:** India's **real GDP** grew by **8.2% in FY24,** surpassing the 8% mark in three out of four quarters of FY24.

  ❍ **Retail Inflation**: Retail inflation decreased from **6.7% in FY23 to 5.4% in FY24.**

  ❍ **Current Account Deficit** (CAD): The CAD improved to **0.7% of GDP in FY24 from 2.0% in FY23.**

  ❍ **Tax Revenue:** Direct taxes contributed **55% of the total tax revenue**, with indirect taxes making up the remaining **45%**.

  ❍ **Capital Spending:** The government progressively increased capital expenditure and provided free food grains to **81.4 crore people.**

➤ Monetary Management and Financial Intermediation – Stability is the Watchword

  ❍ **Monetary Policy:** The RBI maintained a steady **policy repo rate at 6.5% throughout FY24**.

    ● Consequently, **Core inflation** declined by around 4% from April 2022 to June 2024.

  ❍ **Credit Growth:** Credit disbursal by **Scheduled Commercial Banks** (SCBs) reached **Rs 164.3 lakh crore**, growing by **20.2% by March 2024.**

  ❍ **Banking Sector:** Gross and **net non-performing assets are at multi-year lows**, and bank asset quality has improved.

    ● Data from the **RBI's Financial Stability Report** of June 2024 show that the asset quality of SCBs has improved, with the **Gross Non-Performing Assets (GNPA) ratio** declining to **2.8% in March 2024**, a 12-year low.

    ● **Insolvency and Bankruptcy Code** has been recognised as an effective solution for the **twin balance sheet problem,** in the last 8 years, **31,394 corporate debtors** involving a value of Rs 13.9 Lakh Crore have been disposed off as of March 2024.

      ■ **Twin Balance Sheet Problem** refers to heavily **indebted corporations and banks burdened with bad loans**, creating a vicious cycle hindering economic growth.

  ❍ **Capital Markets:** Primary capital markets facilitated capital formation of Rs 10.9 lakh crore, approximately **29% of the gross fixed capital formation of private and public corporates** in FY23.

Note:

- ○ **Insurance and Microfinance:** India is poised to become one of the fastest-growing insurance markets and has the **second-largest microfinance** sector globally.

➢ **Prices and Inflation – Under Control:**

- ○ **Inflation Trends:**
  - 29 States and Union Territories recorded inflation below 6% in FY24.
  - **Core services inflation** eased to a nine-year low in FY24
  - **Food inflation** increased from **6.6%** in FY23 to **7.5%** in FY24.
  - Price cuts on LPG, petrol, and diesel helped in keeping **retail fuel inflation** relatively low.

- ○ **Future Projections:** The RBI forecasts inflation to decline to **4.5% in FY25 and 4.1% in FY26.**

➢ **External Sector – Stability Amid Plenty:**

- ○ **Exports:** India's **services exports** grew by **4.9%** to USD 341.1 billion in FY24, with significant contributions from IT/software and other business services.

- ○ **Remittances:** India remains the top global recipient, with **remittances** totaling **USD 120 billion in 2023.**

- ○ **External Debt:** India's **external debt to GDP ratio** stood at **18.7%** as of March 2024.

- ○ **Logistics Performance:** India's rank in the **World Bank Logistics Index** improved to **38th in 2023** from 44th in 2014.

- ○ **Tourism:** India's share in world tourism receipts increased from **1.38% in 2021 to 1.58% in 2022.**

➢ **Medium-Term Outlook – A Growth Strategy for New India:**

- ○ **Growth Strategy:** To sustain a **7%+ growth rate**, a tripartite compact between the Union Government, State Governments, and the private sector is required.

- ○ **Key Focus Areas:** Job and skill creation, agriculture, **MSME** bottlenecks, green transition, and addressing the education-employment gap are crucial for medium-term growth.

➢ **Climate Change and Energy Transition – Dealing with Trade-Offs:**

- ○ **Renewable Energy:** As of May 2024, **non-fossil sources** accounted for **45.4% of installed electricity generation capacity**.

- ○ **Energy Needs:** India's energy needs are projected to grow **2 to 2.5 times by 2047.**

- ○ **Investment in Clean Energy:** The **clean energy sector** attracted investments of **Rs 8.5 lakh crore** between 2014 and 2023.

➢ **Social Sector – Benefits that Empower:**

- ○ **Welfare Expenditure:** Grew at a CAGR of **12.8%** between FY18 and FY24.

- ○ **Healthcare:** Over 34.7 crore **Ayushman Bharat cards** have been issued.

- ○ **Housing:** 2.63 crore houses constructed under **PM-AWAS-Gramin** in the past 9 years.

- ○ **Rural Infrastructure:** 15.14 lakh km of roads constructed under the **Gram Sadak Yojana** since 2014-15.

➢ **Employment and Skill Development – Towards Quality:**

- ○ **Unemployment Rate:** Declined to **3.2% in 2022-23**.
  - Net payroll additions under the **Employees' Provident Fund Organisation (EPFO)** have more than doubled to 13.15 million in the past five years, indicating robust growth in formal employment.

- ○ **Youth Unemployment:** Fell from 17.8% in 2017-18 to **10% in 2022-23.**

- ○ **Female Labor Force Participation:** Rising for six consecutive years (**37.0%** currently).

- ○ **Gig Economy:** Workforce expected to reach **2.35 crore by 2029-30.**

➢ **Agriculture and Food Management**

- ○ **Agricultural Growth:** The sector registered an average annual growth rate of **4.18%** at constant prices over the last five years.

- ○ **Credit and Micro Irrigation:** Credit disbursed to agriculture amounted to Rs 22.84 lakh crore**.**

Note:

- **90 lakh hectares** covered under micro-irrigation since 2015-16.
  - <u>Kisan Credit Cards</u>: **7.5 crore** cards issued with a Rs 9.4 lakh crore limit.

➢ **Industry – Small and Medium Matters:**

- **Industrial Growth:** Economic growth of **8.2% in FY24** is supported by an industrial growth rate of **9.5%.**
- **Pharmaceutical and Clothing Sectors:** India's pharmaceutical market is the **world's third-largest by volume,** valued at USD 50 billion.
  - It is the second-largest clothing manufacturer globally, with textile and apparel exports reaching **Rs 2.97 lakh crore in FY24.**
- **Electronics Manufacturing:** India's electronics sector accounts for an estimated **3.7% of the global market share**.
  - Domestic production increased to Rs 8.22 lakh crore, with exports rising to Rs 1.9 lakh crore in FY23.

➢ **Services – Fuelling Growth Opportunities:**

- **Sector Contribution:** The services sector accounted for **55% of the economy** in FY24 and grew by 7.6% during the year.
- **Digital Services:** India's share in global digitally delivered services exports increased to **6% in 2023.**
  - Globally, India's services exports constituted **4.4% of the world's commercial services exports in 2022** & accounted for **44%** of India's total exports in FY24.
- <u>Aviation</u>: 15% YoY increase in total air passengers in FY24.
- <u>E-commerce</u>: Expected to cross **USD 350 billion by 2030.**
- <u>Start-ups:</u> Increased from around 2,000 in 2014 to approximately **31,000 in 2023.**

➢ **Infrastructure – Lifting Potential Growth:**

- **National Highways:** The pace of <u>National Highways</u> construction increased from 11.7 km per day in FY14 to approximately **34 km per day by FY24.**
  - **Railways:** Capital expenditure on Railways increased by **77%** over the past five years.
  - **Aviation: 21 new airport terminal** buildings operationalised in FY24.
  - **Logistics:** Rank in the International Shipments category improved to **22nd in 2023 from 44th in 2014.**
  - **Space:** India has **55 active space assets**, including 18 communication, 9 navigation, 5 scientific, 3 meteorological, and 20 earth observation satellites.
  - **Digital Infrastructure:** The <u>**DigiLocker**</u> platform has over **26.28 crore registered users** and over 674 crore issued documents.
  - **Telecommunication:** The overall teledensity (number of telephones per 100 population) in India increased from **75.2% in March 2014 to 85.7% in March 2024.**
    - The internet density also increased to **68.2% in March 2024.**

➢ **Climate Change and India:**

- **Current global strategies for climate change** are flawed and not universally applicable.
  - The **Western approach** does not seek to address the root of the problem, i.e., **overconsumption**, but rather chooses to substitute the means to achieve overconsumption.
  - A **one-size-fits-all approach will not work,** and developing countries need to be free to choose their own pathways.
- India's ethos emphasises a **harmonious relationship with nature,** in contrast to the culture of overconsumption in other parts of the developed world.
  - Shifting towards **'traditional multi-generational households'** could pave the way towards sustainable housing.
  - "<u>Mission LiFE</u>" focuses on human-nature harmony, promoting mindful consumption rather than the overconsumption that lies at the root of the global climate change problem.

Note:

What are the Major Challenges and Recommended Solutions Outlined in the Economic Survey 2023-24?

➢ **Key Challenges Identified:**

○ **Global Headwinds and FDI**: The prospects for Foreign Direct Investment (FDI) are not very promising **due to high interest rates in developed countries**, which increase the cost of funding and the opportunity cost of investing in developing nations like India.

- Additionally, **industrial policies in developed countries** that offer substantial subsidies for domestic investment further complicate the competitive landscape.

- Geopolitical uncertainties also pose challenges.

○ **China Dependency**: India **remains heavily dependent on China for imports**, especially in the renewable energy sector.

- Furthermore, China continues to **dominate the low-skill manufacturing** space that India has aimed to occupy.

○ **AI Threat**: The rise of artificial intelligence (AI) could potentially disrupt the telecommunications and **Internet-driven business process outsourcing (BPO)** sector, which has seen significant growth.

○ **Tepid Private Investment**: Despite tax cuts implemented in **September 2019** to boost capital formation, the corporate sector's response has been underwhelming.

- **Corporate profits before taxes have surged**, but hiring and compensation have not kept pace.

○ **Employment Imperative**: There is a notable **lack of high-quality and timely data related to employment.** This gap hampers effective labour market analysis and policy making.

- To accommodate the growing workforce, the Indian economy must create approximately **7.85 million non-farm sector jobs annually until 2030.**

○ **Lifestyle Disadvantages**: **Social media, excessive screen time, sedentary lifestyles, and unhealthy food choices** are identified as factors that could undermine public health and productivity, impacting India's economic potential.

➢ **Recommended Solutions:**

○ **Job Creation by the Private Sector**: The survey emphasises that it is in the interest of the corporate sector, which is currently experiencing excess profits, to **take on a more active role in job creation.**

○ **Lifestyle Changes by the Private Sector**: Indian businesses are encouraged to embrace **traditional lifestyle practices and healthy food recipes**, which not only align with global trends but also open up new commercial opportunities.

○ **Revitalising the Farm Sector**: Given the challenges in manufacturing and services, the survey suggests **focusing on improving agricultural practices and policies**.

- This includes increasing **value addition, boosting farmers' income, and creating opportunities in food processing** and exports.

○ **Removing Regulatory Bottlenecks**: It advocates for reducing the regulatory burden on businesses, particularly for Medium, Small, and Micro Enterprises (MSMEs).

- Streamlining licensing, inspection, and compliance requirements is crucial.

○ **Administrative Strengthening**: Instead of large-scale reforms, the survey calls for strengthening state capacity to support and **accelerate India's progress through effective implementation and management.**

Union Budget 2024-2025

Why in News?

Recently, Union Budget **2024-25** was presented in the Parliament. It was the first general budget of the **18th** Lok Sabha.

Note:

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UNION BUDGET

Drishti IAS

A **statement of the estimated receipts and expenditure** of the Govt in an FY

ARTICLE 112 (PART V)

- **President of India** to present the **Annual Financial Statement** for each FY before both Houses of Parliament

  The term 'Budget' is not mentioned anywhere in the Constitution of India

NODAL BODY FOR PREPARING BUDGET

- **Budget Division** (Dept of Economic Affairs, Ministry of Finance) in **consultation with NITI Aayog** and concerned Ministries

  The first Budget of Independent India was presented in 1947

MAJOR COMPONENTS OF BUDGET

- Estimates of **revenue and capital receipts**
- **Ways and means** to raise the revenue
- Estimates of **expenditure**
- Actual receipts/**expenditures of closing FY** (+ deficit/surplus)
- **Economic/financial policy** of upcoming FY

  Till 2017, the Govt of India had 2 budgets - Railway Budget and General Budget

STAGES OF BUDGET ENACTMENT

- **Presentation**
- **General discussion**
- **Scrutiny** by Dept Committees
- **Voting** on Demands for Grants
- Passing an **Appropriation Bill**
- Passing of **Finance Bill**

What else does the Constitution of India provide for the Budget?

- Without the recommendation of the President:
  - No demand for a grant can be made
  - No money bill imposing tax can be introduced

- No money can be withdrawn from the Consolidated Fund of India except under appropriation made by law

- Role of Parliament:
  - Money/Finance Bill (involving taxation) - introduced only in LS
  - Vote on the demand for grants - RS has no such power
  - Money/Finance Bill - to be returned to LS by RS in 14 days
    - LS may/may not accept the recommendations made by RS

Note:

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What are the Major Highlights of the Union Budget 2024-25?

Budget at a Glance

- 2022-23 (Actuals)
- 2023-24 (Budget Estimates)
- 2023-24 (Revised Estimates)
- 2024-25 (Budget Estimates)

In ₹ crore

Receipts

Revenue:
- 23,83,206
- 26,32,281
- 26,99,713
- 31,29,200

Capital:
- 18,09,951
- 18,70,816
- 17,90,773
- 16,91,312

Expenditure

Revenue:
- 34,53,132
- 35,02,136
- 35,40,239
- 37,09,401

Capital:
- 7,40,025
- 10,00,961
- 9,50,246
- 11,11,111

@PIB_India @PIBHindi @pibindia @pibindia @pibindia @pibindia KBK
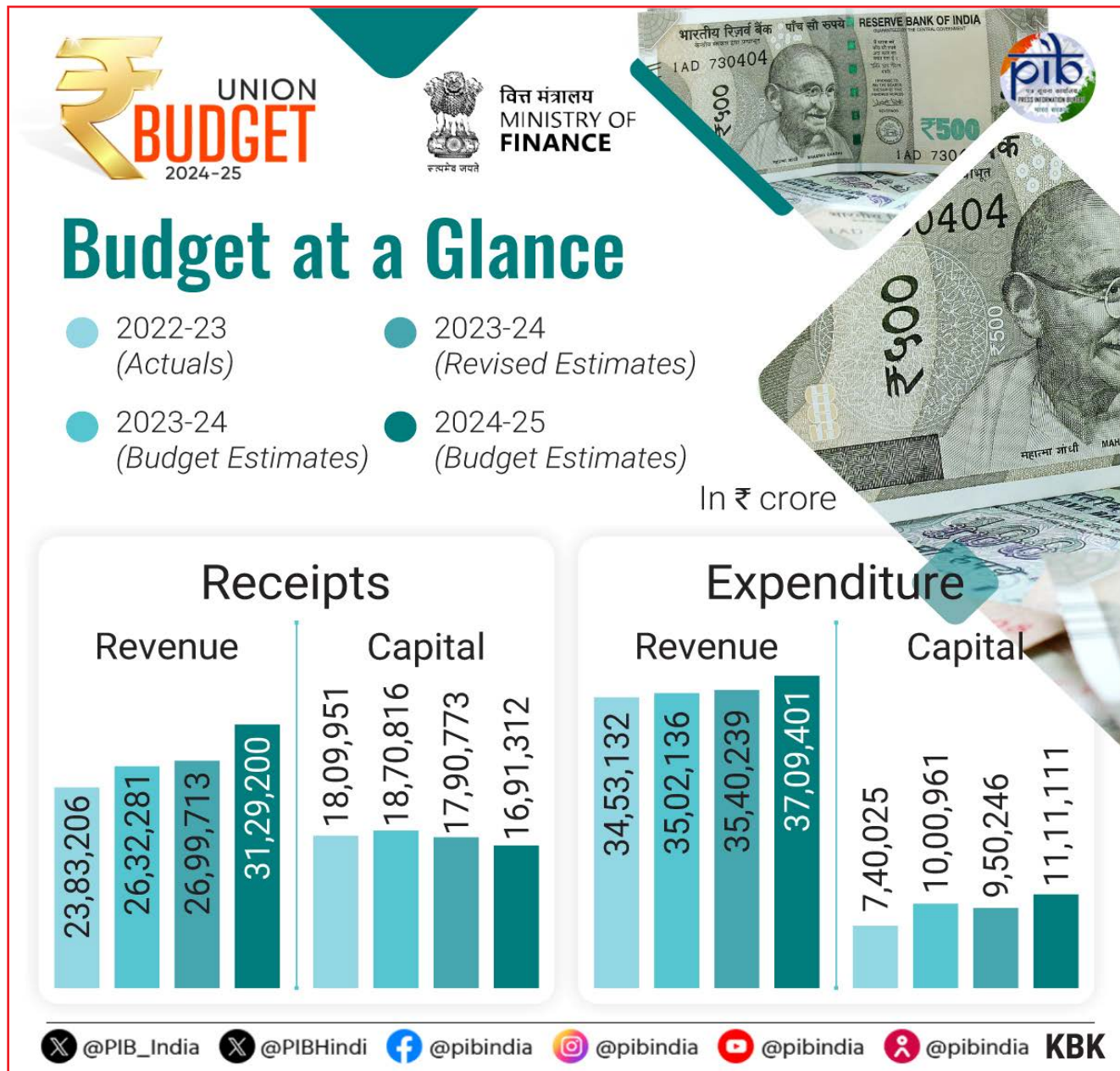
➢ **Focus Area:**
  ○ As outlined in the **Interim Budget**, the focus of the budget remains on four major groups: **'Garib' (Poor), 'Mahilayen' (Women), 'Yuva' (Youth), and 'Annadata' (Farmers)** .

➢ **Budget Theme:**
  ○ The **Union Budget 2024-25** emphasises **employment, skilling, support for MSMEs, and the middle class**. A significant allocation of **Rs 1.48 lakh crore** is earmarked for **education, employment, and skilling.**

➢ **Budget Priorities:**
  ○ The budget prioritizes **nine areas** including **agriculture, employment, human resource development, manufacturing, services, urban development, energy security, infrastructure, innovation, research & development, and next-generation reforms.**

Note:

Budget Priorities

Path of strong development and all-round prosperity

Productivity and resilience in Agriculture	Employment & Skilling	Inclusive Human Resource Development and Social Justice
Manufacturing & Services	Urban Development	Energy Security
Infrastructure	Innovation, Research & Development	Next Generation Reforms

➢ **Priority 1: Productivity and Resilience in Agriculture:**

  ❍ Measures include releasing **new 109 high-yielding crop varieties, promoting natural farming among 1 crore farmers,** establishing 10,000 need-based bio-input bio-input centres, and enhancing production, storage, and marketing of pulses and oilseeds (achieve'atmanirbharta' for oil seeds).

  ❍ A provision of **Rs 1.52 lakh crore** has been announced for agriculture and allied sectors this year.

  ❍ Government along with the states, will facilitate the implementation of the **Digital Public Infrastructure (DPI)** in agriculture for coverage of farmers and their lands in 3 years.

➢ **Priority 2: Employment & Skilling:**

  ❍ The budget introduces schemes like **Employment Linked Incentive** and initiatives to boost skilling with a focus on skilling **20 lakh youth over** a 5-year period **and upgrading 1,000 Industrial Training Institutes**.

    ● Financial support for higher education and loans for skilling are also announced.

Note:

- The **Model Skill Loan Scheme** will be revised to facilitate loans up to **Rs 7.5 lakh** with a guarantee from a government promoted fund, which is expected to help **25,000 students** every year.

➤ **Priority 3: Inclusive Human Resource Development and Social Justice:**

- Enhanced support for economic activities among marginalised groups, including tribal communities and women entrepreneurs, is emphasized.

- The government's **Purvodaya initiative** aims to comprehensively develop the eastern region of India- including **Bihar, Jharkhand, West Bengal, Odisha, and Andhra Pradesh**, focusing on **human resource development, infrastructure enhancement, and economic growth** to advance towards a developed nation.

- The Finance Minister announced the launch of the **Pradhan Mantri Janjatiya Unnat Gram Abhiyan** to enhance the socio-economic conditions of tribal communities, covering **63,000 villages in tribal-majority areas** and **aspirational districts**, benefiting approximately **5 crore tribal people**.

- Over **100 branches of India Post Payment Bank** will be established in the **North East region** to enhance banking services, alongside a provision of **Rs 2.66 lakh crore** allocated for rural development and infrastructure this year.

➤ **Priority 4: Manufacturing & Services:**

- The budget emphasises support for **MSMEs**, focusing on labour-intensive manufacturing, with a new self-financing guarantee fund offering up to **Rs 100 crore** per applicant.

- **Public sector banks** will enhance their internal assessment capabilities for **MSME credit**. Additionally, **Mudra loan** limits will increase to **Rs 20 lakh** for previous **'Tarun' category** borrowers.

- The budget also includes initiatives like setting up **50 food irradiation units, establishing 100 food quality labs, and creating E-Commerce Export Hubs**.

- Furthermore, **a scheme for internships** in 500 top companies aims to benefit **1 crore youth over 5 years.**

➤ **Priority 5: Urban Development:**

- **PM Awas Yojana Urban 2.0**, has been allocated **Rs 10 lakh crore** to address housing needs of **1 crore** urban poor and middle-class families, with **Rs 2.2 lakh crore** in central assistance over 5 years.

- The government will also collaborate with **State Governments and Multilateral Development Banks** to promote **water supply, sewage treatment, and solid waste management** in 100 large cities through bankable projects.

- Additionally, building on the success of **PM SVANidhi**, the government plans to establish **100 weekly street food hubs (haats)** annually over the next five years.

➤ **Priority 6: Energy Security:**

- **PM Surya Ghar Muft Bijli Yojana** aims to install rooftop solar plants for free electricity to **1 crore** households (up to 300 units every month).

- **Nuclear energy** is highlighted as a significant part of India's energy mix.

➤ **Priority 7: Infrastructure:**

- Government will try to maintain strong fiscal support for infrastructure over the next 5 years on this line **Rs 11,11,111 crore** for **capital expenditure** has been allocated this year, which is **3.4% of our GDP.**

- **Phase IV of Pradhan Mantri Gram Sadak Yojana (PMGSY)** to connect **25,000 rural habitations** with all-weather roads due to population growth has been announced.

- For Bihar, under the **Accelerated Irrigation Benefit Programme** and other sources, the government will allocate **Rs 11,500 crore** for projects like the **Kosi-Mechi intra-state link** and 20 other schemes including barrages, river pollution abatement, and irrigation.

- Additionally, financial assistance will be provided to **Assam, Himachal Pradesh, Uttarakhand, and Sikkim for flood management, landslides, and related projects**.

Note:

- ➢ **Priority 8: Innovation, Research & Development:**
  - ○ The government will establish the **Anusandhan National Research Fund** to support basic research and prototype development, allocating **Rs 1 lakh crore** to spur **private sector-driven research and innovation at a commercial scale.**
  - ○ To expand the **space economy** fivefold in the next decade, **a venture capital fund of Rs 1,000 crore** will be established.

- ➢ **Priority 9: Next Generation Reforms:**
  - ○ Plans for an **Economic Policy Framework**, **labour reforms, and simplification** of FDI regulations are outlined to spur economic growth.
  - ○ **Jan Vishwas Bill 2.0** to improve **Ease of Doing Business** will be introduced by the government.

- ➢ **Other Highlights:**
  - ○ **Economic Policy Framework:**
    - The government will formulate an **Economic Policy Framework** to guide economic development and reforms for enhancing employment.
  - ○ Labour related reforms:
    - Implementing comprehensive labour reforms through integrated portals like **e-shram portal, Shram Suvidha and Samadhan portals** will be revamped to enhance ease of compliance for industry and trade.
    - Government will come up with a taxonomy for **climate finance** for enhancing the availability of capital for **climate adaptation and mitigation**.
  - ○ Foreign Direct Investment and Overseas Investment:
    - The rules and regulations for **Foreign Direct Investment and Overseas** Investments will be simplified to facilitate foreign direct investments, nudge prioritisation, and promote opportunities for using Indian Rupee as a currency for overseas investments.
  - ○ NPS Vatsalya
    - A plan for contribution by parents and guardians for minors and on attaining the age of majority, the plan can be converted seamlessly into a normal NPS account.

- ○ New Pension Scheme (NPS)
  - A Committee to review the **NPS** has been constituted to addresses the relevant issues while maintaining fiscal prudence to protect the common citizens.
- ○ **Direct Tax Reforms:** Comprehensive review and simplification of **direct and indirect tax regimes** are proposed.
  - Changes include revised income tax slabs and deductions, simplification of tax compliance, and reforms in capital gains taxation.
- ○ **Custom Duty Reforms: Rationalization of GST and custom duty rates**, exemptions for essential medicines and critical minerals, and measures to promote domestic manufacturing are highlighted.
- ○ **Dispute Resolution:** Initiatives like **Vivad se Vishwas Scheme**, increased monetary limits for appeals, and measures to streamline transfer pricing assessments are aimed at reducing litigation and providing tax certainty.

Expenditure of Major Items

Item	in ₹ Crore
Defence	4,54,773
Rural Development	2,65,808
Agriculture and Allied Activities	1,51,851
Home Affairs	1,50,983
Education	1,25,638
IT and Telecom	1,16,342
Health	89,287
Energy	68,769
Social Welfare	56,501
Commerce & Industry	47,559
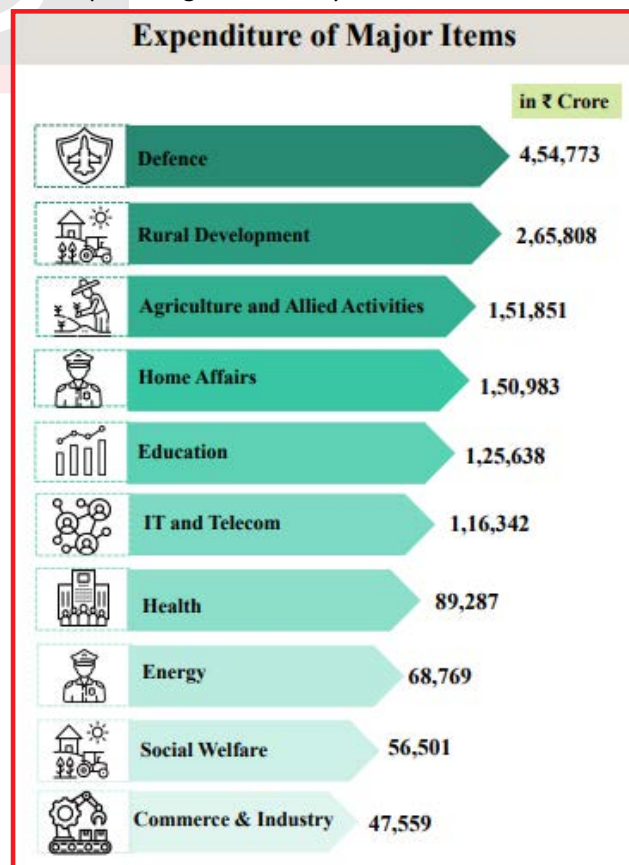
Note:

UNION BUDGET 2024-25

वित्त मंत्रालय
MINISTRY OF FINANCE
सत्यमेव जयते
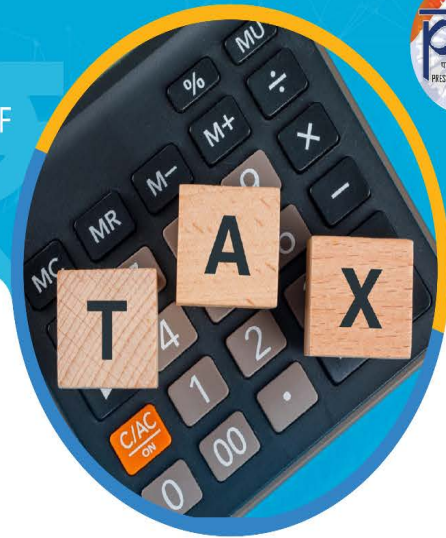
Simplification of IT Act, Tax Reassessment, Capital Gains Taxation

* Income-tax Act, 1961 to be made concise and easy to read

* Opening of Reassessment beyond three years from end of assessment year only if escaped income is ₹ 50 lakh or more, up to a maximum period of five years from end of assessment year

* Time limit for search cases to be reduced from 10 years to 6 years before year of search

* Short-term gains on certain financial assets to be taxed at 20%, Long-term gains on all financial and non-financial assets to be taxed at 12.5%

* Listed financial assets held for more than a year to be classified as long-term

* Vivad Se Vishwas Scheme, 2024 for resolution of certain income tax disputes pending in appeal

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Note:

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UNION BUDGET 2024-25

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सत्यमेव जयते

Tax Relief and Revised Tax Slabs in New Tax Regime

0-3 lakh rupees	Nil
3-7 lakh rupees	5 per cent
7-10 lakh rupees	10 per cent
10-12 lakh rupees	15 per cent
12-15 lakh rupees	20 per cent
Above 15 lakh rupees	30 per cent

- Income tax saving of up to ₹ 17,500/- for salaried employee in new tax regime

Income Tax Relief for around Four Crore Salaried Individuals and Pensioners

- Standard deduction for salaried employees to be increased from ₹ 50,000/- to ₹75,000/-

- Deduction on family pension for pensioners to be increased from ₹ 15,000/- to ₹ 25,000/-

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Budget Estimates 2024-25

➤ For the year 2024-25, the total receipts other than borrowings and the total expenditure are estimated at **Rs 32.07 lakh crore** and **Rs 48.21 lakh crore** respectively.

➤ The **net tax receipts** are estimated at **Rs 25.83 lakh crore** and the **fiscal deficit** is estimated at **4.9%** of GDP. Also, the government will aim to reach a deficit below **4.5%** next year.

➤ The **gross and net market borrowings** through **dated securities** during 2024-25 are estimated at **Rs 14.01 lakh crore and Rs 11.63 lakh crore** respectively.

➤ Budget speech highlighted India's low and stable inflation moving towards the **4% target,** with specific measures to ensure adequate supply of perishable goods.

Key Economic Reforms in the Budget 2024-25

Why in News?

In the **Union Budget 2024-25**, there have been several changes related to the **angel tax**, **equalisation levy** on **e-commerce**, application of capital gains and **Securities Transaction Tax (STT)** and several **new initiatives related MSMEs** sector.

What are the Key Changes in the Budget Regarding Industry?

➤ **Angel Tax:** The government in the Union budget 2024-25 has announced the **abolition of the angel tax.**

   ❍ Angel tax is the tax that must be paid on the funds raised by **unlisted companies** through the issuance of shares in off-market transactions if they **exceed the fair market value** of the company.

   ❍ The angel tax was **introduced in 2012 through the Income Tax Act 1961** with the intent to keep a **check on money laundering practices** through investments in startups.

➤ **Equalisation Levy:** The government has **decided to withdraw the 2% equalisation levy** on the e-commerce supply of goods and services.

   ❍ However, th**e 6% equalisation levy under the Finance Act 2016** for specified digital services, such as online advertising, will remain in effect.

   ❍ In **April 2020, India imposed a 2% equalisation levy** on the revenue generated by **non-resident e-commerce operators** from e-commerce supply or services.

      ● The equalisation levy is aimed at **taxing foreign companies that have a significant local client base in India** but are billing them through their offshore units, effectively escaping the country's tax system.

   ❍ The **levy affected major US digital companies**, leading Washington to propose **retaliatory import tariffs of up to 25%** on several Indian products to offset approximately USD 55 million in taxes.

   ❍ In November 2021, India and the US agreed under the **OECD/G20 Inclusive Framework's two-pillar solution** to address the tax challenges arising from the digitalisation of the economy, leading to the suspension of retaliatory tariffs.

➤ Increased Taxation on Capital Gains and Securities Transaction Tax (STT):

   ❍ The Budget 2024 has revised the rules for determining **long-term capital gains**, **changing the holding periods for various types of capital assets** that qualify for **short-term** or **long-term capital gains.**

   ❍ There will **now be only two holding periods: 12 months for the Short-term and 24 months for the long-term** to determine whether capital gains from assets are short-term or long-term.

      ● However, the proposed holding period **for all listed assets is 12 months** to **qualify for long-term capital gains**.

      ● For all other assets, the holding period will be 24 months to **qualify the gains as long-term capital gains.**

   ❍ The **exemption limit for capital gains on listed equity** and equity-oriented mutual funds has been increased to Rs 1.25 lakh per annum from Rs 1 lakh.

   ❍ Short-term capital gains from all assets, **except listed equity shares and equity mutual funds**, will be taxed according to the investor's tax slab rates.

      ● The **short-term capital gains tax rate for equity shares and equity mutual funds has been increased to 20%**, regardless of the tax slab.

Note:

- ➢ The **STT on the Future and Option (F&O) of securities has been doubled**. For futures, the STT is increased to 0.02%, and for options, it is increased to 0.1%.
  - ○ **Options** and **futures** **are two types of derivatives contracts** that derive their value from market movements for the underlying index, security, or commodity.
  - ○ An **option gives the buyer** the **right**, but not the obligation, to buy (or sell) an asset at a specific price at any time during the life of the contract.
  - ○ A **futures contract obligates the buyer to purchase** a specific asset, and the seller to sell and deliver that asset, at a specific future date.
- ➢ **New Assessment Model and Credit Schemes for MSMEs:**
  - ○ **New Credit Assessment Model for MSME**:
    - ● **Public Sector Banks (PSBs)** are **required to assess MSME credit eligibility** based on **digital footprints** rather than traditional criteria like assets or turnover.
    - ● It will also **cover MSMEs that do not have a formal accounting system.**
  - ○ **Increase in Mudra Loan Limit**:
    - ● The **Mudra loan** limit has been raised from Rs 10 lakh to Rs 20 lakh, and entrepreneurs who have successfully repaid previous 'Tarun' category loans are eligible for the increased limit.
  - ○ **Mandatory Onboarding on the TReDS Platform**:
    - ● The turnover threshold for mandatory onboarding on the **Trade Receivables Discounting System (TReDS)** platform has been **reduced from Rs 500 crore to Rs 250 crore.**
    - ● This move will bring 22 more Central Public Sector Enterprises (CPSEs) and 7,000 additional companies onto the platform, enhancing liquidity and working capital access for MSMEs.
  - ○ **Expansion of SIDBI Branches**:
    - ● The **Small Industries Development Bank of India (SIDBI)** will open new branches in major MSME clusters, with **24 branches to be added this year** and a target of covering 168 out of 242 clusters within three years.

Pradhan Mantri Mudra Yojana

- ➢ The **PMMY (launched in 2015)** provides **collateral-free institutional loans** up to Rs. 10 lakhs for small business enterprises.
- ➢ Funding is provided by Member Lending Institutions (MLIs) i.e. **Scheduled Commercial Banks (SCBs), Regional Rural Banks (RRBs),** Non-Banking Financial Companies (NBFCs) and **Micro Finance Institutions (MFIs).**
- ➢ There are **three loan products** under PMMY:
  - ○ Shishu (loans up to Rs. 50,000)
  - ○ Kishore (loans between Rs. 50,000 and Rs. 5 lakh)
  - ○ Tarun (loans between Rs. 5 lakh and Rs. 10 lakh)

Trade Receivables Discounting System (TReDS)
- ➢ Trade Receivables Discounting System (TReDS) is the **institutional mechanism for facilitating the financing of trade receivables of MSMEs** from corporate and other buyers, including Government Departments and Public Sector Undertakings (PSUs), through multiple financiers.

What are the Implications of the Recent Changes?

- ➢ **Angel tax:**
  - ○ The scrapping of angel tax would help **bolster the Indian start-up ecosystem**, boost the entrepreneurial spirit, and support innovation.
  - ○ The abolition of the angel tax is expected to attract more foreign investors and provide essential capital for start-ups, **especially amid the significant decline in start-up funding.**
    - ● According to the **Indian Tech Startup Funding Report 2023** by Inc42, start-up **funding fell by 60% in 2023 to USD 10 billion.**
- ➢ **Equalisation levy:**
  - ○ The withdrawal of the 2% levy is **expected to reduce compliance burdens** and **create a mutually conducive environment** for non-resident digital companies operating in other jurisdiction.
  - ○ This move is **likely to ease trade tensions between India and the US**, fostering a more collaborative international trade environment.
  - ○ The decision underscores India's commitment to **aligning with global taxation norms and practices**, facilitating a smoother transition to the OECD/G20's Pillar 1 solution.
    - ● **Pillar One ensures a fairer distribution of profits** and taxing rights among countries with respect to the largest multinational enterprises(MNEs), including digital companies.

Note:

➢ **Increase in STT:**
- ❍ It could lead to **reduced speculative trading**, thereby cooling down market activity.
  - ● The increase in STT **aims to curb the exponential rise in volumes in the F&O segment**, which the **Securities and Exchange Board of India (SEBI) and the Reserve Bank of India (RBI)** have flagged as a potential risk to macroeconomic stability.
  - ● High volumes in derivatives can **pose systemic risks and affect capital formation**, investment, and economic growth.
- ❍ The new tax rates are likely to increase compliance costs for traders and investors while generating additional revenue for the government.

➢ **MSMEs:**
- ❍ The shift to a **digital footprint-based assessment model will facilitate easier credit access for MSMEs**, especially those without formal accounting systems.
- ❍ The increased Mudra loan limit and the introduction of a collateral-free credit guarantee scheme will enhance financial support for MSMEs, enabling them to upgrade technology, invest in new machinery, and improve competitiveness.
- ❍ Lowering the threshold for mandatory onboarding on the TReDS platform will **improve liquidity for smaller enterprises** by allowing them to convert trade receivables into cash more efficiently.
- ❍ Expanding **SIDBI** branches will ensure that **MSMEs in major clusters have better access to financial services**, facilitating their growth and development.

Schemes in Budget 2024 for Rural and Tribal Development

Why in News?

Recently, the **Union Budget** 2024-25 was presented in the **Parliament**. It was the first general budget of the **18th Lok Sabha**.

➢ In this budget, the government has announced several measures for rural development (**PMGSY**) and tribal welfare like **PM Janjatiya Vikas Mission (PMJVM).**

What is Pradhan Mantri Gram Sadak Yojana (PMGSY) ?

➢ **About: Launched** on 25th December 2000, to provide **all-weather road connectivity** to unconnected habitations.

- ❍ **Eligibility:** Unconnected habitations with a **population of 500+ in plain areas** and **250+ in North-Eastern, Himalayan, Desert, and Tribal Areas** (as per the 2001 census).
  - ● Unconnected Habitation is a habitation located at least 500 metres (1.5 km in hills) from an all-weather road.
- ❍ **Core Network:** The essential network of roads required to provide basic access to social and economic services through at least one all-weather road.
- ❍ **Funding Pattern:** The **Union Government covers 90% of project costs in North-Eastern and Himalayan States**, and **60% in other states**, with allocations based on sanctioned project values.
- ❍ **Construction Standards:** Rural roads are constructed according to the **Indian Roads Congress (IRC)** guidelines, which have been the apex body of highway engineers since 1934.

➢ **PMGSY - Phase I:**
- ❍ It was launched in **2000** as a **100% centrally sponsored scheme.**
- ❍ Under the scheme, 1,35,436 habitations were targeted for providing road connectivity and **3.68 lakh km** for the upgradation of existing rural roads to ensure full farm-to-market connectivity.

➢ **PMGSY - Phase II:**
- ❍ It was launched in **2013** for the upgradation of **50,000 km of the existing rural road** network to improve its overall efficiency.
- ❍ While the ongoing PMGSY - I continued, under PMGSY phase II, the roads already built for village connectivity were to be upgraded to enhance rural infrastructure.
- ❍ The cost was shared between the centre and the states/UTs.
- ❍ **Road Connectivity Project for Left Wing Extremism Affected Areas (RCPL WEA)**, was launched in **2016** for the construction of rural roads in LWE areas.

➢ **PMGSY - Phase III:**
- ❍ It was approved by the Cabinet in **July 2019.**
- ❍ It gives priorities to facilities like:
  - ● **Gramin Agricultural Markets (GrAMs):** The retail agricultural markets c**lose to the farm gate, t**hat promote and service a more efficient transaction of the farmers' produce.
  - ● Higher Secondary Schools and
  - ● Hospitals.
- ❍ Under this, it is proposed to consolidate **1,25,000 km of road** length in the States. The duration of the scheme is **2019-20 to 2024-25.**

Note:

- ➤ **Progress of the Scheme:** It has already **completed over 7 lakh km** of roads out of a sanctioned 8.25 lakh km with an investment of **Rs. 2,70,000 crore**. Additionally, a total of **1,61,561 unconnected habitations** have been provided all-weather road connectivity under PMGSY.
- ➤ **PMGSY - Phase IV:**
  - ❍ **Phase IV** of **Pradhan Mantri Gram Sadak Yojana (PMGSY)** has been announced in **the Union Budget 2024-25** to connect **25,000 villages** with **all-weather roads**.
  - ❍ An amount of **Rs 19,000 crore** has been allocated for this for the **FY 2024-25 (FY-25).**

Indian Roads Congress (IRC)
➤ It was **established in 1934 with the aim of advancing road infrastructure in India** by uniting professionals and stakeholders in road development.   ➤ Its key functions include setting standards, conducting research, and hosting knowledge-sharing events.   ➤ Its membership **spans government, private industry, and academia.**   ➤ It influences national road policies, supports bodies like the **National Highway Authority of India (NHAI)**, and advocates for sustainable and environmentally friendly practices in road construction and maintenance.

What are the Key Highlights of the Union Budget 2024 Regarding Tribal Development?

- ➤ **Launch of Pradhan Mantri Janjatiya Unnat Gram Abhiyan (PM JUGA):**
  - ❍ The launch of the **PM JUGA Scheme** marks a major effort to improve the living standards of tribal families in 63,000 villages.
  - ❍ The scheme will emphasise **"saturation coverage" in tribal-majority villages** and aspirational districts. It is anticipated to **benefit around 5 crore tribal** individuals by improving their access to essential services and socio-economic opportunities.
- ➤ **Budget Allocation for Different Schemes Related to Tribals:**
  - ❍ **Eklavya Model Residential Schools (EMRS)** aimed at providing quality education to ST students have been allocated **Rs 6,399 crore**, an increase of Rs 456 crore from FY 2023-24.
    - ● EMRS is a scheme for **model residential schools for STs** across India, **started in 1997-98** under the **Ministry of Tribal Affairs**.
    - ● The aim is to build schools on par with **Jawahar Navodaya Vidyalayas** and **Kendriya Vidyalayas**,

with a focus on **preserving local art, culture, sports, and skill development**.

- ❍ **Post-Matric Scholarship for ST Students** allocation has increased from Rs 1,970.77 crore to **Rs 2,432.68 crore.**
- ❍ **The Prime Minister's Janjati Vikas Mission (PMJVM)** has faced a **budget reduction of Rs 136.17 crore** this year.
  - ● PMJVM aims to **strengthen tribal entrepreneurship,** facilitate livelihood opportunities, and promote efficient, equitable, self-managed, and optimal use of natural resources, Agri/Non-Timber Forest Products (NTFPs)/ Non-farm enterprises.
- ❍ The **PM DAKSH scheme** allocation has been raised from Rs 92.47 crore to **Rs 130 crore.**
  - ● It is a central sector scheme by the **Department of Social Justice and Empowerment** aimed at providing skills training to individuals from SC and ST.
- ❍ **The National Overseas Scholarship Scheme for Scheduled Castes** allocation has been **increased to Rs 95 crore from Rs 50 crore**, enhancing financial support for higher education in foreign universities.
- ❍ The **NAMASTE scheme** received an **increased allocation of Rs 116.94 crore** in FY24, up from Rs 97.41 crore in FY23.
  - ● NAMASTE stands for **National Action for Mechanised Sanitation Ecosystem.**
  - ● Launched in **2022**, the NAMASTE Scheme is a **Central Sector initiative** replacing the **Self-Employment Scheme for the Rehabilitation of Manual Scavengers (SRMS)** from 2007. It will be implemented across over 4,800 Urban Local Bodies (ULBs) until 2025-26.
  - ● It has been launched **to ensure the safety and dignity of sanitation workers** in urban areas **by eradicating manual scavenging** through mechanised sewer cleaning in India as well as providing sustainable livelihood to these workers.
- ❍ **Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN)**, launched in **Union Budget 2023**, has been continued with the allocation of Rs 25 crores in **Union Budget 2024**.
  - ● It aims to provide **essential amenities** such as secure housing, clean drinking water, sanitation, improved access to education, health, and nutrition, as well as enhanced road and telecom connectivity, and sustainable livelihood opportunities to **PVTGs** households and habitats.

Note:

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UNI₹N BUDGET

A **statement of the estimated receipts and expenditure** of the Govt in an FY

ARTICLE 112 (PART V)

- **President of India** to present the **Annual Financial Statement** for each FY before both Houses of Parliament

  The term 'Budget' is not mentioned anywhere in the Constitution of India

NODAL BODY FOR PREPARING BUDGET

- **Budget Division** (Dept of Economic Affairs, Ministry of Finance) in **consultation with NITI Aayog** and concerned Ministries

  The first Budget of Independent India was presented in 1947

MAJOR COMPONENTS OF BUDGET

- Estimates of **revenue and capital receipts**
- **Ways and means** to raise the revenue
- Estimates of **expenditure**
- Actual receipts/**expenditures of closing FY** (+ deficit/surplus)
- **Economic/financial policy** of upcoming FY

  Till 2017, the Govt of India had 2 budgets - Railway Budget and General Budget

STAGES OF BUDGET ENACTMENT

- Presentation
- **General discussion**
- **Scrutiny** by Dept Committees
- **Voting** on Demands for Grants
- Passing an **Appropriation Bill**
- Passing of **Finance Bill**

What else does the Constitution of India provide for the Budget?

- **Without the recommendation of the President:**
  - No demand for a grant can be made
  - No money bill imposing tax can be introduced

- No money can be withdrawn from the Consolidated Fund of India except under appropriation made by law

- **Role of Parliament:**
  - Money/Finance Bill (involving taxation) - introduced only in LS
  - Vote on the demand for grants - RS has no such power
  - Money/Finance Bill - to be returned to LS by RS in 14 days
    - LS may/may not accept the recommendations made by RS

Note:

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What were the Other Schemes and their Allocations Announced in the Union Budget 2024-25?

➢ **Pradhan Mantri Awas Yojana (PMAY)**:

○ **Objective of PMAY-G:** To provide affordable housing to the underprivileged, with a **total target of 2.95 crore rural houses** since its **launch in 2016.** As of July 2024, nearly **2.94 crore houses** have been sanctioned.

○ **Unit Cost Increase:** The government has decided to **increase the unit cost** under **PMAY-G** from Rs 1.2 lakh to **Rs 2 lakh in plain areas**, and from Rs 1.3 lakh to Rs 2.20 lakh in Integrated Action Plan (IAP) districts, hilly regions, and difficult areas **from 2024-25 onward.**

● IAP is a government initiative in India aimed at promoting development in certain underserved areas.

○ **Target and Allocation: 3 crore additional houses** under PMAY in rural and urban areas.

● Of these, **2 crore homes will be constructed in villages** under **PMAY-Gramin (PMAY-G)** with an allocation of **Rs 54,500 crore.**

➢ **Jal Jeevan Mission (JJM) (Rural):** **Allocation**: Rs 69,926.65 crore.

○ **Objective:** To provide a **safe and adequate drinking water supply to all rural** households, enhancing public health and sanitation.

○ **About JJM:** Launched in **2019**, it envisages a supply of **55 litres** of water **per person per day** to every **rural household** through **Functional Household Tap Connections (FHTC) by 2024.**

○ **Achievement:** It has provided tap water connections to **15 crore rural households** nationwide. It has rapidly increased rural tap connection coverage **from 3 crore to 15 crore between 2019 and 2024**. **8 states and 3 Union Territories** have achieved **100% coverage**, with others like Bihar, Uttarakhand, Ladakh, and Nagaland making substantial progress.

Aim

○ To provide **55 litres of water per person per day to every rural household by 2024** through Functional Household Tap Connections (FHTC).

Implementation

○ **Ministry of Jal Shakti:** Nodal Ministry
○ **Paani Samitis:** Build, operate, manage, and maintain village water supplies.
  ○ **Members:** 10-15 (At least **50%** Women)
○ **Goa and Dadra & Nagar Haveli and Daman & Diu (D&NH and D&D)** are the first 'Har Ghar Jal' certified State and UT in the country respectively.

Funding Pattern

○ **Centrally Sponsored Scheme**
  ○ **Centre:** Himalayan and North-Eastern States - **90:10**
  ○ **Centre:** Other States - **50:50**
  ○ **100%** by the Centre for Union Territories

Major Components

○ Bottom-up Planning
○ Women Empowerment
○ Focus on Future Generation
○ Skill Development & Employment Generation
○ Greywater Management
○ Source Sustainability

Har Ghar Jal

Jal Jeevan Mission

Launched on 15th August 2019

Note:

➢ **Rural Land Reforms:**
- ❍ **Objective:** These reforms aim to **facilitate credit flow** and **improve land management**, thereby **enhancing agricultural productivity.**
- ❍ Reforms:
  - Assignment of Unique Land Parcel Identification Numbers **(Bhu-Aadhaar)**.
  - Digitization of cadastral maps.
  - Survey of map subdivisions based on current ownership.
  - Establishment of a land registry.
  - Linking land records to a farmers' registry.

What is the Jal Jeevan Mission (Urban)?

➢ In the **Budget 2021-22**, **Jal Jeevan Mission (Urban)** was announced under the MInistry of Housing of Urban Affairs to provide universal coverage of water supply to all households in **urban areas** through functional taps in all statutory towns in accordance with **Sustainable Development Goal- 6.**

➢ It complements the **Jal Jeevan Mission (Rural)**.

➢ **Objectives of Jal Jeevan Mission (Urban):**
- ❍ Securing tap and sewer connections.
- ❍ Rejuvenation of water bodies.
- ❍ Creating a circular water economy.

Agriculture-Related Initiatives in Union Budget 2024-25

Why in News?

In the **Union Budget 2024-25**, the Finance Minister announced the allocation of Rs 500 crore for providing drones to **women self-help groups (SHGs)** under the **Namo Drone Didi scheme**, along with support for one crore farmers to adopt natural farming practices.

What are the Key Initiatives in the Field of Agriculture?

➢ **Namo Drone Didi Scheme:**
- ❍ **The scheme was launched in March 2024** and aims to **provide drones to 15,000 selected women** SHGs for offering rental services to farmers.
  - The implementation period spans from 2023-24 to 2025-26.
  - Rs 500 crore has been earmarked for this initiative under the Union budget 2024-25.
- ❍ This scheme will **empower women in rural areas by integrating them into the technological advancements** in agriculture, thus fostering entrepreneurship.
- ❍ Drones will **enhance farming efficiency through precision agriculture**, leading to better crop management and yield optimisation.

➢ **Support for Natural Farming:**
- ❍ One crore farmers will be encouraged to adopt **natural farming practices**, supported by certification and branding.
  - **Natural farming** is an agricultural practice that **emphasises minimal intervention** and the use of natural resources to cultivate crops.
- ❍ This will be carried out through scientific institutions and willing **gram panchayats**.
- ❍ Under the **National Mission on Natural Farming**, **Rs 365.64 crore has been allocated for 2024-25**.
  - 10,000 need-based bio-input resource centres will be established.

➢ **Jan Samarth-based Kisan Credit:**
- ❍ The issuance of **Jan Samarth-based Kisan Credit** will be enabled in states, streamlining access to 13 government schemes through a single-window online platform.

➢ **Pulses, Oilseeds, and Vegetable Production:**
- ❍ A strategy is being formulated to **achieve self-sufficiency ('atmanirbharta') in pulses** and **oilseeds production**, which is crucial as India currently relies heavily on imports for edible oil.
- ❍ **Large-scale clusters for vegetable production will be developed** near major consumption centres.
  - This includes promoting **farmer-producer organisations,** cooperatives, and startups for efficient supply chains.

Note:

➢ **National Cooperation Policy and Rural Economy:**

○ The government announced a **National Cooperation Policy** for systematic and orderly all-round development of the **cooperative sector**.

○ Fast-tracking the growth of the rural economy and the generation of employment opportunities on a large scale will be the policy goal.

➢ **Shrimp Production and Export:**

○ India is one of the **world's largest shrimp exporters**.

● In 2022-23, India's seafood exports stood at USD 8.09 billion and shrimps accounted for a bulk of these exports at USD 5.6 billion.

○ Further financial support will be provided for **setting up a network of nucleus breeding centres** for **shrimp broodstocks, enhancing shrimp production** and export capabilities.

Other Initiatives Related to Agriculture
➢ **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)**
➢ **National Mission on Sustainable Agriculture**
➢ **Paramparagat Krishi Vikas Yojana (PKVY)**
➢ **Sub-mission on AgroForestry (SMAF)**
➢ **Rashtriya Krishi Vikas Yojana**
➢ **AgriStack**
➢ **Digital Agriculture Mission**
➢ **Unified Farmer Service Platform (UFSP)**
➢ **National e-Governance Plan in Agriculture (NeGP-A)**

India's Lithium Mining Challenges

Why in News?

India's efforts to **secure domestic lithium resources** have hit a roadblock as the Ministry of Mines cancelled the auction for a **lithium block in Jammu and Kashmir's Reasi district** for the second time.

➢ The repeated setback has officials weighing the need for **further exploration before attempting another auction.**

What are the Key Points About the Lithium Block in J&K's Reasi District?

➢ **Estimated Resources:** In February 2023, the **Geological Survey of India (GSI)** established **lithium-inferred resources of 5.9 million tonnes** in the Reasi district in Jammu and Kashmir (J&K), which is essential for various applications, particularly in **electric vehicle (EV) batteries.**

○ This discovery makes **India the seventh-largest source of lithium globally**.

➢ **Auction Attempts:** The first auction attempt took place in November 2023 but was annulled on March 13 due to fewer than three bidders qualifying.

○ A second auction attempt was made but was again annulled due to no bidders qualifying.

➢ **Regulatory Framework:** According to the **Mineral (Auction) Rules, 2015,** the auction can proceed to a **second round even if fewer than three bidders qualify.** However, in this case, no bidders met the qualification criteria.

○ The **second auction attempt saw no qualified bidders**, which highlights the extent of investor hesitation.

➢ **Reasons for Investor Hesitation:**

○ **Clay Deposits:** The J&K lithium reserves are primarily **clay deposits**, which have not yet been commercially proven on a global scale. The path to commercialisation for such deposits is **uncertain and may take longer time.**

○ **Lack of Beneficiation Study:** The absence of a beneficiation study to evaluate the **feasibility of extracting and processing lithium** has raised concerns among potential bidders about the economic viability of the project.

○ **Sub-Par Reporting Standards:** The auction documents have been criticised for **providing limited information about the block**.

● Prospective bidders have expressed concerns about the block's small size and the inadequacy of the data for applying modern mineral systems-based tools.

Note:

○ **Exploration Stage Ambiguities**: The primary reason for the low bid interest is the block's exploration status, which is currently at the **G3 level according** to the **United Nations Framework Classification for Resources (UNFC)**.

● This level of exploration provides **preliminary and less confident estimates of the mineral reserves,** which deters investors due to the high risk and uncertainty associated with such investments.

○ **Economic Viability Concerns:** The extraction of **lithium is expensive, and with global lithium prices falling,** investors are wary of potential financial losses.

● The current reporting standards do not provide enough clarity on the project's profitability, further deterring investment.

○ **Reserve Price:** The reserve price set for the second auction attempt was based on the highest initial bid offer from the previous round. If this reserve price was deemed too high relative to the perceived value or risk of the block, it could have deterred potential bidders.

United Nations Framework for Classification of Resources (UNFC)

The UNFC provides a structured approach to classifying mineral resources based on the stage of exploration and the confidence in the estimates. The classification is divided into four stages:

➢ **G4-Reconnaissance:** This is the initial stage of exploration, involving regional assessments and limited subsurface sampling.

○ **Confidence Level:** Estimates are of low confidence, providing only preliminary information about the potential quantity and grade of the mineral resources.

➢ **G3-Prospecting:** At this stage, preliminary exploration is conducted to assess the potential of the mineral deposit further.

○ **Confidence Level:** Estimates remain of low confidence, with continued uncertainty about the true value and extent of the mineral resources.

➢ **G2-General Exploration:** This stage involves more detailed exploration and sampling, providing a moderate level of confidence in the estimates.

○ **Confidence Level:** The assessments offer a more reliable estimate of the mineral resources but are still not fully detailed.

➢ **G1-Detailed Exploration:** The most advanced stage of exploration involves comprehensive investigations, extensive sampling, and direct analysis.

○ **Confidence Level:** Estimates at this stage are of high confidence, providing accurate and reliable data about the quantity and quality of the mineral resources.

What is the Status of Lithium Exploration in India?

➢ **Successful Auction in Chhattisgarh:** India's first successful lithium auction took place in **Korba district, Chhattisgarh.** The block was auctioned to Maiki South Mining Pvt Ltd in June 2024.

○ The bid included a premium of 76.05%, reflecting strong interest and competitive bidding.

○ **Additional Findings in Korba:** A private exploration company funded by the **National Mineral Exploration Trust (NMET)** has identified hard rock lithium deposits in Korba, with concentrations ranging from 168 to 295 parts per million (ppm).

➢ **Challenges in Other States:**

○ **Manipur:** Lithium exploration efforts in Kamjong district have been **stalled due to local resistance.** The NMET committee has decided to pause further actions in this area.

○ **Ladakh:** Exploration in the Merak block near the India-China border has yielded disappointing results, leading the NMET committee to suggest dropping the exploration efforts there.

○ **Assam:** Exploration in Dhubri and Kokrajhar districts has not been promising, with the NMET recommending against further upgrades or exploration in these areas.

Note:

Lithium exploration

Between Field Season (FS) 2016-17 to FS 2021-22, the Geological Survey of India has explored 19 mineral blocks/belts for lithium. Of these, 15 are in the G4 stage, 3 in the G3 stage and one in the G2 stage as of March 2022.
Locations approximate

■ G4 ■ G3 ■ G2
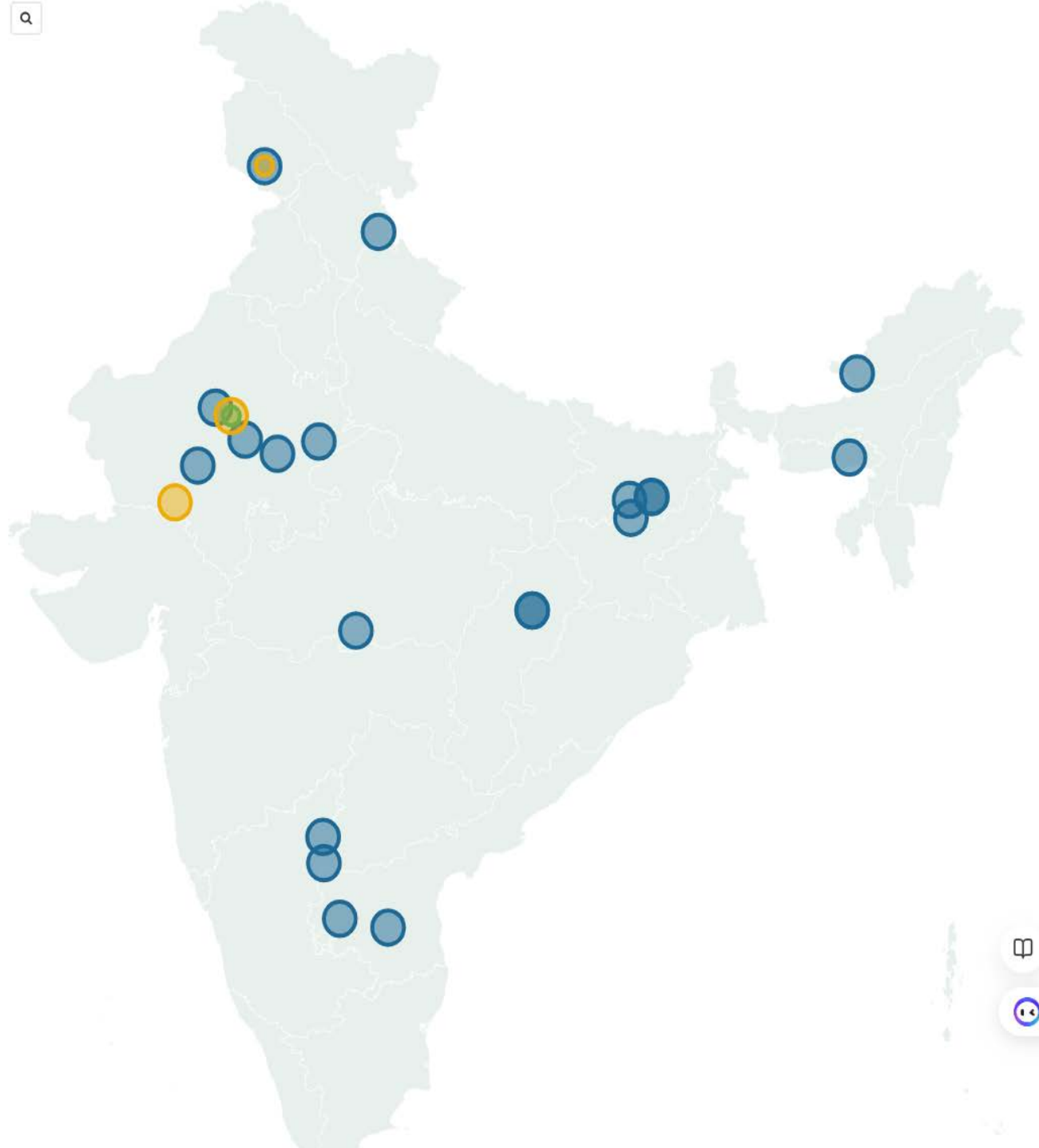
Note:

Significance of Lithium for India

➢ Lithium is a **soft, silvery-white alkali metal with high reactivity, low density**, and excellent electrochemical properties.

    ❍ It is found naturally in various minerals and is extracted and refined into lithium metal or its compounds.

➢ India has pledged to reduce its emissions towards **net-zero by 2070,** requiring lithium as a critical component in EV batteries, and **renewable energy storage systems.**

    ❍ India needs **27 GW of grid-scale battery energy storage systems by 2030,** requiring massive amounts of lithium.

    ❍ The **World Economic Forum** warns of global lithium shortages due to rising demand for EVs and rechargeable batteries, estimated to reach **2 billion by 2050.** The world's lithium supply is under strain, with **54% of reserves in Argentina, Bolivia, and Chile.**

➢ Lithium's role in green technologies and energy storage makes it a vital resource as countries aim to meet climate goals and transition to cleaner energy.

➢ India imports **70–80% of its lithium and 70% of its lithium-ion from China,** which could put its growth and domestic industries at risk if tensions between the countries continue.

What are the Challenges in Extraction and Investment of Lithium in India?

➢ **Extraction Challenges:** Lithium extraction from hard rock pegmatite deposits is difficult, requiring specialised technology and expertise. Extracting lithium from pegmatite ores involves multiple complex and costly processing stages.

    ❍ **Environmental Concerns:** Lithium extraction, particularly through **open-pit mining, can have substantial environmental impacts,** including habitat destruction and pollution. Proper management and mitigation measures are required to minimise these effects.

    ❍ **Transportation:** In remote areas like J&K's Reasi district, inadequate infrastructure for **transportation and logistics** can hinder efficient extraction and increase costs.

    ❍ **Nascent Industry:** India's lithium sector is still developing, with **substantial time required to establish a functional mining and processing infrastructure.**

        ● Lithium projects, especially from brine assets, typically **take 6 to 7 years from discovery to production,** according to the **International Energy Agency (IEA).**

    ❍ **Lack of Processing Infrastructure:** China currently dominates the lithium processing sector, **handling 65% of the global market. India lacks a foothold in this critical area.**

    ❍ **Limited Domestic Expertise:** India's **limited experience in developing mining assets abroad** and its nascent expertise in lithium mining contribute to challenges in accelerating domestic projects.

➢ **Investment Challenges:** India's current mineral reporting standards, based on the **United Nations Framework Classification for Resources (UNFC),** do not align with the **Committee for Mineral Reserves International Reporting Standards (CRIRSCO)** used globally.

    ❍ The UNFC standards lack the detail needed to assess economic viability comprehensively.

    ❍ **Local Tensions:** The ethnic and religious tensions could complicate efforts to attract investment and manage resource development. Past conflicts and ongoing violence make the area particularly unstable.

Note:

○ **Global Competition and Dependency:** China controls **77% of the global lithium-ion battery manufacturing capacity**, creating a strategic challenge for other nations, **including India,** which seeks to reduce its dependency on Chinese supplies.

● Investors have multiple opportunities in the global mining market. If other regions offer more attractive or lower-risk opportunities, investors might prioritise those over the regions like the J&K lithium block.

Report on Currency and Finance (RCF) 2023-24

Why in News?

As per the **'Report on Currency and Finance (RCF)** for the year 2023-24' released by the **Reserve Bank of India (RBI)**, India's digital economy is set to constitute **20% of the country's GDP by 2026**, doubling its current contribution of 10%.

➢ This significant growth projection **underscores the transformative potential of digitalization in finance** and its far-reaching impact on India's economy.

What is the Report on Currency and Finance?

➢ **About:**
  ○ It is an **annual publication of the RBI.**
  ○ The report **covers various aspects** of the Indian economy and financial system.

➢ **Theme:**
  ○ The theme of the "Report is **"India's Digital Revolution."**
    ● It focuses on the **transformative impact of digitalization** across various sectors in India, particularly in the financial sector.

➢ **Dimensions:**
  ○ It highlights how digital technologies are r**eshaping economic growth, financial inclusion, public infrastructure**, and the regulatory landscape, while also addressing the associated opportunities and challenges.

What are the Key Highlights from the Report on Currency and Finance 2023-24?

➢ **Expansion of Financial Services**: The evolution and adoption of technological advancements have led to **massive improvement** in deepening of digital financial services.
  ○ The potential for expanding financial inclusion in India by application of digital technologies is high in view of existing conditions.
    ● First, the progress of financial inclusion in India is evident in the Reserve Bank's **Financial Inclusion Index** and narrowing account access gap between income groups.
    ● Second, in **rural India, 46% of the population consists of wireless phone** subscribers and 54% are active internet users.
    ● Third, given that more than half of FinTech consumers are from semi-urban and rural India and **more than a third of digital payment users are from rural areas** there is potential for furthering digital penetration and closing the rural-urban gap.

➢ **Over two lakh gram panchayats** have been connected through **BharatNet** in the last decade, enabling provision of services like e-health, e-education and e-governance in rural areas.

➢ **Mobile Penetration**: Although internet penetration in India was at 55% in 2023, the internet user base has grown by 199 million in the recent three years.
  ○ **India's cost per gigabyte (GB) of data** consumed is the **lowest globally** at an average of Rs. 13.32 per GB.
  ○ India also has **one of the highest mobile data consumption** in the world, with an **average per-user per-month consumption of 24.1 GB in 2023.**
  ○ There are **about 750 million smartphone users**, which is expected to reach about one billion by 2026.
  ○ India is expected to be the **second largest smartphone manufacturer** in the next five years.

Note:

Chart I.4: Digitally Connected Population in India

Number in million

- UPI unique users
- Social media users
- Smartphone users
- Internet subscriptions
- Wireless subscriptions
- *Aadhaar* issued
- Total population

Indicator	Number in million
UPI unique users	424
Social media users	467
Smartphone users	750
Internet subscriptions	954
Wireless subscriptions	1165
Aadhaar issued	1380
Total population	1410
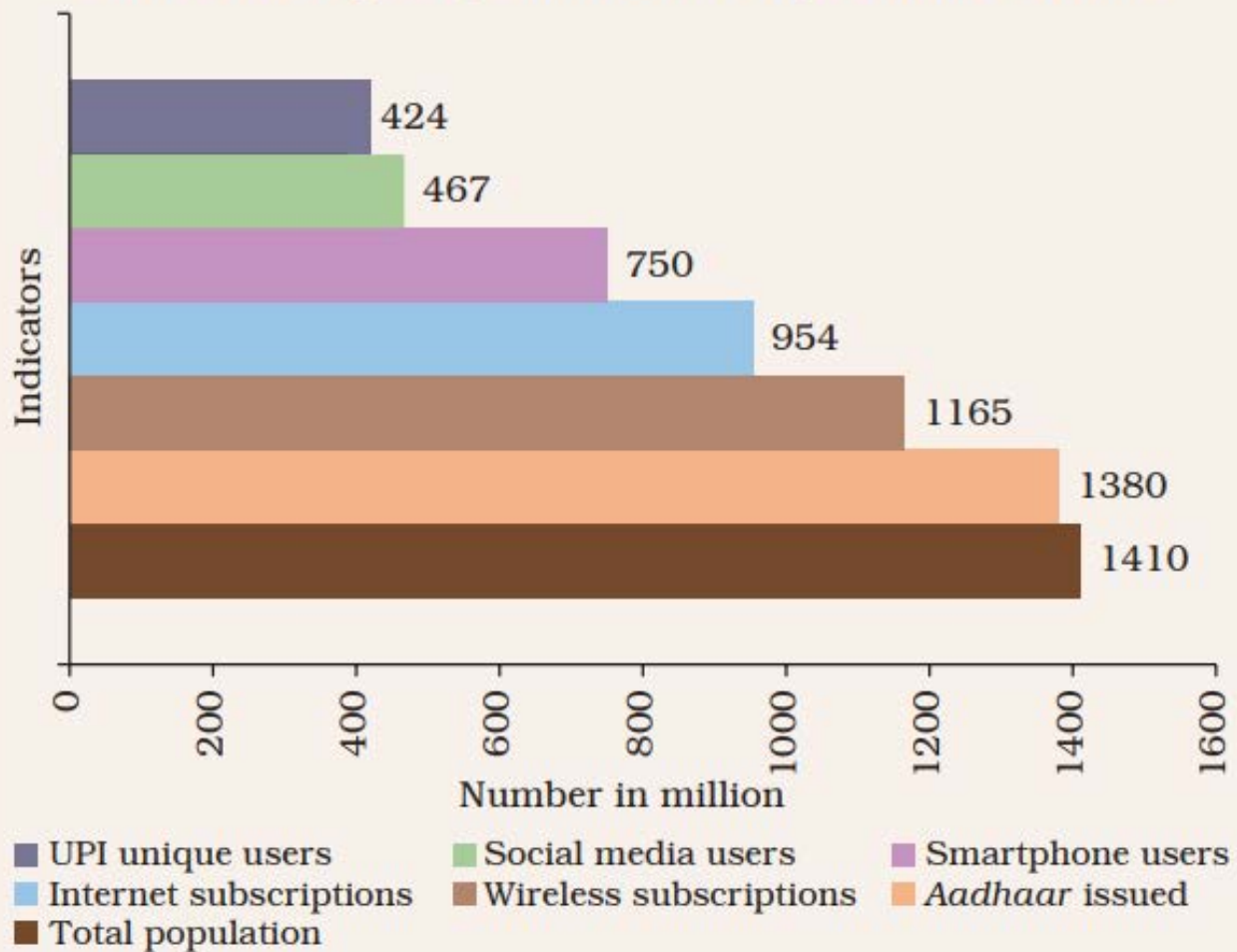
Note: Data for wireless subscriptions, internet subscriptions, smartphone users and social media users are not unique, *i.e.*, one individual may be holding multiple subscriptions.

Source: *Jan Dhan* Dashboard, Telecom Regulatory Authority of India (TRAI), Statista and RBI staff estimates.

➤ **Digital Economy:** The digital economy currently **accounts for 10% of India's GDP.**
  ○ By 2026, **this figure is expected to double, contributing to 20% of GDP,** driven by rapid advancements in **digital infrastructure** and financial technology.
  ○ Digitization is **strengthening banking infrastructure** and public finance systems, optimising direct benefit transfers and tax collections.
➤ **India Stack:** Key components such as **Aadhaar, Unified Payments Interface (UPI), and DigiLocker** have revolutionised service delivery. UPI has seen a tenfold increase in transactions over four years.
  ○ **Aadhaar**: The world's **largest biometric-based identification system**, covering 1.38 billion ID holders.
  ○ **UPI**: A real-time, low-cost transaction platform contributing significantly to financial inclusion.
  ○ **DigiLocker**: Cloud-based storage providing secure document access.

Note:

Chart I.6: India Stack – Schematic Presentation

DPI Rails	Developers	Main Components				
Data Exchange	MeitY; RBI	DigiLocker	Account Aggregator			Beckn
Payments	RBI; NPCI	UPI	NETC FASTags	NACH	AePS	BBPS
Identity	UIDAI; Government Depts.	Aadhaar	PMJDY RuPay	e-KYC	e-Sign	GSTN
DPI Enablers	Telecom; Big Techs; FinTechs	Internet	Mobiles	Data Storage		Computing
DPI Principles	Open	Scalable	Common Standard	Public	Trust	Private Innovations

Source: RBI staff illustration.

➤ **Internationalisation of Digital Public Infrastructure**: India's DPI is going global by:
  ❍ Collaborating with other nations to develop digital identity solutions under the **Modular Open Source Identity Platform (MOSIP) programme.**
  ❍ Interlinkage of the UPI with fast payment systems of other nations like Singapore's PayNow, the United Arab Emirates' (UAE) Instant Pay Platform (IPP) and Nepal's National Payments Interface (NPI) for **cost-effective and fast remittances.**

Note:

drishti

❍ Partnering with other central banks and foreign payment service providers to **broaden UPI and RuPay acceptance** beyond geographical borders, such as in countries like Bhutan, Mauritius, Singapore and the UAE.

❍ Sharing the **Beckn protocol with nations** to provide their public and private services through open, lightweight and decentralised specifications.

● Beckn Protocol **enables the creation of open**, peer-to-peer decentralised networks for pan-sector economic transactions.

Chart I.10: Global Footprint of India's DPI

■ UPI and *RuPay*　　　■ MOSIP digital identity　　　■ UPI
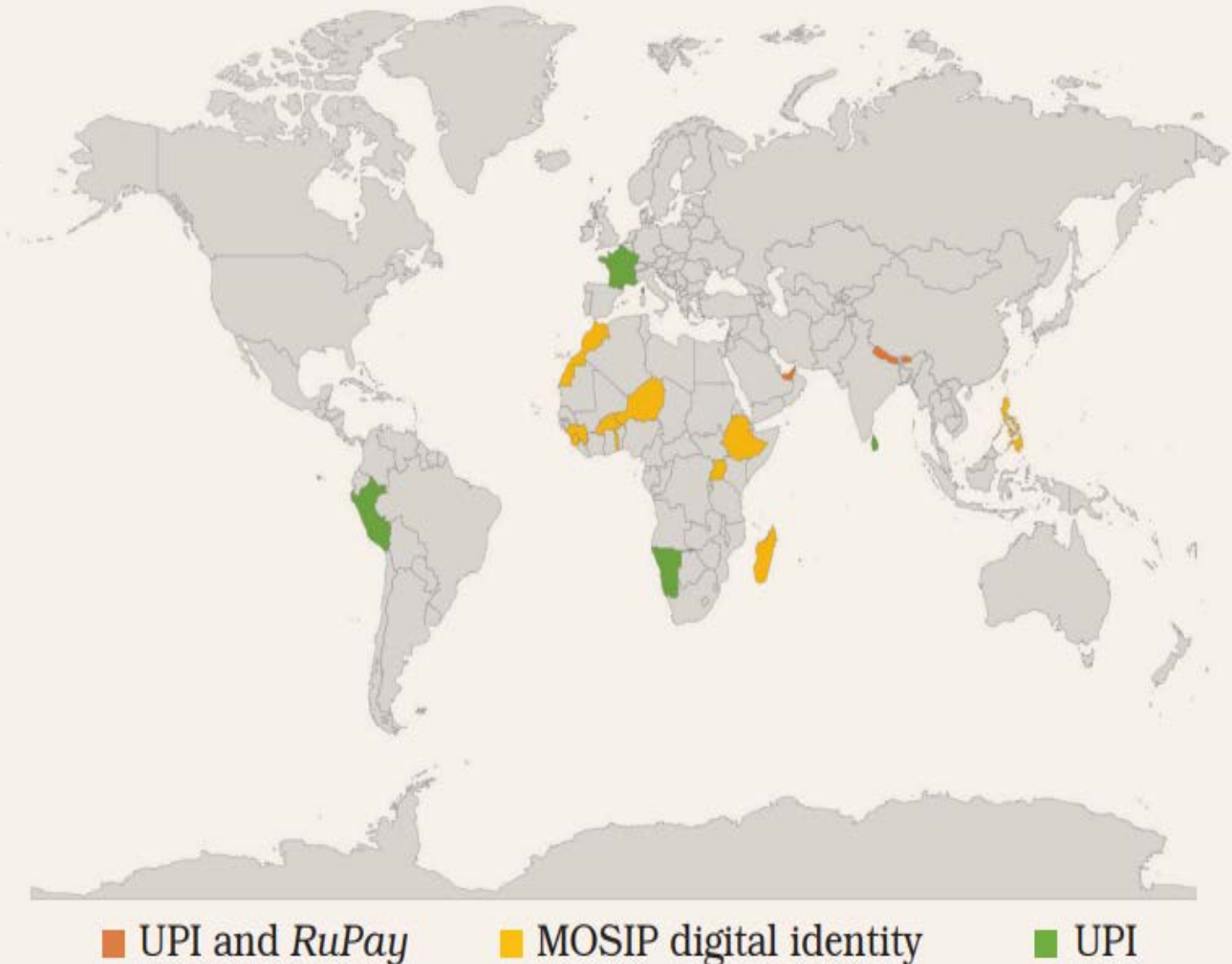
Note: The "UPI" category includes initiatives for UPI acceptance *via* QR codes, fast payment interlinkages and partnerships with other countries to develope UPI-like infrastructure. The combined "UPI and *RuPay*" category covers countries where both UPI and *RuPay* acceptance initiatives are undertaken. The "MOSIP digital identity" category involves partnerships with countries to establish MOSIP-based digital identity systems.
Source: NPCI; MOSIP and RBI staff estimates.

Note:

REPORT ON CURRENCY AND FINANCE

Annex I.1: India's Digital Evolution Timeline

- DigiYatra
- UPI123Pay
- FinTech Department, RBI
- CBDC

SRO Framework

2020

- NIPL
- Aarogya Setu

- CoWIN
- ONDC
- Retail Direct
- Reserve Bank Innovation Hub

- UPI 2.0
- TReDS

- UPI, NETC FASTag, BHIM
- Aadhaar Act
- ReBIT
- NACH

BBPS

- Digital India
- DigiLocker
- IFTAS

2015

PMJDY

DBT Mission

- RuPay
- BBNL

2010

- CTS
- IMPS
- AePS

Aadhaar

NPCI

PSS Act

National e-Governance Plan

2005

- RTGS
- NFS

- DPSS, RBI
- NEFT

CCIL

2000

Information Technology Act

- Committee on Banking Sector Reforms
- Kisan Credit Card (KCC)
- Internet banking

TRAI

IDRBT

1995

- MICR based cheque clearing
- ATM service
- Committee on Communication Network for Banks and SWIFT Implementation

- Committee on the Financial System
- Software Technology Parks of India (STPI)

1990

Committee on Computerisation in Banks

- CDAC
- NASSCOM

VSNL

1985

- Department of Telecommunication
- ERNET

- Committee on Mechanisation in the Banking Industry
- New Computer Policy
- C-DOT

National Clearing Cell (NCC)

- Colour transmission
- EVMs
- First INSAT satellite

1980

Credit Card

- Aryabhata
- National Informatics Centre (NIC)
- Computer Management Corporation (CMC)

1975

Minicomputer Policy

- Department of Space
- Dandekar Committee on Automation

- Department of Electronics and Science and Technology
- Electronics Commission

1970

Electronics Corporation of India Limited (ECIL)

Report of the Electronics Committee (Bhabha Committee)

1965

1960

Digital computer TIFRAC

Television transmission

1955

: This is not an exhaustive list and includes major policy milestones.
ce: RBI staff illustration.

Note:

- ➤ **Vibrant Initiatives:** The **Open Credit Enablement Network,** Open Network for Digital Commerce, and the Public Tech Platform for Frictionless Credit are driving the digital lending ecosystem.
  - ❍ Fintech companies are partnering with **banks and non-banking financial companies (NBFCs)** to offer digital credit solutions and enhance financial inclusion.

	Evolution of Digital Revolution in India	

- ➤ **India's digital revolution is** a blend of government-led initiatives and enabling regulatory frameworks of financial market regulators (**Reserve Bank of India** and the **Securities and Exchange Board of India (SEBI)**). This journey traverses four phases since independence.

Phase	Period	Description
Digital Awakening	1950s-1980s	Early **computers were introduced in banks.** ATMs and credit cards were also introduced during this period.
Liberalisation & InfoTech Boom	1990s	The **internet became more widely available** in the 1990s. This led to the **dematerialization of stocks,** which means that stocks were no longer represented by physical certificates. **Internet banking also began** to be offered by banks during this time.
Building Legal Framework	2000-2016	Laws were passed to regulate digital transactions. Digital payment systems, such as **UPI, were launched during this period.**
Digital Innovation	2017 onwards	**India has become a leader in digital payments.** New features, such as offline payments, have been introduced.

What are the Challenges Posed by Digitalisation?

- ➤ **Impact on Financial Markets:** Digitalisation has led to the **introduction of complex financial products** and services, significantly impacting market structure and financial stability.
  - ❍ The emergence of digital players with unreliable funding models **increases system vulnerabilities** and poses challenges to financial stability.
  - ❍ This **hyper-diversification** of financial services may result in a **"barbell" financial structure**, where a **few dominant multi-product players coexist** with numerous niche service providers.
- ➤ **Fear of Monopolisation:** In India's **digital payment ecosystem**, the **proliferation of Unified Payments Interface (UPI)** applications has expanded customer choices and increased transaction volumes. However, a significant share of transactions is dominated by a few applications, as indicated by the **Herfindahl-Hirschman Index (HHI)** (a common **measure of market concentration** of an industry used to **determine market competitiveness**).
  - ❍ To address concentration risks, the **National Payments Corporation of India (NPCI)** has capped the market share of a **single third-party application provider** to 30% by December 2024.
- ➤ **Cyber Security Challenges: Cybersecurity** is a major concern due to the diverse nature of **cyber threats** targeting digital financial infrastructure.
  - ❍ In India, security incidents handled by the Indian **Computer Emergency Response Team (CERT-In)** have skyrocketed from 53,117 in 2017 to over 1.32 million between January and October 2023.
  - ❍ The majority of these incidents **involve unauthorized network scanning**, probing, and exploitation of vulnerable services.
  - ❍ In India, the average cost of a data breach in 2023 was USD 2.18 million, which is less than the global average but still represents a significant increase.
- ➤ **Consumer Protection Issues:** Digitalisation has also led to **"dark patterns,"** where consumers are tricked into making decisions against their interests. Additionally, **extensive use of customer data** by companies raises concerns about data protection and privacy, potentially compromising customer trust.

Note:

REPORT ON CURRENCY AND FINANCE

Chart I.34: Dark Patterns

False Urgency
Creating a false sense of urgency to mislead users into quick purchases.

SaaS Billing
Exploiting recurring payment models in software services to charge users subtly.

Forced Action
Compelling users to perform unrelated actions to proceed with their intended purchases.

Subscription Trap
Making subscription cancellations difficult or hiding cancellation options.

Interface Interference
Manipulating user interface to highlight certain information and obscure other details.

Trick Question
Using confusing language or double negatives to mislead users.

The Central Consumer Protection Authority's Guidelines for Prevention and Regulation of Dark Patterns, 2023 prohibit any engagement in these specified practices deemed as dark pattern practices.

Basket Sneaking
Adding items to the cart without user consent, increasing the total payable amount.

Confirm Shaming
Using language to shame users into making purchases or continuing subscriptions.

Bait and Switch
Advertising one outcome but delivering an alternate, often less desirable, result.

Drip Pricing
Not revealing the full price upfront, adding extra costs later in the purchasing process.

Disguised Advertisement
Posing ads as other types of content to trick users into clicking them.

Nagging
Annoying users with persistent and repeated requests or interruptions.

Rogue Malwares
Using malware or scareware to trick users into paying for fake malware removal tools.

Source: Guidelines for Prevention and Regulation of Dark Patterns, 2023 and RBI staff illustration.

Note:

- ➢ **Reshaping Labour Markets:** Digital technologies are **transforming workforce composition**, job quality, skill requirements, and labour policies. The implementation of AI in financial services shifts roles towards higher-skilled tasks, automating routine functions and aiding decision-making.
  - ❍ Between 2013 and 2019, support roles in the financial sector declined, while the number of professionals and technicians increased.
  - ❍ In India, **private sector banks** reported high turnover rates in 2022-23, leading to significant risks such as loss of **institutional knowledge** and higher recruitment costs.

What Steps Have Been Taken to Deal With the Challenges?

- ➢ **Financial and Digital Inclusion:** India has established **Digital Banking Units (DBUs)** and improved UPI with **offline and conversational payments** in local languages.
  - ❍ The **Payment Infrastructure Development Fund (PIDF)** has been launched to broaden payment infrastructure, and digitalisation of agricultural finance is underway.
- ➢ **Customer Protection:** To address regulatory and customer protection challenges in the digital lending ecosystem, the RBI issued the **Guidelines on Digital Lending**, focusing on loan servicing, disclosures, grievance redressal, credit assessment standards, and data privacy.
  - ❍ The **Reserve Bank-Integrated Ombudsman Scheme (RB-IOS)** has improved grievance redress mechanisms, and public awareness campaigns like **'RBI Kehta Hai'** and the **e-BAAT programme** educate the public on digital payment products and fraud prevention.
- ➢ **Data Protection:** The RBI has implemented data localisation for payments data and guidelines preventing **digital lending applications** from accessing private information without explicit user consent. **Card-on-file tokenisation (CoFT)** through card-issuing banks has been enabled to enhance the security of digital payments.
- ➢ **Cyber Security:** To promote the security of digital transactions, measures such as **two-factor authentication, increased customer control over card usage,** faster turnaround times for transaction failures, and augmented supervisory oversight have been implemented.

- ❍ The RBI has issued comprehensive guidelines for **IT and Cyber Risk management.**
- ➢ **FinTech Regulation:** The RBI has launched the **Regulatory Sandbox scheme**, the Reserve Bank Innovation Hub, and FinTech Hackathons to encourage FinTech innovations.
- ➢ **Digital Technologies in Regulation and Supervision:** Digital tools are being leveraged to enhance supervisory and monitoring frameworks. The **DAKSH system** help digitalise supervisory processes.
  - ❍ **Integrated Compliance Management and Tracking System (ICMTS)** and Centralised Information Management System (CIMS) are also being implemented to enhance data management and analytics capabilities.

Surge in Tax Concessions on Political Donations

Why in News?

The latest financial data reveals a significant **increase in tax concessions provided for donations to political parties**, with the government granting nearly Rs 4,000 crore in fiscal year 2022-23.

- ➢ This rise highlights the growing trend of electoral funding through tax deductions and surge in tax concessions reflects broader shifts in political finance and its implications for fiscal policy.

What are the Tax Concessions on Political Donations?

- ➢ **About:** A tax concession is a **reduction in the amount of tax** that a particular group or organisation has to pay, or a change in the tax system that benefits them.
  - ❍ In India, tax concessions on political donations are provided under the Income Tax Act, 1961.
  - ❍ **Section 80GGB, of Income Tax Act, 1961** allows Indian companies to claim deductions for contributions made to political parties or electoral trusts. However, donations made in cash are not eligible for deductions.
  - ❍ **Section 80GGC, of Income Tax Act, 1961** applies to **individuals, firms, and other non-corporate entities.** Similar to Section 80GGB, it allows deductions for contributions to political parties or electoral trusts, excluding cash donations.

Note:

![drishti logo]

- Deductions apply to donations made via cheques, account transfers, or electoral bonds.
  - The **Income Tax Act** defines a **political party** as one registered under **Section 29A of the Representation of the People Act, 1951.**
- **Total Tax Concessions:** In FY 2022-23, the total tax concessions for donations to political parties amounted to approximately Rs 3,967.54 crore.
  - In 2021-22, the tax concessions were Rs 3,516.47 crore, indicating a 13% increase from the previous fiscal year.
- **Revenue Impact of These Deductions:** Since 2014-15, the total revenue impact of tax concessions on political donations has reached approximately Rs 12,270.19 crore.
  - In 2022-23, Rs 2,003.43 crore of the tax concessions came from donations by corporate taxpayers under Section 80GGB.
  - Deductions claimed by individuals under Section 80GGC amounted to Rs 1,862.38 crore.

What are the Implications of Surge in Tax Concessions?

- **Rising Electoral Funding:** The increasing tax concessions for political donations highlight a growing trend in electoral financing, suggesting that political parties are relying more heavily on contributions from corporations and individuals.
  - This could potentially alter the **balance of power and influence in political decision-making.**
- **Need for Transparency:** With the surge in political donations, there is a pressing need for greater transparency in political financing to ensure accountability and prevent undue influence on the political process.
  - The sharp increase in concessions raises questions about the impact on public finances and the need for potential reforms in political funding policies.
- **Revenue Loss:** Increased tax concessions can lead to a significant reduction in government revenue. This can affect the government's ability to **fund public services and infrastructure projects.**
- **Market Distortions:** Excessive concessions might create market distortions, favouring certain sectors or companies over others, which can lead to inefficiencies.

- **Sustainable Growth:** While tax concessions can boost short-term growth, they need to be balanced with long-term fiscal sustainability. **Over-reliance on concessions can undermine the tax base and fiscal health.**

What are the Regulations on Political Donations in India?

- **Representation of People Act, 1951:** Section 29B in RPA, 1951 allows political parties to accept voluntary contributions from any person or company, except government companies and foreign sources.
- **Companies Act, 2013:** Section 182 of the **Companies Act, 2013** allows Indian companies to contribute any amount to a political party, with conditions such as authorisation by the Board, non-cash payment, and disclosure in the company's profit and loss (P&L) account.
- **Income Tax Act, 1961**: Indian companies and individuals are eligible for tax deductions on donations made to political parties or electoral trusts under Section 80GGB and 80GGC.
- **Foreign Contributions (Regulations) Act, 2010 (FCRA):** The **Representation of People Act, 1951 and the FCRA** bar political parties from accepting donations from a 'foreign source', but Indian companies with foreign investment up to the permitted limits are no longer treated as a 'foreign source' and can now make political contributions under the Companies Act, 2013.
- **Electoral Bonds Scheme**: Introduced in 2018, electoral bonds allow donors to contribute to political parties anonymously. The bonds are purchased via authorised banks and are valid for 15 days.
  - In February 2024, the **Supreme Court of India unanimously struck down the Electoral Bond Scheme** and associated amendments as unconstitutional, ruling that the scheme **violated the right to information.**

India's First Offshore Mineral Auctions

Why in News?

India is set to launch its **first offshore mineral auctions,** marking a significant step in resource management. This initiative, part of the proposed **National Critical Minerals Mission (NCCM),** aims to enhance the supply chain for **critical minerals**.

➤ Union Minister of Mines announced the identification of 10 blocks, marking a pivotal moment in the nation's quest for self-reliance in mineral resources, in line with the vision of an **Atmanirbhar Bharat.**

What are the Key Details of the Offshore Mineral Auctions?

➤ **Mineral Blocks Identified:** Exploration reports of 10 blocks located in India's **Exclusive Economic Zone (EEZ)** are available for auction for grant of composite license. Of these, 7 blocks of poly-metallic nodules and crusts are located in **Andaman Sea**, 3 blocks of lime-mud are located off the **Gujarat coast.**

➤ **Types of Minerals:** The mineral blocks which contain critical minerals like **Cobalt and Nickel** which are key to manufacturing **low-carbon technologies** to generate, store and transmit clean energy and steel manufacturing.

➤ **Regulatory Framework:** The auctions will be conducted under the **Offshore Areas Mineral (Development and Regulation) Act (OAMDR), 2002.**
  ○ Composite licenses will be issued for mineral resource determination, exploration, and commercial production.

Offshore Areas Mineral (Development & Regulation) Act, 2002

➤ The **Ministry of Mines administers the OAMDR Act, 2002**, which provides for development and regulation of mineral resources in the territorial waters, continental shelf, exclusive economic zone and other maritime zones of India and to provide for matters connected therewith or incidental thereto.

➤ The recent amendment in 2023 introduced a **transparent auction process** for **operating rights, establish a trust for mining-affected persons**, increase exploration, and provide relief in case of disasters.
  ○ The amendment removed **discretionary renewals,** established a standard **lease period of fifty years,** introduced **composite license,** set area limits for operating rights, and facilitated easy transfer of composite license and production lease.

What is the National Critical Mineral Mission?

➤ **Need: Increasing demand** for electronic gadgets and clean energy technologies has led to India's heavy reliance on **importing critical minerals, primarily from China.**

○ This import dependency has **negative economic impacts,** contributing to the **current account deficit and affecting domestic production**.

○ The **Economic Survey 2023-24** has highlighted strategic concerns regarding India's dependence on China for critical minerals.

➤ **Objective:** Ensure a sufficient supply of critical minerals, including copper, lithium, nickel, cobalt and rare earth elements. These minerals are essential components in almost all electronic gadgets ranging from laptops to electric cars.

➤ **Applications:**
  ○ **Electronics:** Essential for manufacturing laptops, electric cars, and other electronic gadgets.
  ○ **Clean Energy Technologies:** Vital for wind turbines and other **renewable energy sources.**
  ○ **High-Priority Sectors: Nuclear energy**, renewable energy, space, defense, telecommunications, and high-tech electronics.

➤ **Legislative and Budgetary Measures to Support NCCM:**
  ○ **Mines and Minerals (Development & Regulation) Amendment Bill 2023:** Allows awarding of exploration licenses for 30 deep-seated and critical minerals, including antimony, beryllium, lithium, and more.
  ○ Budgetary Support:
    ● The **Union Budget 2024-2025** proposed increased allocations for the **Geological Survey of India (GSI), Indian Bureau of Mines (IBM),** and **National Mineral Exploration Trust (NMET).**
      ■ Rs.1,300 crore for GSI to improve **geoscience data and strategic planning.**
      ■ Rs.135 crore for IBM to enhance **regulatory efficiency and environmental protection.**
      ■ Rs. 400 crore for NMET to accelerate **mineral exploration and support startups in the sector.**
  ○ **Waiver of Customs Duty:** The Union Budget 2024-2025 proposed the elimination of **customs duties** on 25 critical minerals and reductions for two others.
    ● This move aims to **lower costs for industries reliant on these minerals,** attract investments in processing and refining, and foster the growth of downstream industries.
    ● Zero import duty on blister copper will stabilize the supply chain for **copper refiners, crucial for electronics and construction industries.**
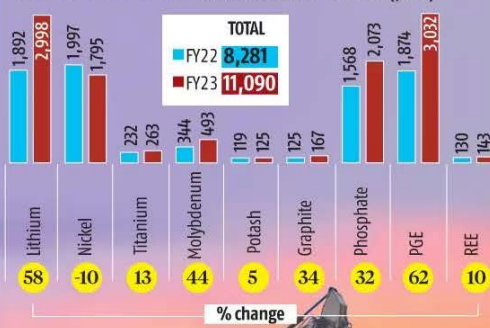
Note:

Sl. No.	Critical Mineral	Percentage (2020)	Major Import Sources (2020)
1.	Lithium	100%	Chile, Russia, China, Ireland, Belgium
2.	Cobalt	100%	China, Belgium, Netherlands, US, Japan
3.	Nickel	100%	Sweden, China, Indonesia, Japan, Philippines
4.	Vanadium	100%	Kuwait, Germany, South Africa, Brazil, Thailand
5.	Niobium	100%	Brazil, Australia, Canada, South Africa, Indonesia
6.	Germanium	100%	China, South Africa, Australia, France, US
7.	Rhenium	100%	Russia, UK, Netherlands, South Africa, China
8.	Beryllium	100%	Russia, UK, Netherlands, South Africa, China
9.	Tantalum	100%	Australia, Indonesia, South Africa, Malaysia, US
10.	Strontium	100%	China, US, Russia, Estonia, Slovenia
11.	Zirconium(zircon)	80%	Australia, Indonesia, South Africa, Malaysia, US
12.	Graphite(natural)	60%	China, Madagascar, Mozambique, Vietnam, Tanzania
13.	Manganese	50%	South Africa, Gabon, Australia, Brazil, China
14.	Chromium	2.5%	South Africa, Mozambique, Oman, Switzerland, Turkey
15.	Silicon	<1%	China, Malaysia, Norway, Bhutan, Netherlands

Table.1 The net import reliance for critical minerals of India (2020) (Source: A report on 'Unlocking Australia-India Critical Minerals Partnership Potential' by Australian Trade and Investment Commission, July 2021)

ON THE BLOCK Import data for critical minerals going to be auctioned* in India ($ mn)

	TOTAL
FY22	8,281
FY23	11,090

Mineral	FY22	FY23	% change
Lithium	1,892	2,998	58
Nickel	1,997	1,795	-10
Titanium	232	263	13
Molybdenum	344	493	44
Potash	119	125	5
Graphite	125	167	34
Phosphate	1,568	2,073	32
PGE	1,874	3,032	62
REE	130	143	10

FY24* (Apr-Sep)

Lithium	1,643
Nickel	953
Titanium	156
Molybdenum	280
Potash	63
Graphite	92
Phosphate	967
PGE	666
REE	61

*Glauconite data not available
Source: Ministry of Commerce and Industry

How does Offshore Mineral Auctions Align with the Proposed National Critical Minerals Mission?

➢ **Expanding Capabilities:** Tapping into offshore mineral resources will significantly enhance India's capabilities in sectors like clean energy and steel manufacturing.

➢ **Supply Chain Approach:** The proposed **NCCM** will oversee the entire supply chain of critical minerals, from domestic production to recycling.

   ○ It will also shield the country from elevated levels of **import reliance and supply risks owing to global geo-political turbulence.**

➢ **Focus on Research and Development:** The mission will address trade and market access, scientific research, and technology development in the critical minerals value chain.

➢ **Encouraging Recycling Initiatives:** The initiative aims to incentivise the Indian industry to develop recycling capacities for critical minerals, reducing reliance on primary sources.

Harnessing AI and New Energy for Economic Growth

Why in News?

Over the last decade, **India's GDP has nearly doubled to USD 3.5 trillion**, reflecting its status as one of the world's fastest-growing major economies.

➢ To further enhance growth and competitiveness, **it is crucial to prioritise Artificial Intelligence (AI) and new energy technologies** that can transform the entire economy.

What are the Key Emerging Sectors for India's Economic Growth?

➢ **Building India's Own AI Stack:** While India's economy has **digitised significantly, its compute penetration remains low**. Despite huge success in Information Technology (IT) services, they **represent just 1% of the USD 30 trillion global technology industry.**

   ○ On the other hand **global competitors like China have rapidly accelerated investments in AI,** pouring hundreds of billions into research, infrastructure and talent.

   ○ India's approach to AI must **leverage its core strengths across data**, compute and algorithms.

➢ **Data Colonisation:** It refers to the **control and exploitation of data resources** by foreign entities, raising concerns about **data sovereignty** and **national security**. India **generates 20% of the world's data, yet 80% is stored offshore**, processed into AI and imported back in dollars.

  ○ **India must reverse this trend by leveraging its Digital Public Infrastructure (DPI)** to create privacy-preserving datasets.

  ○ India can build on its DPI success (**Unified Payments Interface(UPI), Unique Identification Authority of India (UIDAI), Open Network for Digital Commerce (ONDC)**) to create the world's largest open source AI, grounded in Indian ethos.

➢ **Compute Infrastructure:** In terms of compute infrastructure, India currently has only 1GW of data centre capacity, while the global capacity is 50GW.

  ○ By 2030, **projections indicate that the US will reach 70GW**, China will achieve 30GW, and **India will attain 5GW** if it continues on its current path.

  ○ To achieve AI leadership, **India needs rapid AI adoption**, data localisation norms, incentives for global computing companies, and **Production Linked Incentive (PLI) Schemes for data centres**. Deploying 50GW by 2030 will require USD 200 billion in capital which is an ambitious but achievable goal.

  ○ **India is the world's largest hub for silicon development** and design talent, yet it lacks Indian-designed chips. It **needs industry-led chip design projects and government incentives** through research linked incentive schemes.

➢ **R&D on Algorithms:** As AI research **becomes increasingly closed and proprietary**, India has a unique opportunity to become a **global champion of open innovation in AI** Research and Development (R&D).

  ○ India can achieve this **by attracting world-class talent and the best scientists to work in India**, providing industrial-scale resources for research and offering government incentives for AI R&D.

  ○ By **creating a globally leading open innovation platform for AI**, India can position itself at the forefront of AI advancement while ensuring that its values and perspectives shape the future of this transformative technology.

➢ **New Energy Supply Chains:** The new energy paradigm is **shifting from mining and refining of fossil fuels** to advanced material sciences, particularly for **critical minerals** like lithium. This transition is reshaping the global energy landscape, and India must position itself at the forefront of this revolution.

What are the Three Pillars of the New Energy Ecosystem?

➢ **The new energy ecosystem rests on three pillars:**

  ○ **Renewable Energy (RE) Generation:** India's **RE** capacity has **grown from 72GW in 2014 to over 175GW in 2023,** with solar capacity rising from 3.8GW to more than 88GW.

    ● However, **India still lagged behind global leaders**. In 2023, China deployed 215 GW of solar energy capacity, while India installed only 8 GW. To meet its 500 GW target by 2030, **India needs to significantly ramp up its focus on renewable energy deployment**.

  ○ **Battery Storage:** For renewable energy to be truly effective, **India must couple it with a robust battery storage solution** Currently, its battery storage production capacity is only 2GWh, compared to China's 1,700GWh.

    ● To power its RE grid and achieve 100% EV adoption, India needs to aim for 1,000GWh capacity. This significant increase in battery storage will not only support its RE goals but also **drive down costs and improve energy accessibility across the country.**

  ○ **EV Sector:** In the **EV sector**, India's current auto penetration is less than **200 vehicles per 1,000 people**, with 2 million EVs sold annually compared to China's 30 million.

    ● **By 2030, India should aim to become the world's largest EV market**, potentially producing 50 million EVs.

    ● This **shift will create a cleaner environment,** lower transport costs for consumers and reduce the economy's overall logistics expenses.

    ● At present, 90% of the new energy ecosystem— encompassing solar production, lithium cell manufacturing, midstream processing, and EV production—is concentrated in China.

    ● By building its own technologies and supply chains, **India can make its economy more energy-efficient** and create tens of millions of future-ready jobs.

    ● This **transition will secure its energy independence** and position it as a key player in the global fight against climate change. India's path to global leadership lies in mastering these technologies of the future.

Note:

India's Initiatives Related to Emerging Sectors

➢ **Building India's Own AI Stack:**
- ○ **INDIAai**
- ○ **Global Partnership on Artificial Intelligence (GPAI)**
- ○ **US India Artificial Intelligence Initiative**
- ○ **Responsible Artificial Intelligence (AI) for Youth**
- ○ **Artificial Intelligence Research, Analytics and Knowledge Assimilation Platform**
- ○ **Artificial Intelligence Mission**

➢ **Data Colonisation**:
- ○ **Digital Personal Data Protection Bill, 2023**
- ○ **National Data Governance Framework**

➢ **Compute Infrastructure**:
- ○ National Supercomputing Mission (NSM)
- ○ Cloud Computing Initiatives like **Digilocker**

➢ **R&D on Algorithms:**
- ○ **5G Intelligent Village**
- ○ **Quantum Encryption Algorithm**

➢ **New Energy:**
- ○ **International Solar Alliance (ISA)**
- ○ **National Electric Mobility Mission Plan (NEMMP)**
- ○ **Production-Linked Incentives (PLI)**
- ○ **FAME India Scheme (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles)**

What are the Challenges and Potential Solutions in these Emerging Areas?

Challenges	Way Forward
Infrastructure Gap	➢ Significant investment needed to **upgrade compute infrastructure**, particularly **data centers**. Development of **indigenous chip technology** is crucial for AI hardware.
Talent Acquisition and Retention	➢ Creating an environment that **nurtures AI talent domestically** and incentivizes their return from overseas. Competing with global tech giants for skilled professionals.
Data Privacy and Security	➢ Establishing **robust data governance frameworks** and building trust among citizens to effectively utilize vast amounts of data generated.
Financial Constraints	➢ **Mobilising public and private sector resources** for large-scale projects aimed at building an AI stack and transitioning to a new energy economy.
Supply Chain Vulnerabilities	➢ Building a **resilient domestic supply chain** for **critical components like semiconductors** and battery materials to reduce reliance on global supply chains and achieve self-reliance.
Policy and Regulatory Environment	➢ Creating a **conducive policy and regulatory environment** for AI and new energy sectors that balances innovation with safety, security, and ethical considerations.
Technological Complexity	➢ Continuous investment in research and development to **stay updated with rapid technological advancements** and develop indigenous capabilities in AI and new energy sectors.

Note:

SC Upholds States' Taxation Power on Mineral Rights

Why in News?

The **Supreme Court of India** has recently addressed a crucial issue regarding the **taxation of mineral rights,** overturning its 1989 verdict and **reaffirming the power of states in this context.**

➢ This decision, delivered by a nine-judge Bench, clarifies the extent of authority both Parliament and states hold over mineral royalties.

What did the Supreme Court Decide?

➢ **Background of the Case:**
   ❍ In 1989, a seven-judge Bench ruled that the **Centre has primary authority over mining regulation** under the **Mines and Minerals (Development and Regulation) Act, 1957,** and **Entry 54 of the Union List.**
      ● States were permitted only to **collect royalties** and not impose additional taxes. The court classified royalties as taxes, making any cess on them **beyond state authority.**
   ❍ The 2004 five-judge Bench had later suggested a typographical error in the 1989 ruling, **indicating that royalties were not a tax.** This led to the current nine-judge review.

➢ **Overturning 1989 Verdict:** The Supreme Court's nine-judge Bench ruled that the 1989 verdict, which classified **royalties on minerals as a tax under the MMDRA, 1957 was incorrect.**

➢ **State vs. Central Authority:** The Court emphasised that the power to impose taxes on mineral rights resides solely with the states, while Parliament may only impose limitations to prevent hindrances to mineral development.
   ❍ The ruling clarifies that **Parliament does not possess the power to tax mineral rights** under **Entry 50 of the List II of the Constitution**, which governs **state powers** and is limited to imposing restrictions, not taxes.
      ● Parliament can set constraints on how states levy taxes on mineral rights, **but it cannot impose taxes directly.** This is to ensure that mineral development is not obstructed.

➢ **Dissenting Opinion: Warned that allowing states to levy taxes on mineral rights** may also attempt to impose taxes on **lands and buildings under Entry 49 of List II,** leading to a breakdown of the **federal system** and lead to a breakdown in uniformity in mineral pricing and development.
   ❍ Consequently, **states will start levying taxes on minerals again, leading to legal uncertainty and adverse economic consequences,** including on metal development in India.
   ❍ **Parliament** will need to intervene to ensure uniformity in mineral pricing and development interests, and to **prevent states from imposing taxes on mineral rights.**

What is the Difference Between Royalty and Tax?

➢ Earlier in 2021, the Supreme Court of India had delineated the distinction between **'royalty' and 'tax.'**

➢ **Royalty:** It originates from an **agreement between parties**. It is a compensation paid for the rights and privileges enjoyed by the grantee.
   ❍ The royalty payment has a **direct relationship with the benefit or privilege conferred** upon the grantee.
   ❍ It is specific to the agreement and is often linked to the exploitation of resources or usage of a privilege granted by the grantor.
   ❍ **Precedents:** The Court referenced several cases, including *Hingir-Rampur Coal Co. Ltd. vs. State of Orissa (1961), State of West Bengal vs. Kesoram Industries Ltd. (2004),* and *others,* to establish that royalties are contractual obligations with direct benefits.

➢ **Tax:** It is imposed under a **statutory power** without reference to **any special benefit conferred on the payer.** It is enforced by **law and does not require the taxpayer's consent.**
   ❍ Taxes are imposed for public purposes without any specific benefit to the payer. They are part of the common burden borne by all citizens.
   ❍ Unlike royalties, taxes do not involve a *quid pro quo* **arrangement**. The payment is mandatory and not linked to any specific privilege or benefit.
   ❍ **Precedents:** The Court referred to several cases, including *the State of Himachal Pradesh vs. Gujarat Ambuja Cement Ltd. (2005) and Jindal Stainless Ltd. vs. the State of Haryana (2017),* to highlight the characteristics of taxes.

What is the Mines and Minerals (Development and Regulation) Act, 1957?

➢ It is a pivotal legislation in India governing the mining sector. This Act has undergone multiple amendments

Note:

to address emerging needs and challenges in the mineral sector, ensuring its alignment with national economic and security interests.

➢ The primary objectives were to develop the mining industry, ensure mineral conservation, and bring transparency and efficiency to mineral exploitation.

➢ **2015 Amendment:** This comprehensive amendment introduced several key reforms.
  ❍ **Auction Method:** Mandated auctioning of mineral concessions to enhance transparency in allocation.
  ❍ **District Mineral Foundation (DMF):** Established DMF to benefit areas and people affected by mining.
  ❍ **National Mineral Exploration Trust (NMET):** Created NMET to boost mineral exploration activities.
  ❍ **Penalties for Illegal Mining:** Implemented stringent penalties to curb illegal mining activities.

➢ **2016 and 2020 Amendments:** Addressed specific issues in the sector to ensure its smooth functioning.

➢ 2021 Amendment:
  ❍ **Captive and Merchant Mines:** Removed the distinction between these types of mines.
    ● **Captive mines** are operated by companies to produce minerals exclusively for their own use. The **minerals extracted from captive mines may sell up to 50% of their annual mineral production in the open market after meeting the entire needs** of the end-use plant for which the mineral block was originally allocated by the government.
    ● **Merchant Mines** are **operated to produce minerals for sale in the open market.** The extracted minerals are sold to various buyers, including industries that do not own their own mines.
  ❍ **Auction-Only Concessions:** Ensured that all private-sector mineral concessions were granted through auctions.

➢ **2023 Amendment:**
  ❍ The Mines and Minerals (Development and Regulation) Amendment Act, 2023 aims to strengthen the exploration and extraction of **critical minerals essential for India's economic development** and national security.
  ❍ Key amendments include removing **6 minerals from the list of 12 atomic minerals** limited to exploration by State agencies, empowering the government to exclusively auction mineral concessions for critical minerals.
  ❍ Introduced exploration licences to attract **foreign direct investment** and engage junior mining companies in exploring deep-seated and critical minerals.
    ● The focus is on reducing dependence on imports and encouraging private sector involvement to expedite exploration and mining of these critical minerals.
  ❍ Recognised the importance of minerals like lithium, graphite, cobalt, titanium, and rare earth elements for future technologies and **India's commitment to energy transition and net-zero emissions by 2070.**

Scenario of the Mining Sector in India

➢ **India's steel sector** has experienced significant growth, making it the **2ⁿᵈ largest producer of steel in the world.** The country's crude steel production was 144.04 million tonnes, finished steel production was 138.83 million tonnes, and finished steel consumption was 136.65 million tonnes in FY 2023-24.
  ❍ Finished steel **production increased by over 12.68%** compared to the previous year, while **consumption grew by 13.9%**

➢ India has a total coal reserve of 344.02 billion tonnes and is the **second largest producer of coal in the world.**
  ❍ In the **coal sector,** production during Jun 2024 was 84.63 million tonnes, showing a **growth of 14.49% compared to Jun 2023.**
  ❍ Cumulative coal production increased by 11.65% over the previous year.

➢ **Manganese Ore (India) Limited** achieved its **highest production of 17.56 lakh tonnes of Manganese Ore** in FY 2023-24, marking a 35% growth over the previous year. India's mineral production also saw a cumulative growth of 8.2% for the period Apr-Feb, 2023-24.

➢ The country's **FDI policy allows 100% FDI through automatic routes in the steel and mining sectors, as well as for coal and lignite.**

Note:

drishti

> The mineral production index (base 2011-12) for 2021-22 is **113.3,** showing a growth of 12.17% compared to 2020-21.
  ○ The total value of mineral production (excluding atomic and fuel minerals) for 2021-22 is estimated at approximately Rs. 220000 crore, with metallic minerals contributing approximately Rs. 120000 crore.
> The **Indian mining industry** has a large number of small operational mines. In 2021-22, there were 1319 reporting mines in India, with the highest number located in Madhya Pradesh (263), followed by Gujarat (147), Karnataka (132), Odisha (128), Chhattisgarh (114), Andhra Pradesh (108), Rajasthan (90), Tamil Nadu (88), Maharashtra (73), Jharkhand (45), and Telangana (39).
  ○ These **11 states together accounted for 93% of the total number of mines** in the country in 2021-22.
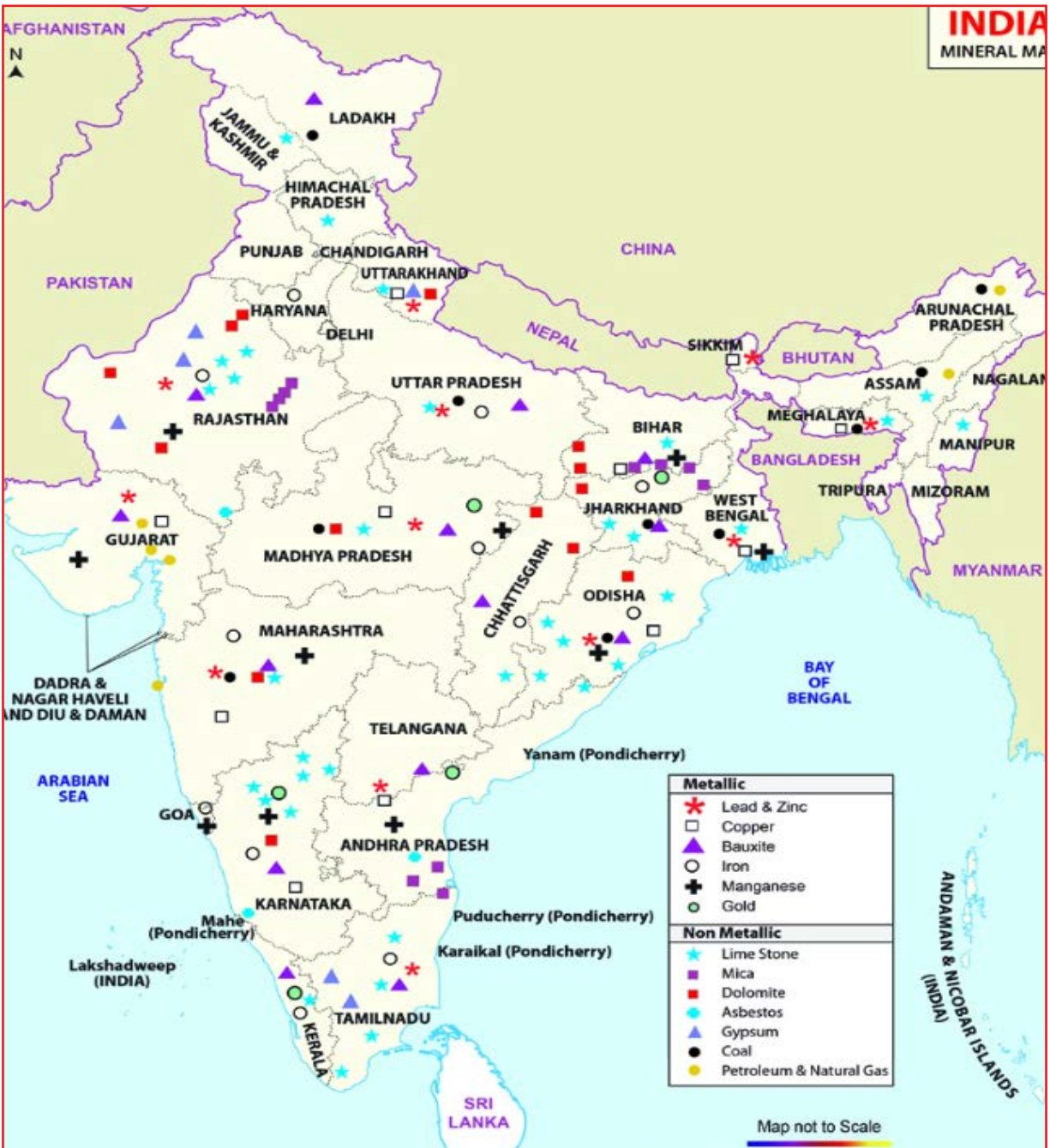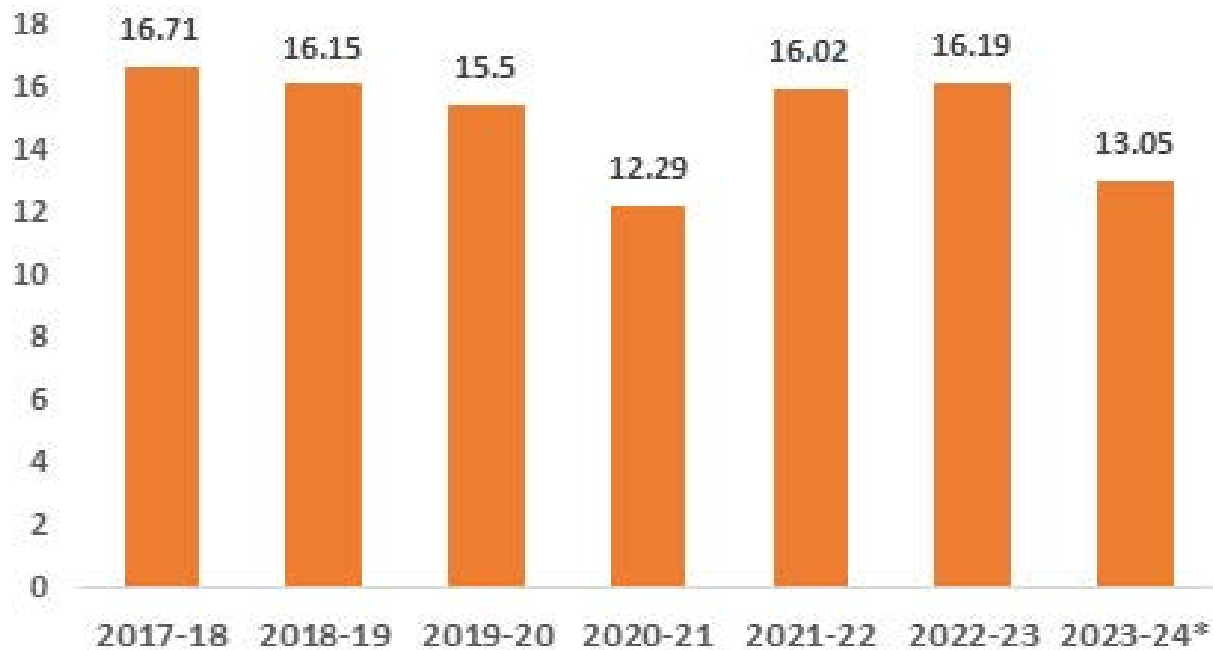

Note:

India's Garment Export Sector

Why in News?

India's garment export industry, a significant contributor to employment, has been facing a persistent decline. A recent report by the Global Trade Research Initiative (GTRI), a research Group focused on Climate Change, technology and trade, sheds light on the reasons behind this downturn, pointing to self-inflicted barriers rather than external competition.

What are the Key Highlights of the GTRI Report?

➢ Decline in Export Value: India's garment exports in 2023-24 were USD 14.5 billion, compared to USD 15 billion in 2013-14.
  ○ Vietnam and Bangladesh's garment exports grew significantly during the same period, reaching USD 33.4 billion and USD 43.8 billion, respectively.
  ○ Despite a decline, China still exported about USD 114 billion in garments.
  ○ Globalisation has increased competition and shifted production to lower-cost labour countries, affecting India's market share.

India's ready-made garment export (US$ billion)

Year	Export (US$ billion)
2017-18	16.71
2018-19	16.15
2019-20	15.5
2020-21	12.29
2021-22	16.02
2022-23	16.19
2023-24*	13.05

Source: Textile Export Promotion Council, Apparel Export Promotion Council
Note: *Until February 2024

➢ **Trade Barriers:** The sector faces substantial duties on importing essential raw materials, making production more expensive.

  ○ Archaic customs and trade procedures add to the challenges, consuming time and resources that could be better utilised.

  ○ The **dominance of local suppliers for raw materials** like **Polyester Staple Fibre** and **Viscose Staple Fibre** forces exporters to rely on more expensive domestic options.

  ○ Recent **Quality Control Orders (QCOs)** for fabric imports have complicated the import process, pushing up costs for exporters.

    • Exporters are forced to use **pricier domestic supplies,** making Indian garments less competitive globally. Exporters must meticulously account for every imported component, adding to the complexity and cost.

➢ **Production Linked Incentive (PLI) Scheme:** The **PLI scheme** launched in 2021 has **not attracted sufficient investment** and requires major modifications to be effective.

➢ **Rising Imports:** India's garment and textiles imports reached nearly USD 9.2 billion in 2023, with concerns that this could increase **if export challenges remain unresolved.**

➢ **Synthetic Fabrics in Global Markets:** Developed countries prefer clothing made from **mixed synthetics,** while only less than 40% of Indian exports consist of synthetic fabrics.

  ○ Diversifying into synthetics can enable Indian manufacturers to operate year-round, meeting demands during autumn and winter as well.

  ○ Indian exporters need to keep up with the fast-paced demands of **the Fast Fashion Industry (FFI)**, which includes major players like Walmart, Zara, H&M, Gap, and online retailers like Amazon.

➢ **Recommendations for Improving the Sector:** Simplifying customs and trade procedures can reduce the time and cost burdens on exporters.

  ○ Lowering duties on essential raw materials can help reduce production costs.

  ○ Ensuring fair competition in the domestic market for raw materials can lower costs for exporters.

What are the Key Facts About India's Garment Industry?

➢ The garment industry in India is **highly fragmented,** with a large number of small-scale manufacturers and fabricators dominating the scene. There are around 27,000 domestic manufacturers, 48,000 fabricators, and 100 manufacturer-exporters. Most of the firms are either proprietorship or partnership-owned.

  ○ The industry benefits from a **large pool of skilled workers** and consistent growth across different sectors, making it a key potential sector in India.

  ○ The textiles and apparel industry in India is the **2nd largest employer in the country after agriculture,** providing direct employment to 4.5 crore people and 10 crore people in allied industries.

➢ **Key Producers and Products:** India is one of the largest producers of **cotton** and **jute** in the world. **India is also the 2nd largest producer of silk** in the world and 95% of the world's hand-woven fabric comes from India.

  ○ **Tamil Nadu is a major cotton textile centre**, contributing over 25% to the country's export of cotton yarn and fabrics.

➢ **Market Growth:** Total textile exports are expected to reach USD 65 Bn by FY26 and is expected to grow at a 10% **Compound annual growth rate (CAGR)** from 2019-20 to reach USD 190 billion by 2025-26.

➢ **Export Trends:** India is a significant exporter of textiles and apparel, with a large manufacturing base. In 2022-23, textile and apparel exports accounted for 8.0% of India's total exports, with a 5% share in global trade. The government aims to achieve **USD 250 billion in textiles production in exports by 2030.**

  ○ India's textile and apparel products, including handlooms and handicrafts, are exported to over 100 countries worldwide, with key export destinations including the **USA, Bangladesh, the UK, UAE, and Germany.**

    • The **USA is the largest importer,** accounting for about one-fourth of India's total exports.

  ○ India signed a **Free Trade Agreement (FTA)** with the UAE in May 2022 and is in the process of negotiating FTAs with the EU, Australia, the UK, Canada, Israel, and other countries/regions to boost textile and apparel exports.

Note:

○ Additionally, India's **Foreign Direct Investment (FDI) policy** allows for **100% FDI in single-brand product retail trading and up to 51% FDI in multi-brand retail trading,** attracting international retailers to source from India and driving interest from new export destinations.

➢ **Government Initiatives:**

○ Union Budget 2024-25:

● The budget allocation for the textiles sector has been increased by USD 974 crore to USD 4,417.09 crore in the Budget 2024.

● The **Union Budget** proposes to reduce **customs duty** on wet white, crust, and finished leather for making garments, footwear, and other leather products for exports from 10% to 0%.

■ Additionally, the duty on real down-filling material from duck or goose for use in manufacturing garments for exports will be reduced to 10% from the current 30%.

○ **Apparel Export Promotion Council (AEPC):** AEPC, sponsored by the **Ministry of Textiles,** was incorporated in 1978. It is a **nodal agency to promote exports of readymade garments from India.**

● The primary objective of the council is to promote, advance, increase, and develop the export of all types of ready-made garments in India.

● AEPC supports the apparel industry by providing research and inputs on FTA, **Foreign Trade Policy (FTP),** and bilateral agreements.

○ **Amended Technology Upgradation Fund Scheme (ATUFS)**

○ **PM Mega Integrated Textile Region and Apparel (PM MITRA) parks**

○ **Rebate of State and Central Taxes and Levies on the Export of Garments and Made-ups (RoSCTL scheme)**

○ **Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme**

○ **National Technical Textiles Mission (NTTM)**

○ **SAMARTH Scheme**

○ **Silk Samagra Scheme.**

○ **Bharat Tex 2024**

What are the Strategies to Boost India's Garment Industry?

➢ **Align Exports with Global Market Demand:** Focus on manufacturing apparel products and **sustainable fashion** that are in high demand globally.

○ **Market-Specific Strategies:**

● Identify top imported commodities by each country where India has a low share.

● Address compliance issues and conduct cost comparisons with competing countries. Implement targeted interventions at the micro level to minimise the supply-demand gap.

➢ **Enhance Brand Building:** Enhance the perceived value of Indian garments through effective branding.

○ Obtain certifications such as **Global Organic Textile Standard (GOTS)** to improve brand image and compliance with international quality standards.

○ Meeting the apparel exports of **USD 40 billion by the year 2030 as highlighted by the Commerce and Industry Ministry** requires at least 1,200 additional manufacturing units by 2030, compared to the projected addition of only 200 units.

● Proper branding of Indian apparel products can increase Unit Value Realisation (UVR), making exports more competitive.

➢ **Capacity Creation:** Invest in scaling up and modernising these segments to match spinning capacity. Encourage major domestic players to reinvest profits in capacity creation.

○ Invest in weaving, fabric processing, and garmenting to strengthen the value chain and achieve cost competitiveness.

➢ **Diversify Markets and Products:** Reduce dependence on traditional markets like the US, EU, and UK. Explore new markets such as Mauritius through **FTA.**

○ Increase production of **man-made fibre (MMF) garments** to tap into their growing global demand.

● MMFs are mainly of two types: **synthetic (made from crude oil)** and **cellulosic (made from wood pulp).** The main varieties of synthetic staple fibres are polyester, acrylic, and polypropylene, while cellulosic fibres include viscose and modal.

➢ **Leverage E-commerce Opportunities:** Global **e-commerce exports** are expected to grow from USD 800 billion to USD 2 trillion by 2030.

Note:

❍ India aims to achieve a merchandise export target of **USD 1 trillion by 2030, with USD 200 billion coming from e-commerce.** The country's **high internet penetration and demand from the Indian diaspora** are expected to fuel this growth.

❍ E-commerce is important for MSMEs as it can greatly increase apparel exports. To achieve this, regulatory compliances should be simplified, and separate customs codes created for e-commerce shipments.

❍ It is important to take a quick, bold, and targeted approach to harness e-commerce for export expansion.

Higher Food Inflation

Why in News?

Recently, the **Reserve Bank of India (RBI)** in its monthly bulletin titled " State of Economy" reported that a sharp rise in vegetable prices in June 2024 has halted the disinflation process towards the 4% target.

➢ The report emphasised the need for monetary policy to remain focused on aligning inflation with the 4% target.

Recent Trends in Consumer Price Inflation in India
➢ **Headline Inflation:** Year-on-year (y-o-y) headline inflation rose to 5.1% in June 2024 from 4.8% in May 2024, driven by food prices.
➢ **Food Inflation Increase:** Food inflation increased to 8.4% in June 2024 from 7.9% in May 2024, with significant contributions from cereal, pulses, and edible oils.
➢ **High-Frequency Data:** Data for July shows increases in cereal prices (mainly wheat), pulses (gram and arhar/tur), and edible oils (mustard and groundnut).

What are the Causes of the Rise in Food Inflation?

➢ **Temperature and Weather Challenges:** Issues like adverse weather conditions, such as the **prediction of a weak monsoon** and heatwave for this year affecting crop yields, particularly for cereals, pulses, and sugar, contributed to supply shortages and higher prices domestically.

❍ **For example, cereal and pulse inflation showed double-digit inflation in April 2024.**

➢ **Fuel Prices:** The price of fuel, key input in agriculture, has witnessed a considerable increase in recent years.

❍ For example, an increase in fuel inflation by 1% leads to a 0.13% rise in food inflation, and the effect slowly declines through the next 12 months.

➢ **Transportation Issues:** Disruptions in the supply chain due to factors like transportation constraints, labour shortages, and **logistical challenges can lead to a decrease in the availability of food products, causing prices to rise.**

➢ **Production Costs:** Rising production costs for farmers can lead to higher food prices. This includes **expenses such as fuel, fertiliser, and labour costs.**

➢ **Global Causes:** The ongoing **Russia-Ukraine war** has a global impact, particularly affecting developing countries. Energy and commodity prices have risen, and global logistical supply chains have been disrupted.

❍ Ukraine and Russia account for up to **30% of global wheat exports**, leading to an increase in food prices.

What Measures Government Has Taken to Curb Food Inflation?

➢ **Subsidised Commodities:** The government is increasing the distribution of subsidised vegetables like onions and tomatoes through its network and releasing stocks of wheat and sugar to stabilise prices.

➢ **Buffer Stock Management:** The Government maintains a buffer stock of essential food commodities like wheat, rice, and pulses to release into the market during periods of scarcity or price spikes.

➢ **Procurement and PDS:** The **Public Distribution System (PDS)** ensures food security for the poor by providing subsidised grains. Increasing procurement and expanding PDS coverage can help stabilise prices.

➢ **Minimum Support Price (MSP):** Guaranteeing remunerative **prices to farmers for their produce incentivises production**, leading to increased supply and potentially lower prices.

➢ **Import-Export Policies:** The government can regulate **imports and exports of food items to manage domestic supply and prices**. For instance, import duties can be reduced to augment supply, while export bans can be imposed to control domestic prices.

➢ **Infrastructure Development:** Investments in cold storage, warehousing, and transportation facilities reduce post-harvest losses and improve supply chain efficiency, leading to lower prices.

➢ **Technology Adoption:** Promoting the use of technology in agriculture, such as precision farming and weather forecasting, **can enhance productivity and reduce production costs.**

Note:

Remove Food items from Inflation Targeting (Economic Survey 2023-24)

➢ **RBI Inflation Targeting Strategy:** In March 2021, the government retained the **Reserve Bank of India (RBI)'s flexible inflation target of 2-6%** for five years, through March 2026.

   ○ Under this framework, introduced in 2016, RBI targets **headline inflation** as measured by the **Consumer Price Index (CPI)**.

➢ **Suggestions of Economic Survey:**

   ○ The **Economic Survey 2023-24** suggested excluding **food inflation** from India's inflation targeting framework.

   ○ Food makes up **46% of CPI Headline Inflation** in developing countries, thus **controlling food prices is key** to managing overall inflation.

     ● In June 2024, **overall inflation was 5.1%**, **food inflation was 9.4%**, and **core inflation was 3.1%**.

➢ **Reasons for Excluding Food from Inflation Targeting:**

   ○ **Supply-Induced Price Changes:** Food price fluctuations are mainly due to **supply shocks (For example: poor harvests, climate conditions)** rather than demand.

     ● Traditional **monetary policy tools, designed to address demand-side pressures,** are ineffective for supply-induced changes.

   ○ **Direct Benefit Transfers (DBT):** To help poor and low-income consumers cope with rising food prices, the Survey suggests using direct benefit transfers or coupons, **offering targeted assistance without disrupting the inflation framework.**

   ○ **Core Inflation Focus**: Excluding food items allows the **focus to shift to core inflation**, which better reflects underlying inflation trends and the economy's health, **as it is less influenced by temporary shocks.**

   ○ **International Practices:** Countries like the **US, UK, and Canada** also exclude food and energy prices in their inflation targeting to maintain a more stable and predictable monetary policy framework.

Note:

➢ **Consumer Price Index (CPI) vs. Wholesale Price Index (WPI):**

   ○ WPI tracks inflation at the **producer level** and CPI captures changes in prices levels at the **consumer level.**

   ○ WPI does not capture changes in the prices of services, which CPI does.

➢ **Headline inflation and Core Inflation:**

   ○ **Headline Inflation** is a measure of the **total economic inflation** that **includes food and energy prices.**

➢ **Core Inflation** is the change in the costs of goods and services but **does not include those from the food and energy sectors**.

   ○ This measure of inflation excludes these items because their prices are much more volatile.

   ○ Core inflation = Headline inflation – (Food and Fuel) inflation.

Role of the Financial Sector in India's Development

Why in News?

India's ambitious goal to achieve developed nation status by its **centennial independence anniversary in 2047** hinges significantly on the **robustness of its financial sector.**

How Can the Financial Sector Support Development of India?

➢ **Sustained High Growth:** According to a recent study by the **Reserve Bank of India**, India needs to grow at a **rate of 7.6% annually** for the next 25 years to become a developed nation.

   ○ Sustaining high growth rates for a long period will **require a stable, efficient, and innovative financial system** that meets the requirements of Indian households and businesses, and also the governments, **without compromising macro-financial stability.**

➢ **Mobilisation of Savings: Capital accumulation** needs to be **at a faster rate** with a **focus on both domestic and external sources** for capital formation.

   ○ The **demand for finance** and capital will stem from **large-scale infrastructure projects**, heightened manufacturing needs, **expansion of the formal economy,** and growing trade activities.

○ The supply of finance and capital requires **mobilising domestic savings, sustainable foreign capital** and strengthening credit, debt, and equity markets.

➢ **Role of Banking Sector:**

○ **Need for New Financial Institution:** A **diverse range of banks and NBFCs** of varying sizes, including **digital, wholesale/investment, and niche banks**, are essential to support **financial inclusion** and fund large-scale projects.

○ **Role of Fintech Companies:** The role of fintech companies in furthering financial reach and inclusion, and adding efficiency to the banking and financial system in the coming years is crucial.

● The Reserve Bank's policy position that fintech companies cannot lend on their balance sheets has **even reduced direct financial risks.**

○ **Privatisation of Banks:** As per the bank balance sheets for the March 2024 quarter, seven PSBs have **less than 1% of loan advances in net NPAs**. None of the PSBs are anymore under the Reserve Bank of India (RBI)'s **Prompt Corrective Action framework** which imposes lending restrictions.

● **Privatising Public Sector Banks would level the banking field by removing bureaucratic hurdles** and pay restrictions, boosting their profitability and valuation, and potentially equalizing them with private banks, benefiting credit access, investment, and job growth.

➢ **Role of Capital Market:**

○ The government aims for India to reach **net zero emissions by 2070** and reduce GDP emissions by 2030, but achieving these goals will depend on having the finance for necessary projects and schemes.

● The Indian markets, with market capitalisation crossing **USD 5 trillion, are now ranked fourth in the world** in terms of size, behind the US, China, and Japan. The market cap to GDP ratio recently crossed 150%.

○ **Indian capital markets are equipped to handle technological changes, with regulators**, institutions, and participants adept at using AI and ML, positioning equities markets to support India's development goals.

What Challenges Does the Financial Sector Face?

➢ Despite the role of fintech companies in expanding financial access and improving efficiency their rapid growth poses **challenges like customer protection and potential indirect risks** for both banks and non-banks.

➢ There are also **concerns about emerging concentration risks as Big Tech firms increasingly dominate the fintech sector.** Fintech companies, currently unregulated, face calls for direct regulatory oversight, despite challenges of feasibility and effectiveness.

➢ **Digital lending, buy-now-pay-later (BNPL), and pay-as-you-go schemes** face the challenge of potential **overextension and irrational enthusiasm** due to their rapid scale and adoption rates.

○ Common risks include mis-selling and excessive exposure.

➢ There is a challenge posed by **increased risks associated with data protection, privacy, cybersecurity,** and operational issues that must also be considered.

➢ Despite **improving their balance sheets, PSBs struggle with a price-to-book multiple significantly lower than Indian private banks**, suggesting potential underperformance.

➢ Private banks often choose to **maintain lower credit growth but higher margins, avoiding the need to compete for deposits**.

○ This results in low deposit rates, which may drive Indian savers to favour equity and housing investments, presenting a challenge for deposit growth.

➢ **India's underdeveloped corporate bond market** needs urgent government attention to utilise its full potential.

SEBI Proposes a New Asset Class

Why in News?

The **Securities and Exchange Board of India (SEBI)** has proposed the introduction of a **new asset class or product category**.

➢ This move is aimed at providing investors with a **regulated investment product that features higher risk-taking capabilities,** while also curbing the proliferation of unregistered and **unauthorised investment** products.

Note:

Note:

➤ PMS allows investors to rely on professionals to manage their investment portfolio and earn competitive returns from various asset classes.

➤ The service is tailored to meet the specific needs of each investor, ensuring that it meets their expectations and requirements.

What is the Proposed New Asset Class?

➤ **Minimum Investment Threshold:** The minimum investment threshold under the new asset class has been proposed at Rs 10 lakh per investor.

➤ **Distinct Nomenclature:** SEBI proposes distinct naming for this new asset class to differentiate it from traditional MFs, PMS, Alternative Investment Funds (AIFs), Real Estate Investment Trusts (REITs), and Infrastructure Investment Trusts (INVITs).

➤ **Investment Strategies:** Some of the investment strategies that may be permitted include long-short equity funds and inverse ETF (exchange-traded fund) (funds that are traded on stock exchanges, much like individual stocks).

❍ Investors may also have an option of systematic plans such as systematic investment plan (SIP), systematic withdrawal plan (SWP) and systematic transfer plan (STP) for investment strategies under the new asset class.

➤ **Eligibility Criteria for Asset Management Companies (AMCs):**

❍ Two Routes of Eligibility:

● **First Route:** Existing MFs operational for at least three years with an average **asset under management (AUM)** of Rs 10,000 crore and **No action initiated by SEBI against the sponsor/AMC** in the last 3 years can directly offer products in this new class.

● **Second Route:** Existing and new MFs that do not fulfil the first eligibility route should appoint a Chief Investment Officer (CIO) with at least 10 years of fund management experience and managing AUM of not less than Rs 5,000 crore.

■ Appointment of an additional fund manager with at least 7 years of fund management experience and managing AUM of not less than Rs 3,000 crore.

➤ **Potential Benefits and Implications:**

❍ **Regulated investment product:** The new asset class is expected to provide investors with a regulated investment product that **offers higher risk-taking capabilities and a higher ticket size.**

❍ **Bridging the gap between MFs and PMS:** The new asset class is intended to fill the gap between MFs and PMS, offering a product that caters to the needs of the emerging category of investors.

❍ **Strengthening the role of MFs:** The eligibility criteria for offering products under the new asset class may strengthen the position of established MFs and AMCs in the investment landscape.

Securities and Exchange Board of India (SEBI)

SEBI is a **Statutory Body** established in 1992 in accordance with the provisions of the **Securities and Exchange Board of India Act, 1992** to protect investors' interests and regulate the securities market.

➤ Its **headquarters is in Mumbai,** with regional offices in Ahmedabad, Kolkata, Chennai, and Delhi.

➤ Before SEBI's establishment, the **Controller of Capital Issues regulated capital markets under the Capital Issues (Control) Act, 1947.**

❍ In 1988, SEBI was formed as the regulatory authority for capital markets in India through a government resolution.

❍ Initially, SEBI was a non-statutory body but gained autonomy and statutory powers through the SEBI Act 1992.

➤ SEBI Board includes a Chairman and other full-time and part-time members. SEBI forms committees as needed to address current issues.

❍ The **Securities Appellate Tribunal (SAT)** is established to safeguard the interests of those affected by SEBI's decisions, with a Presiding Officer and two Members.

❍ SAT has the authority of a civil court, and appeals against its decisions can be made to the Supreme Court.

Collapse of Multiple Infrastructures

Why in News?

Recently, several **physical infrastructures**, like **bridges** in **Bihar** and **airport canopy structures** in **Delhi** and **Rajkot** of Gujarat collapsed.

What are the Causes of the Collapse of Physical Infrastructures?

➢ **Natural causes:**

❍ **Heavy Rainfall: Prolonged and intense rainfall** can saturate the soil and increase the weight of bridge structures, leading to potential failures.

● Incase of **Bihar**, significant water flow from upstream Nepal has also contributed to the factor.

❍ **Disasters:** Disasters like earthquakes can cause **weakening of infrastructure**.
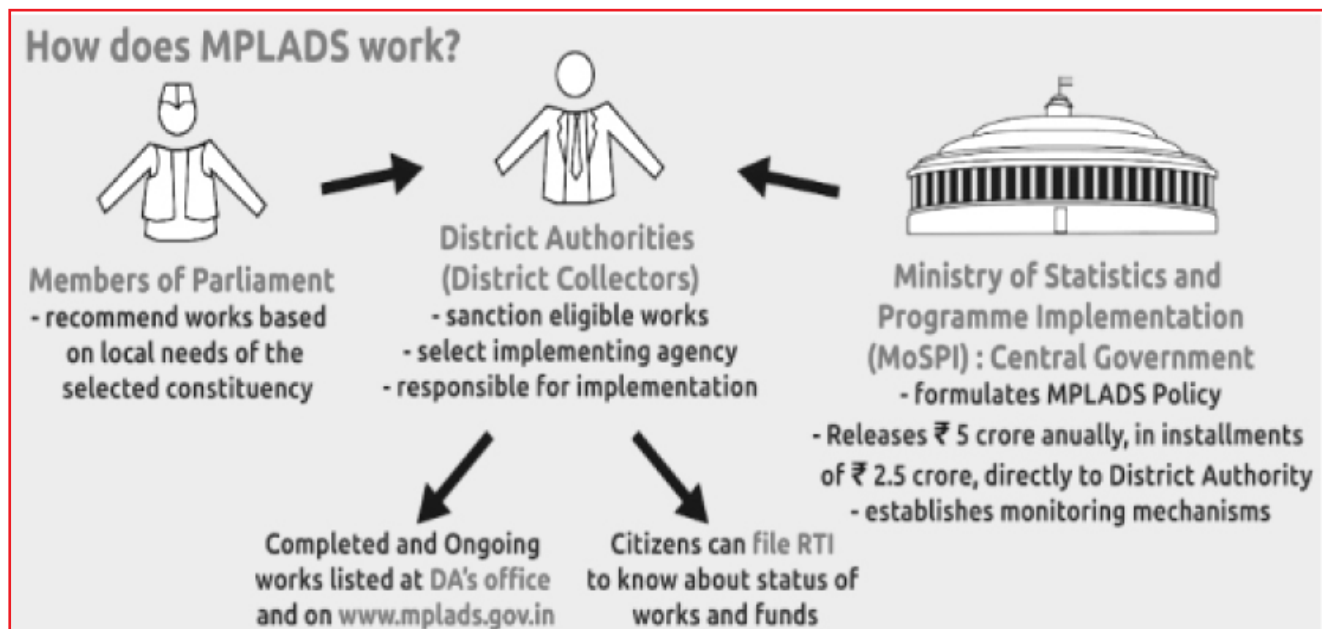
➢ **Administrative Causes:**

❍ **Corruption:** Corruption in administration and tender allocation causes administrative failures related to the implementation and monitoring of projects.

● **For example-** India ranked 93 out of 180 countries on the **Corruption Perceptions Index (CPI)** for 2023.

❍ **Management issue:** Lack of proper maintenance, monitoring and management of crowds leads to infrastructure failure.

● **For example:** One of the reasons for the collapse of the **Morbi Bridge** was failure in regular maintenance and crowd management.

➢ **Procedural Causes:**

❍ **Failure to Follow Design Protocols:** Deviations from established engineering designs and safety protocols can lead to **structural vulnerabilities**.

❍ **Poor Quality Control:** Lack of **inspections and insufficient** quality control measures during construction can result in undetected flaws that compromise safety.

● The use of inferior materials can significantly **weaken structural integrity**, reducing the capacity to bear environmental stresses.

Which are Schemes for Building Rural Infrastructure?

➢ **Members of Parliament Local Area Development Scheme (MPLAD)**

How does MPLADS work?

Members of Parliament - recommend works based on local needs of the selected constituency

District Authorities (District Collectors) - sanction eligible works - select implementing agency - responsible for implementation

Ministry of Statistics and Programme Implementation (MoSPI) : Central Government - formulates MPLADS Policy - Releases ₹ 5 crore anually, in installments of ₹ 2.5 crore, directly to District Authority - establishes monitoring mechanisms

Completed and Ongoing works listed at DA's office and on www.mplads.gov.in

Citizens can file RTI to know about status of works and funds

Note:

➢ **Member of Legislative Assembly Local Area Development Scheme (MLALAD):**
  ○ It is the state's version of a central government scheme- **MPLAD.**
  ○ The objective of this scheme is to **create local need-based infrastructure**, to create assets of public utility and to remove regional imbalances in development.
  ○ The **MLALAD programme** provides funding for each constituency directly from the state government.
  ○ While **MLAs and MPs** do not directly receive the funds, they can recommend projects for the scheme.
  ○ The projects funded by them are usually restricted to "**durable infrastructure work**", from repairing roads to building community centres.
  ○ The funds have also been used for natural disaster relief in some states, as in the case of **Covid-19.**

➢ **Pradhan Mantri Gram Sadak Yojana:**
  ○ It was **launched in 2000** to provide connectivity, **by way of an all-weather road to unconnected habitations.**
  ○ **Eligibility: Unconnected habitations** of designated population size (500+ in plain areas and 250+ in North-Eastern States, Himalayan States, Deserts and Tribal Areas as per 2001 census) in the core network for uplifting the socio-economic condition of the rural population
  ○ **Latest Funding Pattern:** The Union Government bears **90%** of the project cost in respect of projects sanctioned under the scheme in North-Eastern and Himalayan States, whereas for other states the Union Government bears **60%** of the cost.

Other Major Initiatives for Building Physical Infrastructure
➢ **PM Gati Shakti Scheme**
➢ **Bharatmala scheme**
➢ **IIPDF (India Infrastructure Project Development Fund) Portal**

China Plus One

Why in News?

India has the opportunity to capitalise on the **China Plus One** strategy and attract global manufacturing investments.

➢ While China's exports remain strong, India's large domestic market, low-cost talent, and potential for growth make it an appealing alternative.

What is the China+1 Strategy?

➢ **About:**
  ○ It refers to the **global trend** where companies diversify their manufacturing and supply chains by establishing operations in countries **other than China.**
  ○ This approach **aims to mitigate risks associated with over-reliance on a single country,** especially in light of geopolitical tensions and supply chain disruptions.

➢ **China's Dominance in Global Supply Chains:**
  ○ China has been the centre of global supply chains for the past few decades, earning the title of **"World's Factory"**. This was due to favourable factors of production and a strong business ecosystem.

➢ **Shift to China in the 1990s:**
  ○ In the 1990s, large manufacturing **entities from the US and Europe** shifted their production to China, attracted by the **low manufacturing costs** and **access to a vast domestic market.**

➢ **Disruptions During the Pandemic:**
  ○ The **Covid-19** pandemic led to significant disruptions in many economies. As the large economies emerged from the pandemic, there was a **sudden surge in demand**. However, **China's zero-Covid policy** resulted in industrial lockdowns, leading to **inconsistent supply chain performance** and container shortages.

➢ **Evolution of the China+1 Strategy:**
  ○ The confluence of factors, including China's zero-Covid policy, supply chain disruptions, high freight rates, and longer lead times, has led many global companies to adopt a **"China-Plus-One"** strategy.
    ● This involves exploring **alternative manufacturing locations** in other **developing Asian countries**, such as **India, Vietnam, Thailand, Bangladesh, and Malaysia,** to **diversify their supply chain** dependencies.

What are the Opportunities for India to Attract the Foreign Investment?

➢ **Demographic Dividend and Consumption Power:**
- ○ India's youthful demographic, with **28.4% of the population under 30 in 2023**, according to the **World Bank's** data, compared to **China's 20.4%**, is driving the workforce and consumer market. This boosts consumption, savings, and investments, positioning India as a potential multi-trillion dollar economy and attractive market for global companies.

➢ **Cost Competitiveness and Infrastructure Advantage:**
- ○ India's lower labour and capital costs compared to competitors like Vietnam make its production sector highly competitive.
  - A 2023 study by Deloitte stated that **India's average manufacturing wage is 47% lower than China's.**
- ○ Additionally, the government's heavy investment in infrastructure through the **National Infrastructure Pipeline (NIP)** aims to **reduce manufacturing costs and improve logistics by 20%**, further enhancing India's attractiveness.

➢ **Business Environment and Policy Initiatives:**
- ○ Recent policy interventions like the **Production Linked Incentive (PLI)** scheme, **tax reforms**, and **relaxed FDI norms** have created a conducive business environment.
- ○ The **Make in India** initiative, coupled with efforts to promote ease of doing business, is attracting foreign investments.

➢ **Digital Skilling and Technological Edge:**
- ○ As of January 2024, India has **870 million internet users,** representing **61%** of its population. This, combined with access to global tech giants like **Google and Facebook,** unavailable in China, gives Indian youth a digital advantage.

➢ **Strategic Economic Partnerships:**
- ○ India's focus on sub-regional partnerships and control over China's influence through initiatives like the **CEPA trade agreement** with the UAE demonstrates its strategic approach.
- ○ This diversification is expected to **increase bilateral trade by 200%** within 5 years, ensuring access to new markets while protecting domestic interests.

➢ **Dynamic Diplomacy and Global Influence:**
- ○ India's active participation in groupings like **QUAD** and **I2U2**, along with bilateral agreements with key countries, strengthens its economic ties and opens doors for technology transfer, finance, and market access.
- ○ As India assumes leadership roles in **G20** and **SCO**, it can leverage its position to shape global trade trends.

➢ **Large Domestic Market:**
- ○ India's massive **domestic market of 1.3 billion people** with **rising incomes** offers a compelling alternative to China.
- ○ India's **GDP** **per capita** has grown at an average of **6.9%** between 2018 and 2023 leading to a **vast consumer base** that provides a strong foundation for sustained economic growth and increased global trade.

Which Sectors will Benefit from the China+1 Strategy in India?

➢ **Information Technology/Information Technology Enabled Services (IT/ITeS):** In a 2024 NASSCOM report, India is recognized as a key player in IT services exports, bolstered by initiatives like **"Make in India,"** which aims to establish the country as a manufacturing hub for IT hardware. This effort has attracted major global technology firms.

➢ **Pharmaceuticals:** India's pharmaceutical industry, valued at **Rs 3.5 lakh crore** in 2024, is the world's **third-largest** by volume.
- ○ India has emerged as a "pharmacy of the world," supplying nearly **70% of WHO's vaccine needs** and offering **33% lower manufacturing costs** than the US.

➢ **Metals and Steel:** India's rich natural resources and the PLI scheme for specialty steel, expected to attract **Rs 40,000 crore in investments by 2029**, position it as a major steel exporter. China's withdrawal of export rebates and imposition of duties on processed steel products enhance India's attractiveness.
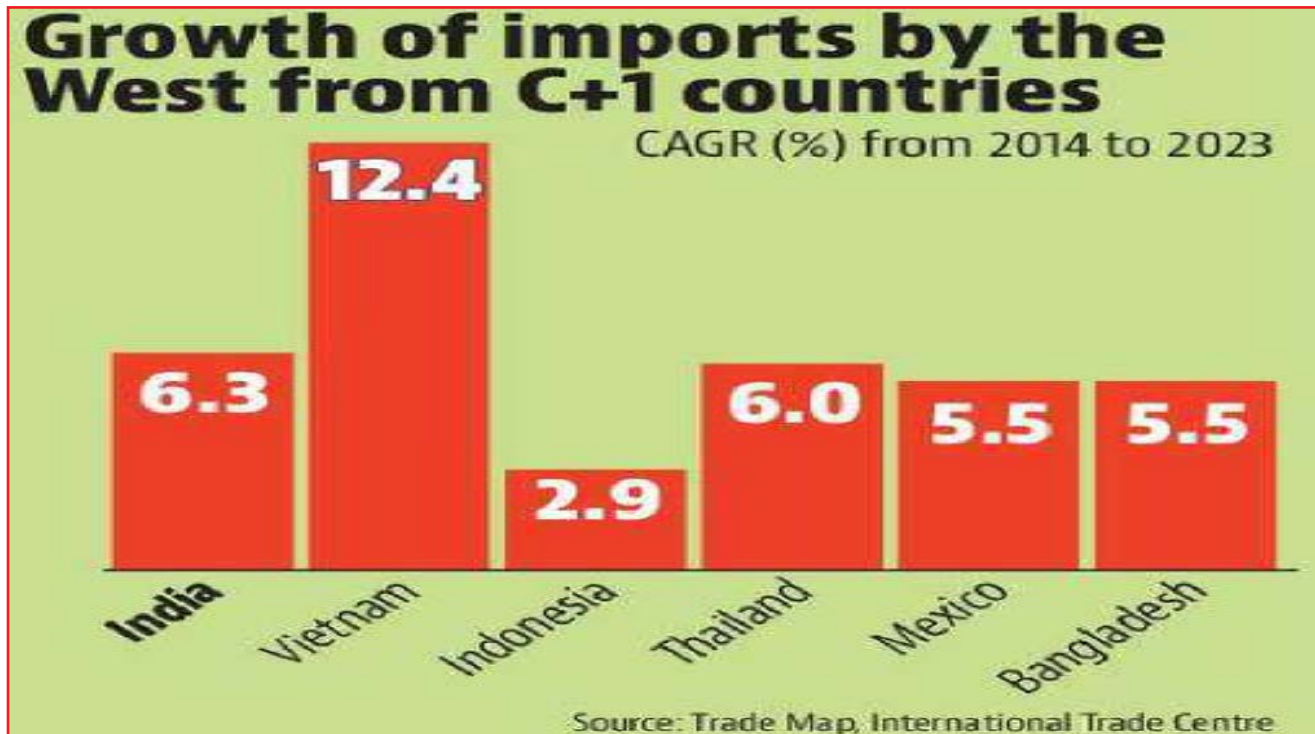
What is India's Performance in the C+1 Landscape?

➢ **Import Growth:**
- ○ **India's imports** from Western countries have shown the **second-highest growth** among analysed countries, with a **compound annual growth rate (CAGR) of 6.3%** from 2014 to 2023.
- ○ **Vietnam and Thailand** have outperformed India, with a CAGR of 12.4% in imports by the US, UK, and EU.
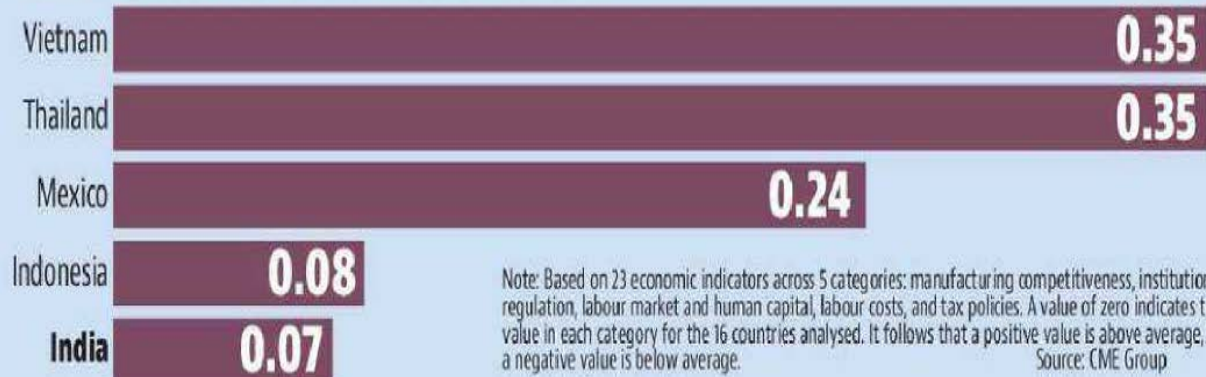
Note:

Growth of imports by the West from C+1 countries

CAGR (%) from 2014 to 2023

- India: 6.3
- Vietnam: 12.4
- Indonesia: 2.9
- Thailand: 6.0
- Mexico: 5.5
- Bangladesh: 5.5

Source: Trade Map, International Trade Centre

➤ **Business Perception:**

○ Despite having abundant resources and strategic planning, India has **struggled to create a positive impression** among businesses relocating from China.

○ Vietnam and Thailand have emerged as more attractive destinations.

How attractive are C+1 countries for manufacturing investors?

Manufacturing Attractiveness Index scores of countries

- Vietnam: 0.35
- Thailand: 0.35
- Mexico: 0.24
- Indonesia: 0.08
- India: 0.07

Note: Based on 23 economic indicators across 5 categories: manufacturing competitiveness, institutions and regulation, labour market and human capital, labour costs, and tax policies. A value of zero indicates the mean value in each category for the 16 countries analysed. It follows that a positive value is above average, whereas a negative value is below average.

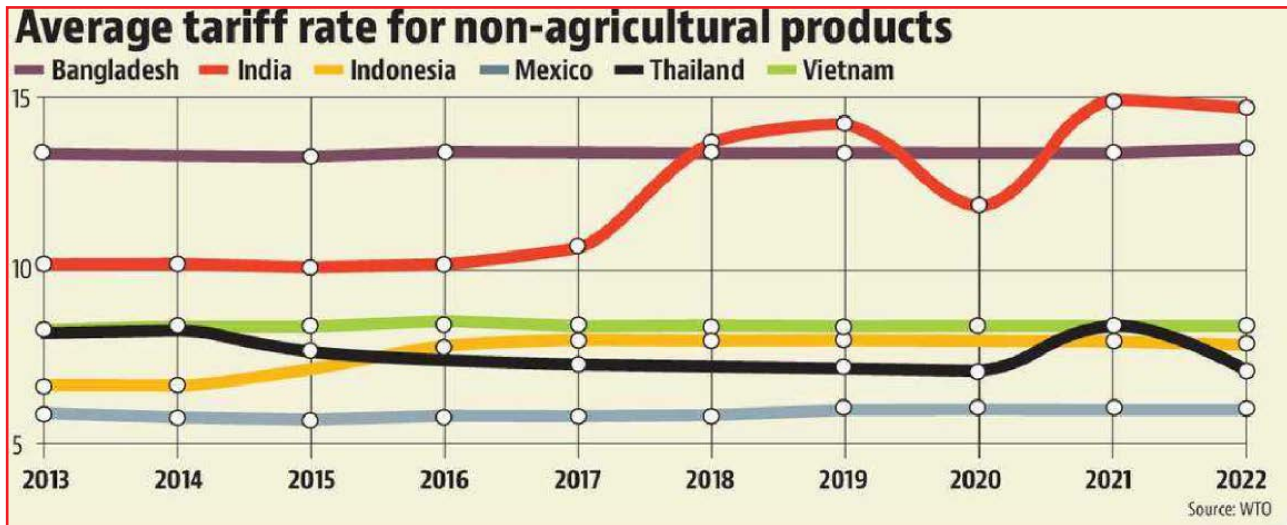Source: CME Group

➤ **Tariff Rates:**

○ **India's higher tariff rates,** averaging **14.7%** for non-agricultural products, have deterred Western investors. This is the highest among the countries analysed.

● The **inverted duty structure** in India, where taxes on imported raw materials are higher than those on final products, **reduces the competitiveness of Indian exports.**
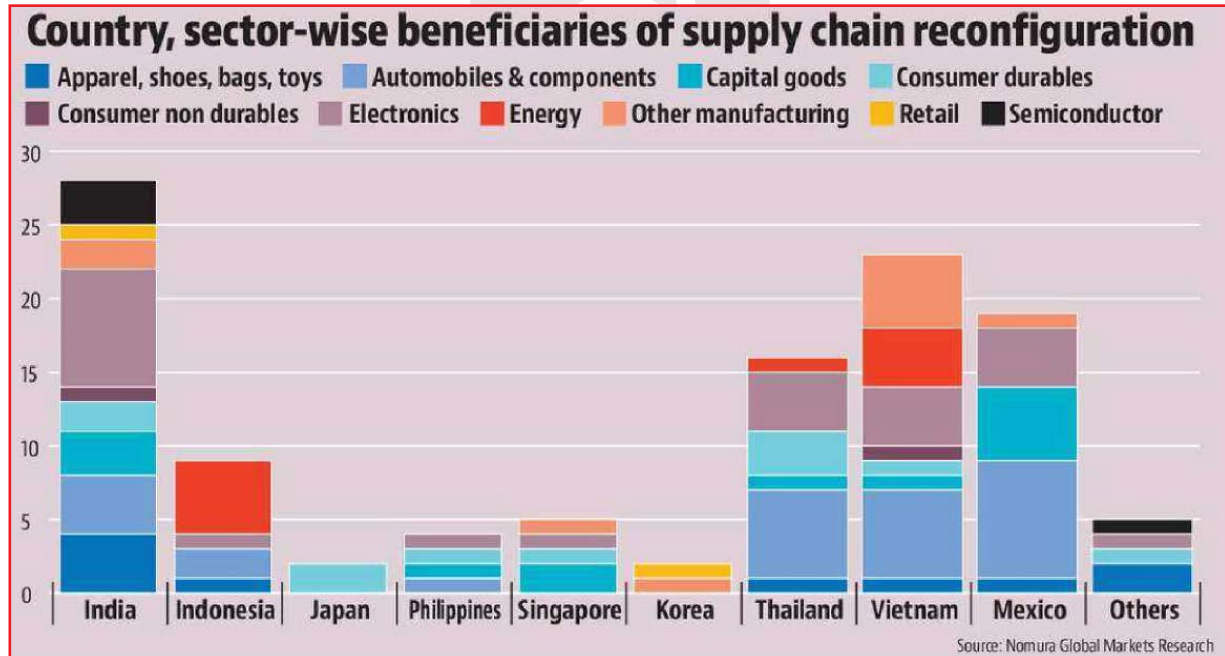
Note:

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Average tariff rate for non-agricultural products

— Bangladesh — India — Indonesia — Mexico — Thailand — Vietnam

Source: WTO

➤ **Promising Future Prospects:**

  ❍ As per **analysis**, India has emerged as the **most favoured destination** for companies planning to **relocate production or invest in new facilities in Asia**, with **28 companies showing interest**, compared to 23 for Vietnam.

  ❍ Notably, a significant portion of these interested firms (8 out of 28) are from the electronics sector, an area where India has previously lagged behind Vietnam.

Country, sector-wise beneficiaries of supply chain reconfiguration

■ Apparel, shoes, bags, toys ■ Automobiles & components ■ Capital goods ■ Consumer durables
■ Consumer non durables ■ Electronics ■ Energy ■ Other manufacturing ■ Retail ■ Semiconductor

Source: Nomura Global Markets Research

What are the Factors Hindering India's Competitiveness?

➤ **Ease of Doing Business:** India's **regulatory environment is complex**, characterized by **bureaucratic hurdles** and **inconsistent policy implementation**, which deter both domestic and foreign investors.

➤ **Manufacturing Competitiveness:** India faces significant challenges in manufacturing competitiveness due to **high input costs, inadequate infrastructure, and a shortage of skilled labour**.

  ❍ The CME Group's ranking highlights this issue, placing India behind several Southeast Asian nations.

➤ **Infrastructure Deficiencies:** Poor transportation, logistics, and energy infrastructure increase operational costs and reduce business efficiency.

Note:

➢ **Labour Market Rigidities:** Restrictive labour laws hinder flexibility and job creation, particularly in the organised sector.

➢ **Tax Structure:** The complex tax regime, including multiple indirect taxes, adds to the cost of doing business.

➢ **Land Acquisition Challenges:** The cumbersome process of land acquisition for industrial projects delays investments and raises costs.

➢ **Skill Mismatch:** The education system often fails to produce graduates with the skills demanded by the modern economy.

➢ **Corruption:** The prevalence of corruption erodes investor confidence and increases transaction costs.

India's Role in Advancing Global DPI

Why in News?

India's increasing influence in the digital sphere has been globally acknowledged, particularly through its advancements in **Digital Public Infrastructure (DPI).**

➢ The recent **Report of India's G20 Task Force on DPI** highlighted India's leadership in this domain and urged the country to proactively **extend its digital solutions to the Global South.**

Note: The Task Force was established in January 2023 to oversee India's G20 Presidency agenda on DPI and Financial Inclusion.

➢ It aims to boost productivity through digital technology adoption and support the government's digital economy policies.

What are the Key Highlights of the Report?

➢ **Identifying a Global Body:** The report recommends establishing a **global-standard organisation** to harness the DPI ecosystem across various regions.

○ This entity **should have a multinational presence** and the expertise necessary to formulate **policies and implement strategies effectively.** Its goal would be to facilitate collaboration among nations, especially in the Global South.

➢ **Integration of AI with DPI:** Explore the integration of **Artificial Intelligence** to enhance DPI capabilities while ensuring ethical use and **data privacy** safeguards.

○ The report suggests **using open-source software and AI models** to promote innovation and scalability in DPI, making it more accessible for private players.

○ Implementing measures to **protect user data** is crucial for building trust in AI-enabled services.

○ **Addressing biases in AI algorithms** ensures fair treatment for all users, Ensuring transparency in AI processes helps in gaining public confidence in digital services.

What is Digital Public Infrastructure (DPI)?

➢ **Definition:** DPI is described as a set of shared digital systems that should be **secure and interoperable,** and can be built on open standards and specifications to deliver and **provide equitable access to public and/or private services at societal scale.**

○ DPI is governed by applicable **legal frameworks and enabling rules** to drive development, inclusion, innovation, trust, and competition, while respecting human rights and fundamental freedoms.

➢ **Components of DPI:**

○ **Technology**: This comprises digital systems and applications (e.g., software codes, building blocks, protocols, standards) that are interoperable.

○ **Governance:** Governance facilitates user adoption at scale by establishing trust in DPI. Governance frameworks may include:

● Rules of engagement governing stakeholder behavior.

● Cross-cutting and domain-specific norms, laws, and policies.

● Governance embedded into digital technologies.

● Accountable institutions for maintaining oversight on its design, deployment, and implementation.

○ **Community:** Vibrant and inclusive community participation can enable value creation. This also comprises private sector and civil society actors who can collaborate to unleash innovation and unlock value.

➢ **Foundational DPI:**

○ **Identification:** The ability for people and businesses to securely verify their identity, as well as complementary trust services such as electronic signatures and verifiable credentials.

○ **Payments:** Easy and instant transfer of money between people, businesses, and governments.

○ **Data sharing:** Seamless flow of personal data with consent, wherever applicable, across public and the private sectors, with safeguards for personal data protection as per applicable data governance frameworks.

Note:

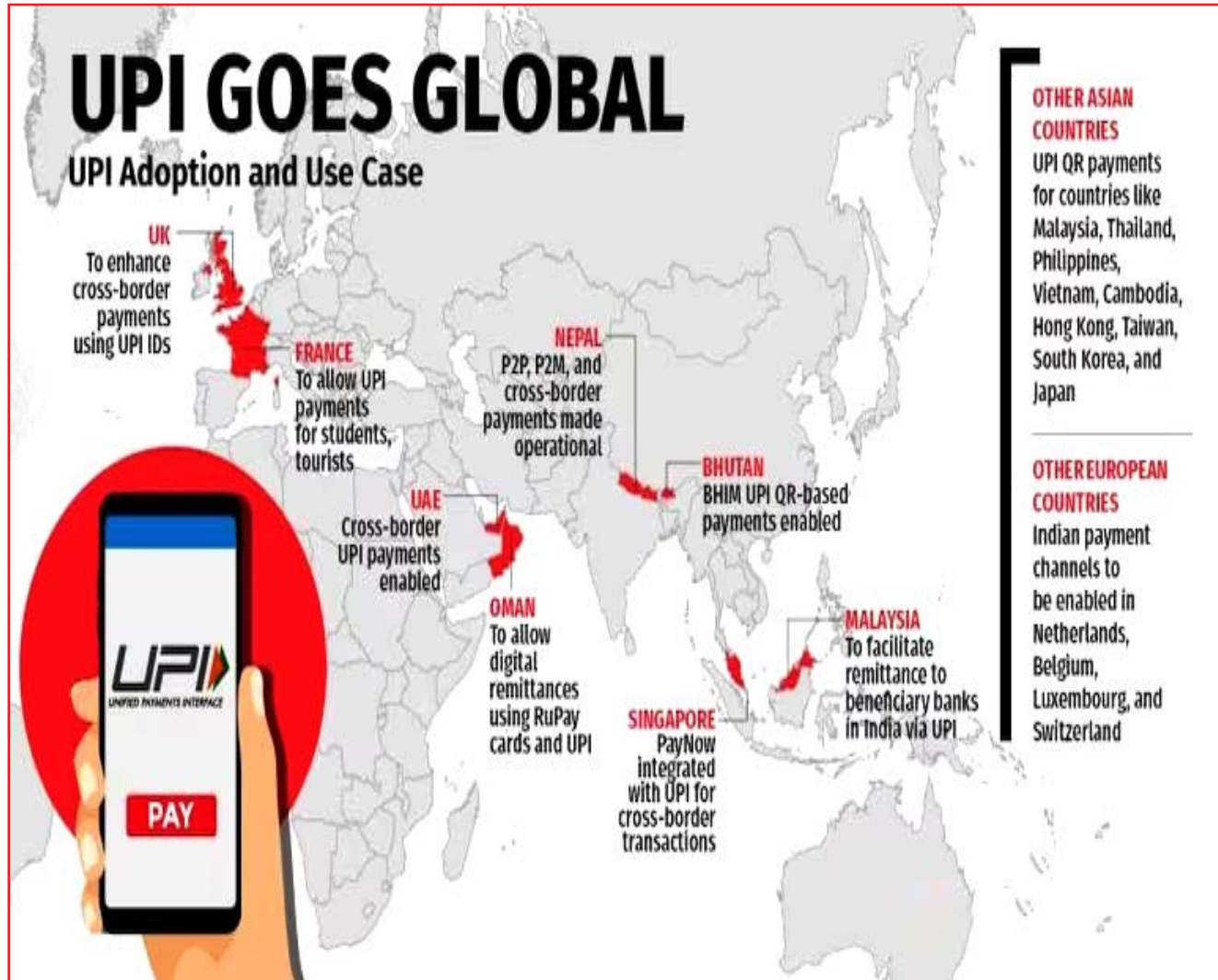drishti

➢ **India's DPI Examples and Achievements:**

India

India's Digital Public Infrastructure Achievements

AADHAAR
- 1.40 Billion Enrollments
- 125 Billion e-Authentications Done
- Led to DBT disbursal of USD 450 Billion in Govt. welfare schemes
- Led to saving of USD 42 Billion in welfare schemes

UPI
- 598 Banks live on UPI
- 329 Billion Digital Payment Transactions
- USD 6.42 Trillion worth of Transactions

Co-Win
- Helped administration of 2.2 Billion vaccination doses
- 1.1 Billion Registrations
- Handled peak of 2.5 Billion API Hits

Digi-Locker
- 6.74 Billion Issued Documents
- 296 Million Users
- 630+ Types of documents

Diska
- 5.48 Billion Learning Sessions
- 177 Million Enrollments
- 124 Million Completed Courses

Umang
- 2033 Government services available at UMANG
- 207 Departments onboarded from Central & State Departments
- 4.4 Billion Transactions done by 66 Million registered users

e-Sanjeevani
- Established 15K+ Hubs and 120K Health & Wellness Centres as Spokes
- 214,400 Providers onboarded
- 266 Millions Patients served

GeM
- 154,048 Primary Buyer Organisations
- 11,887 Product Categories and 323 Service Categories
- 6.3 Million orders served worth USD 48.37 Billion in last FY

API Setu
- 5500+ APIs live
- 1600+ Publisher Organisations
- 600+ Consumer Organisations

e-Hospital
- 1130+ Hospitals onboarded
- Daily average patient visits: 175,000
- Daily average transactions: 450,000

Poshan Tracker
- Provides nutritional services to 100+ Million beneficiaries
- Tracks last mile service delivery through 1.4 Million Anganwadi Workers

Ayushmann Bharat Digital Mission (ABDM) [National Health Stack]
- ABHA (Health IDs): 48,65,63,253
- Verified Health Professionals: 2,44,885
- Verified Health Facilities: 2,23,489

Note:

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How is India Currently Engaging with Global DPI?

➢ **Globalisation of UPI**: The <u>**Reserve Bank of India**</u> is actively working with Indian missions abroad to globalise the <u>**Unified Payments Interface (UPI),**</u> having engaged with over 80 countries and established partnerships in more than 30 countries.

➢ **Role of NPCI**: The <u>**National Payments Corporation of India (NPCI)**</u> is pushing for UPI's international acceptance, highlighting India's commitment to digital finance globally.

UPI GOES GLOBAL
UPI Adoption and Use Case

UK To enhance cross-border payments using UPI IDs

FRANCE To allow UPI payments for students, tourists

UAE Cross-border UPI payments enabled

OMAN To allow digital remittances using RuPay cards and UPI

NEPAL P2P, P2M, and cross-border payments made operational

BHUTAN BHIM UPI QR-based payments enabled

SINGAPORE PayNow integrated with UPI for cross-border transactions

MALAYSIA To facilitate remittance to beneficiary banks in India via UPI

OTHER ASIAN COUNTRIES UPI QR payments for countries like Malaysia, Thailand, Philippines, Vietnam, Cambodia, Hong Kong, Taiwan, South Korea, and Japan

OTHER EUROPEAN COUNTRIES Indian payment channels to be enabled in Netherlands, Belgium, Luxembourg, and Switzerland

Read more: <u>**Digital Public Infrastructure**</u>

Lowest Paddy Sowing in Decade

Why in News?

According to data released by the **Department of Agriculture and Farmers Welfare** in June 2024, the area under paddy cultivation has been **reported to be only 2.27 million hectares (mha) so far**.

➢ June 2024 saw the smallest area sown with **paddy**, **India's primary Kharif crop**, in the past decade, except for the **drought**-affected year of 2015.

What are the Reasons for the Decline in Paddy Sown Area?

➢ **Historical Comparison:**
  ○ According to data from the **Crop Weather Watch Group** in 2016 and 2017, the area under paddy was 3.90 mha and 3.89 mha respectively, and has since fluctuated between 3.60 mha and 2.69 mha, with 2023 figures of June being slightly higher than 2024.

➢ **Reasons for Decline in Paddy Sowing:**
  ○ **Changing Rainfall Patterns:** Farmers have shown apprehensions regarding 'normal' rainfall, leading to a shift in sowing operations from June to July.
    ● This change is due to the **increasingly erratic rainfall patterns** observed over recent years. In June 2024, for instance, there was an 11% rainfall deficit.
    ● The **month of June is no longer suitable for Kharif sowing** for millions of farmers due to these adverse conditions.
  ○ **Agricultural Requirements:** Paddy cultivation requires **continuous flooding of fields up to 10 centimeters** for two weeks during the transplantation stage.
  ○ **Impact of Dry June:** June is crucial as it marks the **onset of the southwest monsoon season**, providing necessary soil moisture for 61% of India's rain-fed agriculture. A dry June results in inadequate ground moisture levels, making sowing challenging for farmers.
    ● Analysis of the data of the period 1988-2018 by Down To Earth covering 676 districts in India showed that **62% of the districts experienced a decrease in June rainfall.**

➢ **Implication:**
  ○ The **traditional crop calendar**, detailing sowing and harvesting times alongside average rainfall and temperature, has **become outdated due to these changes.**
  ○ The decline in the area sown with paddy by the end of June 2024 is **indicative of the broader challenges faced by Indian agriculture**, particularly the impact of erratic monsoon patterns.
    ● While other Kharif crops have seen an increase in sown area, the **overall trend underscores the necessity for better weather forecasting** and **adaptive farming practices** to cope with changing climate conditions.

What are Kharif Crops?

➢ **Kharif crops** are the crops that are **sown in the rainy season**, usually beginning in June with the onset of the **southwest monsoon**, while the crop marketing season will run from October 2024 to September 2025.
  ○ Some of the major kharif crops are **paddy, maize, millets, pulses, oilseeds, cotton and sugarcane.**

➢ Kharif crops **account for about 55% of the total foodgrain production** in India.

➢ The **Union Cabinet** recently gave its nod to raise the **Minimum Support Price (MSP)** for paddy by 5.35% to Rs. 2,300 per quintal for the upcoming 2024-25 kharif marketing season.
  ○ The Cabinet approved MSP hikes for all 14 kharif season crops, in alignment with the government's **"clear policy"** of keeping MSPs at least 1.5 times above the cost of production as calculated by the government.

➢ However, only four of these crops have MSPs that will provide farmers with a margin of more than 50% above their production costs namely **bajra (77%),** followed by **arhar dal (59%), maize (54%),** and **black gram (52%).**

➢ In 2024, MSP hike is likely to **result in a total financial implication of Rs 2 lakh crore**, about Rs 35,000 crore higher than the previous season.

Note:

MONSOON

Monsoons are seasonal winds that reverse their direction with the change of season.

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Origin of Monsoon

- Thermal Concept
- Dynamic Concept

Thermal Concept by Halley

- Monsoon result of:
  - Heterogenous character of globe (Unequal distribution of land and water)
  - Differential seasonal heating and cooling of continents and oceans

South-West (Summer) Monsoon

- Sun shines over Tropic of Cancer
- Brings low-pressure centres (Near Baykal Lake and Peshawar) due to High temperature

Dynamic Concept by Flohn

- Monsoon originated due to shifting of pressure and wind belts
- Intertropical Convergence (ITC) formed due to convergence of NE and SE trade winds near equator
- Northern and Southern branches of the ITC, known as NITC and SITC respectively, create a belt of doldrums marked by equatorial westerlies

South-West (Summer) Monsoon

- Sun shines over Tropic of Cancer
- NITC extended up to 30° N latitude covering south and SE-Asia and establishes Equatorial westerlies
- It brings atmospheric depressions (cyclones) with heavy rainfall

North-East (Winter) Monsoon

- Sun shines over Tropic of Capricorn
- Due to Southward shifting of Sun, pressure and wind belts also shifts
- Western cyclonic disturbances (from Mediterranean Sea) enter India from west in winter due to Westerly Jet stream
- Northeast trade winds reestablished over south and SE Asia
- These NE trades become winter monsoons called Retreating Monsoon and rains in Andhra and Tamil Region

- Low temperature in Southern hemisphere brings High pressure centre over Australia and Indian Ocean
- Winds Blow from high (ocean) to low pressure in Asia (land)
- Ferrel's law and Coriolis force turn these wind in south-westerly (SW) direction
- They bring moisture from Indian oceans to Indian subcontinent yielding heavy rainfall

North-East (Winter) Monsoon

- Sun shines over Tropic of Capricorn
- Brings High Pressure centers (near Baykal Lake and Peshawar) due to low temperatures
- High temperature in Southern hemisphere brings Low pressure centre over Australia and Indian Ocean
- Winds Blow from high (land) to low pressure (ocean) in north-easterly (NE) direction called Retreating Monsoon
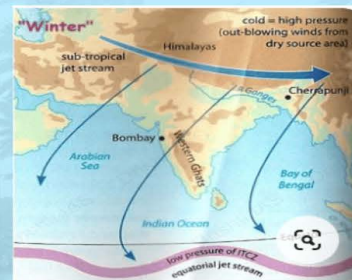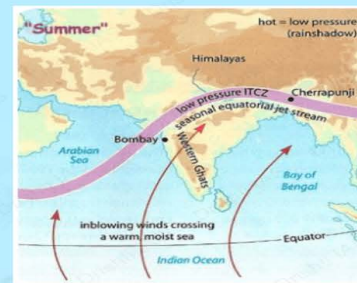
Read More: Centre Sets Minimum Support Price for Kharif Crops

SC Verdict on GM Mustard Approval

Recently, the **Supreme Court (SC)** delivered a split verdict on the validity of the Centre's decision to grant conditional approval for the environmental release of **Genetically Modified (GM) mustard crops**. Now, the case will be referred to a **Supreme Court's three-judge Bench.**

➢ **Genetically Modified (GM) Crops** are **genetically engineered crops** that undergo gene alteration and modification.

What are the Key Highlights of SC Verdict on GM Mustard?

➢ **Reason Behind Split Judgement:**
  - **Justice Nagarathna** criticised the GEAC for clearing the project without relying on any **indigenous studies** on the crop's effect in India and its possible environmental ramifications and **only foreign research studies** were considered while making the recommendation.

Note:

- ❍ **In contrast, Justice Karol upheld** the GEAC's clearance for GM mustard's commercial release
- ❍ However, **both judges concurred on certain points** raised during the arguments.
  - ● They acknowledged that judicial review of decisions made by the GEAC was permissible and emphasised the need for the Centre to consider implementing a **national policy.**
- ➢ **Directive for National Policy**:
  - ❍ The judges asked the Union Ministry of Environment and Forest to formulate such a policy, along with rules, within four months.
  - ❍ This policy should cover **research, cultivation, trade, and commerce,** and be developed in consultation with stakeholders including agriculture experts, **biotechnologists, state governments, and farmer representatives.**
- ➢ **GEAC's Role**:
  - ❍ The **Genetic Engineering Appraisal Committee (GEAC)** approved the environmental release of the **transgenic mustard hybrid Dhara Mustard Hybrid-11 (DMH-11)** in October 2022.

What is GM Mustard?

- ➢ **About:**
  - ❍ **Dhara Mustard Hybrid-11 (DMH-11)** was developed in India by hybridising the Indian mustard variety **' Varuna' and 'Early Heera-2'** (Eastern European variety).
  - ❍ It contains two alien genes ('barnase' and 'barstar') isolated from a soil bacterium called **Bacillus amyloliquefaciens** that enable breeding of high-yielding commercial mustard hybrids.
  - ❍ It is approved by the **Genetic Engineering Appraisal Committee (GEAC)** for cultivation.
- ➢ **Characteristics:**
  - ❍ It is classified as a **Herbicide Tolerant (HT)** mustard variety and it is **engineered to withstand specific herbicides,** which can aid in **weed control and enhance crop yield.**
- ➢ **Significance:**
  - ❍ **Mustard Contribution in Oil Production and Imports:** Despite producing 116.5 lakh tonnes of edible oils in **2021-22, India imported 141.93 lakh tonnes**, highlighting a significant gap and there is a projected demand of **34 million tonnes by 2025-26.**
    - ● Mustard plays a pivotal role, constituting **40% of India's total edible oil** production.

- ❍ **Potential Yield Enhancement Of GM Mustard:** GM Mustard demonstrates a yield increase of **approximately 28%** compared to the national standard and **surpasses zonal benchmarks** by around **37%**, indicating superior performance in specific agricultural regions.
  - ● Its varieties like **DMH-11 have the capability to substantially increase yields to 3-3.5 tonnes** per hectare.
- ❍ **Improved Input Efficiency:** GM mustard can optimise resource utilisation by requiring **less water, fertilisers, and pesticides compared to traditional varieties.** This efficiency is crucial for sustainable agriculture practices and mitigating environmental impact.
- ❍ **Reduced Price Volatility:** Enhanced production through GM mustard can stabilise edible oil prices in the domestic market, benefiting consumers and ensuring food security.

What are Genetically Modified (GM) Crops?

- ➢ **GM crops** are plants whose **genes are artificially modified**, usually by **inserting genetic material from another organism**, in order to give it new properties, such as increased yield, tolerance to a **herbicide**, **resistance** to disease or **drought**, or improved nutritional value.
  - ❍ Earlier, India approved the commercial cultivation of **only one GM crop, Bt cotton**, but **Genetic Engineering Appraisal Committee (GEAC)** has recommended GM Mustard for commercial use.
- ➢ **Challenges Faced by BT Cotton** (only Commercially cultivable GM Crop in India):
  - ❍ **Insect Resistance:** The primary challenge with BT cotton has been the emergence of **insect resistance to the Bt toxin**. Overreliance on a single mode of pest control has accelerated this process.
  - ❍ **Secondary Pest Outbreaks:** While **effectively controlling bollworms,** BT cotton has led to **increased populations of sucking pests like aphids and whiteflies, necessitating additional pesticide applications.**
  - ❍ **Environmental Impact:** Concerns about the impact of Bt cotton **on non-target organisms, such as beneficial insects,** have been raised.
  - ❍ **Economic Implications:** Despite initial yield gains, the long-term economic benefits of BT cotton have been debated, with **some studies indicating diminishing returns.**

Note:

Genetically Modified Crops

About
- Genetic modification of plants involves **adding a specific stretch of DNA into the plant's genome**, giving it new or different characteristics
- Also called **Transgenic crops**

Objective
- Increase yield
- Increase tolerance to herbicides
- Improve nutritional value
- Provide resistance to disease/drought

Global Cultivation
- Top 5 GM growing countries - **USA, Brazil, Argentina, India and Canada**
- Major GM Crops - **Soybean, maize, cotton and canola**

GM Crops in India
- **Bt cotton - only one GM crop approved,** (90% of India's total cotton acreage) (resistance against pink bollworm)
- **Ht Bt cotton** - resistance against **glyphosate** (herbicide)
- **DMH-11 mustard - recommended for commercial use** (high yield)
- **Golden rice** - probably the best variety of GM rice **(Vitamin A)**

Concerns
- Manipulation of GM Seed Cost
- Seeds don't create viable offsprings
- Insect-resistant plants harm non-targeted species too
- Intermixing violates natural plants' intrinsic values

GM Crop Regulation

- **Statutory Provision**:
  - **Rules for Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms (HM) Genetically Engineered Organisms or Cells, 1989** under the Environment Protection Act (1986).
- **Statutory Bodies**:
  - **Genetic Engineering Appraisal Committee (GEAC)** (under MoEF&CC) - **administers commercial release** of GMC
  - Recombinant DNA Advisory Committee (RDAC)
  - Institutional Biosafety Committee (IBSC)
  - Review Committee on Genetic Manipulation (RCGM)
  - State Biotechnology Coordination Committee (SBCC)

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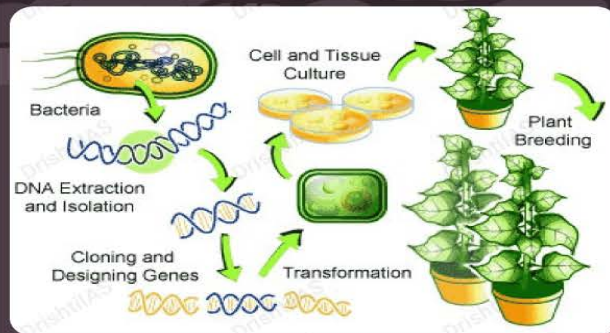
Cartagena Protocol on Biosafety (2000)
- It seeks to protect biological diversity from the potential risks posed by **Living Modified Organisms** resulting from **modern biotechnology.**
- **India is a signatory** to this protocol.

Note:

What is the Genetic Engineering Appraisal Committee (GEAC)?

➢ The **GEAC**, under the Ministry of Environment (MoEF&CC), is **responsible for the appraisal of activities** involving large-scale use of hazardous microorganisms and recombinants in research and industrial production from an environmental angle.

➢ The committee is also **responsible for the appraisal of proposals** relating to the **release of genetically engineered (GE)** organisms and products into the environment including experimental field trials.

➢ GEAC is chaired by the Special Secretary/ **Additional Secretary of MoEF&CC** and co-chaired by a representative from the **Department of Biotechnology (DBT).**

  ❍ Presently, **it has 24 members** and meets every month to review the applications in the areas indicated above.

What are the Concerns Associated with GM Mustard?

➢ **Biodiversity Concern:** Potential effects on honeybees due to **altered flowering and pollen production.**

  ❍ Its altered genes could potentially affect other beneficial such as **insects, soil microbes, and wildlife,** and unintended harm to beneficial insect populations can disrupt **ecological balances** essential for agriculture.

➢ **Food Security and Health Concerns: Monoculture cropping facilitated by GM varieties** could increase vulnerability to crop diseases and climate change impacts, threatening long-term food security.

  ❍ Potential for **creating novel proteins with unknown impacts on human health**, as the genes used in GM mustard are not part of the human diet.

➢ **Ethical Considerations:** There are ethical concerns surrounding the commodification of genetic resources like **self-terminating seed** and **exclusive patent regime** are the implications for agricultural sovereignty.

  ❍ The introduction of GM mustard raises questions about **equitable access to technologies and the rights of farmers** to save and exchange seeds.

➢ **Regulatory Challenges:** Ensuring compliance with stringent **bio-safety protocols** and monitoring **long-term environmental impacts** requires robust institutional capacity and infrastructure and regulatory challenges.

Programme on Science of Natural Farming

Why in News?

Recently, the **"Regional Consultation Program on the Science of Natural Farming"** emphasised the importance of natural farming as a sustainable agricultural practice.

➢ It was announced that farmers who practise natural farming on a portion of their land for 3 years will be eligible for government subsidies.
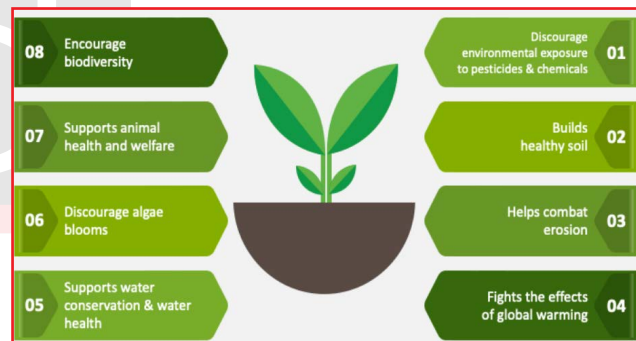
What is Natural Farming?

➢ **About:**

  ❍ Natural farming is an agricultural practice that emphasises **minimal intervention and the use of natural resources** to cultivate crops.

  ❍ It seeks to enhance soil health, biodiversity, and ecosystem balance without relying on synthetic fertilisers, pesticides, or herbicides.

  ❍ It is largely based on **on-farm biomass recycling** with major stress on **biomass mulching**, use of **on-farm cow dung-urine formulations**; maintaining **soil aeration** and **exclusion of all synthetic chemical inputs.**

➢ **Aims and Objectives:**

  ❍ Preserve natural flora and fauna

  ❍ Restore soil health and fertility

Note:

- Maintain diversity in crop production
- Efficient utilisation of land and natural resources
- Promote natural beneficial insects, animals, and microbes
- Promotion of local breeds for livestock integration
- Use of natural/local resource-based inputs
- Reduce input cost of agricultural production
- Improve economics of farmers

➢ **Components:**

COMPONENTS OF
NATURAL FARMING

Beejamrit
The process includes treatment of seed using cow dung, urine and lime based formulations.

Jivamrit
The process enhances the fertility of soil using cow urine, dung, flour of pulses and jaggery concotion.

Whapasa
The process involves activating earthworms in the soil in order to create water vapor condensation.

Mulching
The process involves creating micro climate using different mulches with trees, crop biomass to conserve soil moisture.

Plant Protection
The process involves spraying of biological concoctions which prevents pest, disease and weed problems and protects the plant and improves their soil fertility.

➢ **Current Scenario:**

- Several states, including Andhra Pradesh, Gujarat, Himachal Pradesh, Odisha, Madhya Pradesh, Rajasthan, Uttar Pradesh, and Tamil Nadu, have initiated programs to promote natural farming.
- Currently, over **10 lakh hectares** of land in India are being used for natural farming.

➢ **Government Schemes:**

- **Bharatiya Prakritik Krishi Paddhati (BPKP):** It is a sub-mission under the **Paramparagat Krishi Vikas Yojana (PKVY)**, which falls within the umbrella of the **National Mission on Sustainable Agriculture (NMSA).**
- **National Mission on Natural Farming**

Note:

Table 1: Difference between Organic and Natural Farming	
Organic Farming	**Natural Farming**
Organic fertilizers and manures like compost, vermin-compost and cow dung manure are used and added to farmlands from external sources.	In natural farming, neither chemical nor organic fertilizers are added to the soil. In fact, no external nutrient sources added to soil.
Organic farming is still expensive due to the requirement of bulk manures, and it has an ecological impact.	It is an extremely low-cost farming method, completely moulding with local on biodiversity surrounding environments.
In organic farming the manures and composts are to be incorporated into the soil for their proper decomposition and this requires more effort and cost.	In natural farming, decomposition of organic matter by microbes and earthworms is encouraged right on the soil surface itself, which gradually adds nutrition in the soil, over the years.
Organic farming has a slight adverse effect on the surrounding environment as it involves intervening with the natural processes.	Natural farming practice does not have any effect on the surrounding environment and it confirms with local processes of biodiversity.
Guidelines & regulations to be followed for certification purpose.	Less regulated.

Read more: Plough to Plate: Natural Farming Unleashed, Natural Farming

Green Revolution in Maize

Why in News?

Recently, **India's maize industry** has undergone a remarkable transformation, evolving from a **basic feed crop to a crucial component in the fuel and industrial sectors.**

➢ This shift is indicative of a broader **green revolution,** echoing the historic advances made in wheat and rice but with a modern twist driven largely by private-sector innovations.

What is the Current State of Maize Production in India?

➢ **Tripling Production:** Since 1999-2000, India's maize production has more than tripled, increasing from **11.5 million tonnes to over 35 million tonnes** annually, with average per-hectare yields also rising from 1.8 to 3.3 tonnes.
  ○ As per **APEDA**, India is the **fifth largest maize producer,** accounting for 2.59% of global production in 2020.
  ○ Maize is the **third most important cereal crop in India** after **rice and wheat.** It accounts for around 10% of total food grain production in the country.

➢ **Yield Improvements:** Average per-hectare yields have risen from 1.8 to 3.3 tonnes over the same period.

➢ **Major States:** Karnataka, Madhya Pradesh, Bihar, Tamil Nadu, Telangana, Maharashtra, and Andhra Pradesh are the primary maize-growing states.

➢ **Year-Round Cultivation:** Maize is grown throughout the year, predominantly as a Kharif crop(85% of the maize cultivation area is during this season).

➢ **Export Volume:** India exported 3,453,680.58 MT of maize worth Rs. 8,987.13 crores in 2022-23.
  ○ **Major Export Destinations:** Bangladesh, Vietnam, Nepal, Malaysia, and Sri Lanka are key markets for Indian maize.

Note:

- ➤ **Major Uses:** Approximately **60% of maize is used as feed for poultry** and livestock, while only about **20% is directly consumed by humans.**
  - ○ Maize is a primary energy source in livestock feed, with 55-65% of broiler feed and 15-20% of cattle feed comprising maize.
    - ● **Starch and Ethanol:** Maize grains, containing 68-72% starch, are used in industries such as **textiles, paper, and pharmaceuticals.**
  - ○ Recent developments have shifted focus to using maize for **ethanol production,** particularly as a **substitute for rice in ethanol blending** due to food security concerns.
  - ○ During the crushing season, distilleries run on sugarcane molasses and juice/syrup, while in the off-season they use grains, with the recent shift towards maize.

How does Maize's Green Revolution Compare to Wheat and Rice?

- ➤ **Self-Pollinating vs. Cross-Pollinating**: Unlike **self-pollinating** wheat and rice, **maize's cross-pollinating** nature makes hybrid breeding commercially viable.
  - ○ The Green Revolution in wheat and rice was driven by farmers cultivating high-yielding varieties being self-pollinating plants that are not amenable to hybridization.
  - ○ The Green Revolution in maize has been, and continues to be, a private sector-led one. Private-sector **hybrids** dominate over **80% of maize cultivation, with high yields limited to the first generation.**
    - ● Farmers cannot harvest the same yields if they save the grains from these yields and reuse them as seeds (self termination nature of seeds).
- ➤ **Innovations in Maize Cultivation: The** Indian Agricultural Research Institute (IARI) has bred India's first **"waxy" maize hybrid** (AQWH-4) with *high amylopectin starch content,* making it better suited for ethanol production.
  - ○ The starch in maize is a mixture of two polymers, comprising glucose molecules bonded together in a *straight chain (amylose) and in branched form (amylopectin).*

- ○ Normal maize starch has 30% amylose and 70% amylopectin, while IARI's waxy maize hybrid has 93.9% amylopectin.
  - ● Amylose starch makes the grain hard, while amylopectin makes it soft, affecting starch recovery and fermentation rates.
  - ● Softness aids in better grain grinding for flour production. Granules with higher amylopectin are more easily broken down into glucose units. The glucose is then fermented into ethanol using yeast.
- ○ Normal maize grains have 68-72% starch, but only 58-62% is recoverable. The new **Pusa Waxy Maize Hybrid-1** has 71-72% starch with 68-70% recovery.
  - ● This **hybrid offers an average yield of 7.3 tonnes per hectare** and has the potential to reach 8.8 tonnes.
- ➤ **Private Sector's Role**: The International Maize and Wheat Improvement Center (CIMMYT) has established a **maize doubled haploid (DH)** facility in Kunigal (Karnataka), producing high-yielding, genetically pure inbred lines.
  - ○ This facility speeds up the development of maize hybrids and enhances breeding efficiency.
  - ○ In the conventional process, inbred lines are formed by continuous **self-pollination for 6-8 generations.** DH technology enables the production of completely uniform lines after **just two cropping cycles.**
  - ○ In 2022, the Kunigal facility produced and shared 29,622 maize DH lines. The lines are **high-yielding, tolerant to drought, heat, and water-logging, nutrient-use efficient, and resistant to pests** and diseases such as fall armyworm and maize lethal necrosis.
  - ○ Companies like Mahyco, Shriram Bioseed, Advanta Seeds, and others play a significant role in developing and promoting high-yield maize hybrids.

What are the Initiatives to Promote Maize in India?

- ➤ **National Food Security Mission (NFSM).**
- ➤ **India Maize Summit:** Organized in 2022, with a focus on securing a sustainable maize supply to meet growing demand and increase farmer prosperity.
- ➤ **Rashtriya Krishi Vikas Yojana (RKVY).**

Note:

Green Revolution

➢ It was led by **Norman Borlaug in the 1960s**, resulted in the development of High Yielding Varieties (HYVs) of wheat and led to him winning the **Nobel Peace Prize** in 1970.

➢ In India, **M.S. Swaminathan** played a key role in the Green Revolution, which significantly increased food grain production, especially **wheat and rice**.

  ❍ The revolution transformed India from a food-deficient country to one of the world's leading agricultural nations between 1967-68 and 1977-78.

➢ It included the incorporation of various irrigation methods to **reduce dependence on rainfall.** Mechanisation of major agricultural practices to **reduce labour costs** and increase efficiency. Use of **chemical fertilizers and pesticides** to enhance soil fertility and protect crops.

  ❍ **Double cropping in existing farmland** to increase cropping intensity and yield.

  ❍ Expansion of farming area by bringing more land under cultivation, especially in semi-arid and arid regions, using irrigation and HYV seeds.

➢ The Green Revolution significantly led to a substantial increase in grain output, making **India one of the largest agricultural producers in the world**.

  ❍ As a result, **India became a net exporter of wheat, rice, and other food grains,** with record-high exports in recent years.

➢ The higher productivity also contributed to **poverty alleviation** by lifting many small-scale farmers out of poverty through increased incomes.

➢ The Green Revolution brought several challenges, including **environmental degradation from synthetic fertilizers and pesticides, soil erosion, and water pollution.** It also led to **loss of biodiversity and genetic diversity of crops,** displacement of indigenous crops, and traditional farming practices.

  ❍ Additionally, it increased vulnerability of crops to pests, diseases, and **climate change.**

■■■

Note:

International Relations

Highlights

- *Quad Foreign Ministers Meeting*
- *Letter of Intent between AIM and WIPO*
- *Neighbourhood First in MEA's Aid Allocation*
- *2nd Retreat of the Foreign Ministers of the BIMSTEC*

Quad Foreign Ministers Meeting

Why in News?

Recently, the **Quad** foreign ministers' meeting in Tokyo saw Australia, India, Japan, and the US emphasise ending **violence in Ukraine**, **Gaza**, and **Myanmar**, and expressed their intention to expand the **Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)** into the Indian Ocean Region.

What is QUAD?

➢ The Quad is an **informal diplomatic partnership between Australia, India, Japan, and the United States** committed to **supporting an open, stable and prosperous Indo-Pacific** that is inclusive and resilient.

➢ It was first proposed by Japanese Prime Minister Shinzo Abe in 2007, it became a formal group in 2017 after overcoming initial setbacks, including Australia's withdrawal due to Chinese pressure.

➢ Finally in 2017, India, Australia, the US and Japan, came together and formed this **"quadrilateral" coalition.**
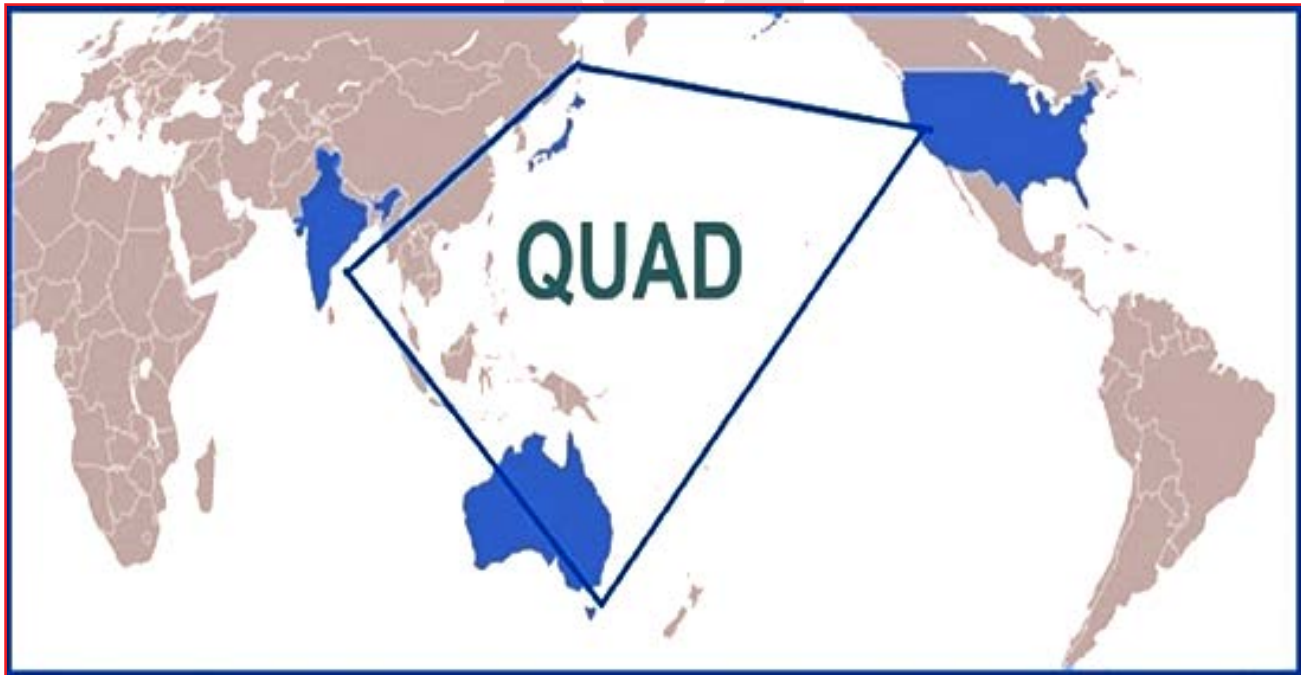
What is the Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)?

➢ The IPMDA Initiative was announced at the **Quad Leaders' Summit in Tokyo in 2022.** It focuses on integrating the **Pacific Islands**, **Southeast Asia**, and the **Indian Ocean region (IOR)** in the **Indo-Pacific**.

➢ Its primary aim is to track dark shipping vessels that turn off their **Automatic Identification System (AIS)** to avoid detection.

Note:

○ Additionally, it focuses on **monitoring tactical-level activities to respond to climate and humanitarian events** and protect fisheries, which are crucial to many Indo-Pacific economies.

➢ **Significance for India**: The IPMDA represents a significant effort to enhance security and stability in the Indo-Pacific, a region of major global geopolitical importance.

○ India's Navy, currently with over 140 ships and submarines, is set to expand to a formidable fleet of 170 to 180 vessels by 2028.

What is the Indian Ocean Region (IOR)?

➢ The Indian Ocean Region (IOR) spans over 36 littoral and island countries and is crucial due to its trade routes, natural resources, and geopolitical importance.

○ It includes **busy sea-lanes** like the **Straits of Hormuz** and **Malacca.**

➢ The region is **rich in marine biodiversity** but faces challenges like piracy, illegal fishing, and environmental degradation.

➢ India plays a key role in the IOR, alongside China, the US, and regional organisations, emphasising the need for cooperation to tackle common challenges and ensure sustainable development.

➢ **Other Groupings in Indian Ocean Region (IOR):**

○ **Indian Ocean Rim Association (IORA):** It is an intergovernmental organisation established to promote economic cooperation and regional integration among countries bordering the **Indian Ocean.**

Note:

- ❍ **AUKUS**: It is a trilateral security partnership formed in 2021 between Australia, the UK, and the US, focused on the Indo-Pacific. It includes sharing US nuclear submarine technology with Australia and aims to counterbalance China's actions in the South China Sea. The partnership also promotes cooperation in emerging technologies like AI, quantum technologies, and undersea capabilities.

Letter of Intent between AIM and WIPO

Why in News?

Recently, **World Intellectual Property Organization (WIPO)** signed a **Joint Letter of Intent (JLoI)** with **Atal Innovation Mission (AIM)**. The JLoI is aimed at building **programs for Innovation, Entrepreneurship & Intellectual Property (IP)** for countries in the **Global South.**

➤ This partnership aims to enhance understanding and awareness about **intellectual property rights (IPR)** from the school level and unlock the innovation potential of the world, **fostering inclusive and sustainable economic growth.**

> **Note:**
> ➤ **India's Innovation Ecosystem:** India has made significant strides in its entrepreneurial journey and is **positioned as a global leader in innovation,** leveraging its vast talent pool and dynamic market to attract international investments.
> ❍ As per the **Global Innovation Index 2023 report**, **India retained the 40th position out of 132** economies featured.

What is Atal Innovation Mission (AIM)?

➤ AIM, launched in 2016, is Government of India's flagship initiative set up by the **NITI Aayog** to promote a **culture of innovation and entrepreneurship** in the country.

Note:

- ❍ Its objective is to develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee the innovation ecosystem of the country.
- ➢ **Major Initiatives:**
  - ❍ **Atal Tinkering Labs:** Creating **problem solving mindset** across **schools** in India.
  - ❍ **Atal Incubation Centers:** Fostering world class **startups** and adding a new dimension to the **incubator model.**
  - ❍ **Atal New India Challenges:** Fostering **product innovations** and aligning them to the needs of various sectors/ministries.
  - ❍ **Mentor India Campaign:** A **national mentor network** in collaboration with the public sector, corporates and institutions, to support all the initiatives of the mission.
  - ❍ **Atal Community Innovation Center:** To stimulate **community centric innovation and ideas** in the unserved / underserved regions of the country including Tier 2 and Tier 3 cities.
  - ❍ **Atal Research and Innovation for Small Enterprises (ARISE):** To stimulate **innovation and research in the MSME industry**.

INTELLECTUAL PROPERTY RIGHTS *(IPRs)*

IP refers to intangible assets owned/legally protected by an individual/company from outside use or implementation without consent.

NEED FOR IPR

↳ Encourages Innovation   ↳ Economic growth   ↳ Safeguard rights of creators   ↳ Enhances ease of doing business

RELATED CONVENTIONS/TREATIES (INDIA SIGNATORY TO ALL)

- ↳ WIPO Administered (first recognised IPR under):
  - ↳ Paris Convention for the Protection of Industrial Property 1883 (**Patents, Industrial Designs**)
  - ↳ Berne Convention for the Protection of Literary and Artistic Works 1886 (**Copyrights**)
- ↳ WTO - TRIPS Agreement:
  - ↳ Ensures adequate standard of protection
  - ↳ Argues for incentives for technology transfer to developing countries
- ↳ Budapest Treaty 1977:
  - ↳ International recognition of the deposit of micro-organisms for the purposes of patent procedure
- ↳ Marrakesh VIP Treaty 2016:
  - ↳ Facilitate access to published works by visually impaired persons and persons with print disabilities
- ↳ IPR also outlined in **Article 27** (Universal Declaration of Human Rights)

INDIA AND IPRS - INITIATIVES

- ↳ National IPR Policy 2016:
  - ↳ **Motto:** "Creative India; Innovative India"
  - ↳ Compliant with TRIPS Agreement
  - ↳ Brings all IPRs to single platform
  - ↳ Nodal Dept - Department of Industrial Policy & Promotion (Ministry of Commerce)
- ↳ National (IP) Awareness Mission (**NIPAM**)
- ↳ Kalam Program for Intellectual Property Literacy and Awareness Campaign (**KAPILA**)

World Intellectual Property Day: 26th April

Intellectual Property	Protection	Law in India	Duration
Copyright	Expression of Ideas	Copyright Act 1957	Variable
Patent	Inventions- New Processes, Machines, etc.	Indian Patent Act 1970	20 years Generally
Trademarks	Sign to distinguish business goods or services	Trade Marks Act 1999	Can last Indefinitely
Trade Secrets	Confidential Business Information	Protected without Registration	Unlimited time
Geographical Indication (GI)	Sign used on specific geographical origin and possess qualities due to site of origin	Geographical Indications of Goods(R & P) Act, 1999	10 years (Renewable)
Industrial Design	Ornamental or aesthetic aspect of an article	Design Act, 2000	10 years

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Note:

Neighbourhood First in MEA's Aid Allocation

Why in News?

In the recently announced **Union Budget** 2024-25, the **Ministry of External Affairs (MEA)** has outlined its **development assistance plans**, focusing on strategic partners and neighbouring countries.

➢ It is geared towards promoting **regional connectivity**, **cooperation** and **stability** in line with India's **Neighbourhood First Policy**.

How is the Development Aid Distributed Among Countries?

➢ A major chunk of the Ministry of External Affairs' outlay, Rs 4,883 crore, has been earmarked for **"aid to countries".** It has been allocated as follows:

   ❍ **Bhutan:** It received the highest aid at **Rs 2,068.56 crore**, though slightly less than last year's Rs 2,400 crore.

   ❍ **Nepal:** It was allocated Rs 700 crore, up from Rs 550 crore last year.

   ❍ **Maldives:** It maintained a consistent allocation of **Rs 400 crore**, despite a higher revised amount of Rs 770.90 crore for the previous year.

   ❍ **Sri Lanka:** It received **Rs 245 crore**, an increase from Rs 150 crore last year.

Note:

○ **Afghanistan:** Afghanistan receives **Rs 200 crore**, illustrating India's role in aiding the country's stability and development amidst ongoing challenges.

○ **Maldives:** Maldives got **Rs 400 crore** despite the anti-India protests and remarks from its top leadership.

○ **Iran:** **Chabahar Port Project** continues to receive **Rs 100 crore**, unchanged for the past three years.

○ **Africa:** African countries **collectively** received **Rs 200 crore**, showcasing India's expanding **influence** and **engagement** with the continent.

• **Seychelles:** It receives **Rs 40 crore**, up from Rs 10 crore.

What are the Benefits of Development Aid Granted to Neighbouring Countries?

➢ **Strengthening Diplomatic Relations:** By providing aid to neighbouring countries, India enhances **diplomatic ties**, fostering stronger **political** and **economic relationships**.

➢ **Promoting Regional Stability:** Financial support helps **stabilise** neighbouring countries, which can lead to a more **secure and stable region**, benefiting India's strategic interests.

➢ **Supporting Economic Development:** Aid contributes to **infrastructure projects**, development programs, and other initiatives that can boost **economic growth** in recipient countries, creating a more prosperous region. Eg. **Chabahar port in Iran.**

➢ **Encouraging Trade and Investment:** Improved infrastructure and economic conditions in neighbouring countries can lead to increased **trade and investment opportunities** for India e.g., **Agartala-Akhaura railway project** between India and Bangladesh.

➢ **Enhancing Strategic Influence:** Providing aid allows India to **exert influence** and build **alliances**, ensuring that neighbouring countries have positive engagements with India and align more closely with its interests.

○ Eg. **Bhutan**''s favour to India on **Doklam issue.**

➢ **Addressing Humanitarian Needs:** Aid often addresses urgent **humanitarian needs**, such as health care, education, and disaster relief, improving the quality of life in recipient countries.

○ Eg. India launched **"Operation Karuna"** to provide humanitarian assistance to Myanmar during **Cyclone Mocha**.

➢ **Strengthening Soft Power:** By investing in neighbouring countries' development, India bolsters its **soft power** and reputation as a responsible **regional leader.**

○ **Eg.** It helps in **alleviating** the **Big Brother syndrome** among India's **smaller neighbours**.

India's Neighbourhood First Policy

➢ The concept of the **Neighbourhood First Policy** came into being in **2008**.

➢ India's 'Neighbourhood First Policy' guides its approach towards the **management** of relations with countries in its **immediate neighbourhood**, that is Afghanistan, Bangladesh, Bhutan, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka.

➢ The Neighbourhood First policy, inter alia, is aimed at enhancing **physical, digital and people to people connectivity** across the region, as well as augmenting trade and commerce.

➢ This policy has evolved into an **institutional priority** for all the relevant arms of the Government managing relations and policies with our neighbourhood.

➢ India's approach to engaging with its neighbouring countries is characterised by **consultation, non-reciprocity** and a focus on achieving **tangible outcomes**. This approach prioritises enhancing connectivity, infrastructure, development cooperation, security, and fostering greater people-to-people contacts.

Why is the Neighbourhood First Policy Important for India?

➢ **Terrorism and Illegal Migration:** India faces **terrorism** and **illegal migration** threats, including **the smuggling** of weapons and drugs, from its immediate neighbours.

Note:

- ○ Better relations can Improve **border security infrastructure** and monitor **demographic changes** due to illegal migration.

- ➤ **Relations with China and Pakistan:** Relations with China and Pakistan are strained, particularly due to terrorism linked to **Pakistan**.

  - ○ Engaging in **regional** and **multilateral organisations** can highlight Pakistan's role in terrorism and create a common platform for **counter-terrorism** under the Neighbourhood First Policy.

- ➤ **Investment in Border Infrastructure:** There is a deficiency in **border infrastructure** and the need to stabilise and develop border regions.

  - ○ Improved connectivity infrastructure like **cross-border roads, railways, and ports**, and explore a regional development fund for such infrastructure.

- ➤ **Monitoring Line of Credit (LOC) Projects:** India's **LOC** to neighbours increased significantly, with 50% of global **soft lending** going to them.

  - ○ It enhances India's influence in the region, expands Indian firms' presence and builds **economic linkages** with recipient countries.

- ➤ **Defence and Maritime Security:** Defense cooperation is crucial, with **joint military exercises** conducted with various neighbours.

  - ○ It helps in enhancing **maritime domain awareness** in the extended neighbourhood.

- ➤ **Development in the North-Eastern Region:** The **North-Eastern region's** development is crucial for the **Neighbourhood First and Act East Policies.**

  - ○ Countries like **Myanmar** and **Thailand** can help improve connectivity, economic development, and security in the North-Eastern Region e.g., the **India-Myanmar-Thailand Trilateral Highway**.

- ➤ **Tourism Promotion:** India is a major source of tourists for **Maldives** and **Bangladesh** and a destination for **Nepali religious tourism**.

  - ○ Tourism fosters **cultural exchange**, which can lead to increased interest in Indian culture and businesses, potentially boosting exports of **Indian cultural products and services**.

- ➤ **Multilateral Organisations:** India's engagement with neighbours is driven by regional mechanisms like **SAARC** and **BIMSTEC**.

  - ○ Both help India assert its leadership role in **South Asia** and counterbalance the influence of other major powers in the region.

What are the Challenges in India's Relationship with its Neighbouring Countries?

- ➤ **Border Disputes:** Disagreements over **borders**, especially with **China** and **Pakistan**, lead to tensions and conflicts.

  - ○ **China's** growing influence in the South Asian region and its close ties with Pakistan pose **strategic challenges.**

- ➤ **Terrorism:** Pakistan has continuously provided **support, safe havens** and **funding** to various militant groups, such as **Lashkar-e-Taiba (LeT)** and **Jaish-e-Mohammed (JeM)**, which have carried out attacks in India.

- ➤ **Illegal Migration:** The influx of **illegal migrants** from Bangladesh into India causes demographic and security concerns.

- ➤ **Trade Imbalances:** Economic issues and **trade barriers** with neighbours like Pakistan, Bangladesh, and Nepal affect relations.

  - ○ Issues related to **trade restrictions** and tariffs have often exacerbated diplomatic tensions.

- ➤ **Water Disputes:** Conflicts over sharing river waters, such as the **Indus** and **Teesta** rivers, strain ties with **Pakistan** and **Bangladesh** respectively.

- ➤ **Internal Conflicts: Political instability** or disputes in neighbouring countries, like Nepal and Bangladesh, impact bilateral relations.

- ➤ **Diplomatic Relations:** Issues such as the treatment of **minorities** in Sri Lanka and India's stance on **Myanmar's** government create friction.

  - ○ Eg. **Free Movement Regime (FMR)** issue with Myanmar.

- ➤ **Environmental Issues:** Natural disasters and environmental problems, like **flooding** in Bangladesh, require joint efforts and can affect relations.

  - ○ E.g. Bhutan's concerns over the environmental impact of **BBIN** and tourism on its fragile ecology.

Note:

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➢ **Regional Cooperation:** Disagreements within regional organisations like **SAARC** and **BIMSTEC** can hinder effective cooperation.

Initiatives by India to Improve Relationships with Neighbours
➢ **Neighbourhood First Policy**
➢ **Act East Policy**
➢ **SAGAR (Security and Growth for All in the Region)**
➢ **Project Mausam**
➢ **BIMSTEC**
➢ **SAARC Rejuvenation**
➢ **Gujral Doctrine**

2nd Retreat of the Foreign Ministers of the BIMSTEC

Why in News?

The 2nd Retreat of the Foreign Ministers of the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** was held in New Delhi, taking on added significance amid escalating tensions and **major developments in Myanmar.**

➢ External Affairs Minister of India emphasised the need for BIMSTEC to address regional challenges internally, especially in light of recent setbacks faced by **Myanmar's military junta against various Ethnic Armed Organisations (EAOs).**

Note: This retreat is the first major event since the **BIMSTEC Charter** came into effect in 2024, marking a significant milestone in the organisation's evolution. The 1st edition of the BIMSTEC Foreign Ministers' Retreat was held in Bangkok, Thailand in 2023.

What are the Key Highlights of the BIMSTEC Foreign Ministers' Retreat?

➢ **Global and Regional Developments:** The meeting underscored the urgency of addressing long-standing goals like capacity **building and economic cooperation due to current global and regional challenges.**

➢ **Myanmar Crisis:** Discussions centred on the impact of the Myanmar crisis on regional stability and developmental projects. The instability in Myanmar is a major concern for BIMSTEC as it has affected various developmental and connectivity projects aimed at strengthening ties among **Nepal, Bhutan, India, Bangladesh, Myanmar, and Thailand.**

➢ **Humanitarian Assistance Discussions:** Conversations included the potential for humanitarian aid, though India's current assistance has been limited to displaced populations and military personnel who have taken refuge in Mizoram.

➢ **India Stance on Myanmar Crisis:** India maintains a cautious stance, particularly since Ethnic Armed Organizations (EAOs) have gained control over crucial trade routes and territories near international borders.

○ India continues to cooperate on countering **transnational crimes** such as **cybercrime, narcotics,** and **illegal arms.**

Myanmar Crisis

Myanmar's **military (the Tatmadaw) junta,** overthrew the democratically elected government in February 2021. This led to widespread protests and a civil disobedience movement demanding the restoration of democracy.

➢ In response to the junta's crackdown, opposition groups, including **Ethnic Armed Organizations (EAOs),** formed the People's Defence Forces (PDFs) to resist military rule, aligning with the National Unity Government (NUG) established by ousted lawmakers. Since October 2023, fighting between the military and armed opposition groups has intensified, causing widespread displacement and humanitarian crisis.

➢ Almost 2.6 million people have fled their homes, and 18.6 million people, roughly 1/3 of the total population, need humanitarian assistance. **Inflation** and conflict have driven up the price of food and other basic necessities, leading to hunger and potential illness for 1/4 of the population.

➢ India maintains a balanced stance, expressing concern over the disruption of democracy while engaging with the junta to safeguard its interests. Notably, anti-junta forces have captured strategic towns near the **India-Myanmar border,** impacting crucial connectivity projects like the **India-Myanmar-Thailand trilateral highway.**

Note:

BIMSTEC

Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation

Members: 7

Significance: Hosts 22% of the world population, accounts for 3.8 trillion of GDP

Formation: 6th June 1997 (Bangkok Declaration)

Secretariat: Dhaka, Bangladesh

BHUTAN
- India is Bhutan's largest trade partner
- **Mutually Beneficial Hydropower Cooperation:** Mangdechhu, Kholongchhu, Chukha hydropower Projects
- India's grant assistance to **Gyalsung Project**
- Integration of **Bhutan's DrukRen** with India's National Knowledge Network

NEPAL
- Shares border with 5 Indian states (Uttarakhand, Uttar Pradesh, West Bengal, Sikkim and Bihar)
- **Bharat Gaurav Tourist Train** connecting India's Ayodhya and Nepal's Janakpur
- **Major Issues:** Territorial Disputes (Kalapani, Limpiyadhura and Lipulekh)
- **Military Exercise:** Surya Kiran (Army)

MYANMAR
- Only Southeast Asian country that **shares a land border with north-eastern India**
- The **2021 coup** returned Myanmar to military rule
- **India's Development Assistance:** India-Myanmar-Thailand Trilateral Highway, Kaladan Multi-Modal Transit Transport (KMMTT), Sittwe port
- **Major Issue:** Rohingya Crisis

SRI LANKA
- India is Sri Lanka's third largest export destination
- India is the first country to **officially back Sri Lanka's debt restructuring programme** at IMF
- **Major Issue:** Fishermen crossing maritime boundary
- **Important Exercises:** Mitra Shakti (Army), SLINEX (Naval)

BANGLADESH
- Shares the **longest border of over 4,096 km with India**
- **Largest trading partner** in South Asia
- **Water Sharing Agreements:** Kushiyara river (2022), Ganga Water Treaty (1996)
- **Major Issues:** Teesta River Water Dispute
- **Military Exercises:** SAMPRITI-X (Military Training), Bongosagar (Naval)

THAILAND
- Thai language is written in **script derived from Southern Indian Pallava alphabet**
- **Hinduism, Buddhism** – both religions of Indian origin being popular in Thailand
- Convergence of India's 'Act East' policy with Thailand's 'Act West' policy
- **Military Exercises:** MAITREE (Army), SIAM BHARAT (Air Force), Indo-Thai CORPAT (Naval)

Map labels: New Delhi, Kathmandu, Thimphu, Dhaka, INDIA, Naypyidaw, Bangkok, Colombo

Drishti IAS

Read more: BIMSTEC Charter

Note:

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Social Issues

Highlights

- Salient Features of India Society
- WHO Study on Adolescent Girls
- Strengthening Suicide Prevention Efforts in India
- The State of Food Security and Nutrition in the World 2024
- Right to Shelter as Fundamental Right
- UNAIDS Global AIDS Update

- Recruitment Concerns in Eklavya Model Residential Schools
- Political Representation of Women
- WHO and UNICEF Estimates of National Immunisation Coverage (WUENIC)
- UNEP Foresight Report 2024

Salient Features of India Society

Salient Features *of* Indian Society

Indian society is diverse and complex, with various ethnic, linguistic, religious and caste groups. It includes people from rural, urban and tribal areas, all sharing a common Indian identity.

Salient Features

Cultural Diversity
- Large population of **Hindus, Muslims, Christians, Sikhs** and others
- Numerous **languages** spoken across different regions carry **unique heritage**

Mix of Spirituality and Materialism
- Unique **blend** of spirituality and materialism, reflecting its **rich cultural heritage**, diverse religious practices, and evolving **economic aspirations**
- Contribute to mental and **emotional well-being**, promoting **inner peace**

Mix of Individualism and Collectivism
- Increasing access to **education** and **career opportunities** has led to a rise in **individual aspirations**
- But people still live in **families** where they **share resources**, responsibilities, and decision-making

Caste System
- **Social stratification** affects access to resources, opportunities, and **social mobility**

Patriarchy
- **Men** hold primary power and enjoy **greater status** than women
- Preference for **male child**

Festivals
- Foster **community spirit**, joy, and cultural continuity

Community Support
- Fosters **solidarity** and strengthens **social cohesion**
- Encourage **mutual assistance** and vigilance

Strong Family Bonds
- Help preserve cultural and **religious traditions**, rituals and values
- **Caregiving roles** like raising children, caring for the elderly, and support during crises

Shortcomings

Gender Inequality
- **Less** access to **economic opportunities** such as jobs and **equal pay** for females
- Confined to domestic responsibilities and face **gender-based violence**

Illiteracy and Lack of Awareness
- Limits the earning potential contributing to **economic disparity**
- Exacerbate **inequalities** and hampers social mobility

Corruption
- Leads to **substandard services** and deprives citizens of essential resources
- Erodes **public trust** in government institutions leading to reduced **civic participation**

Untouchability
- Imposes strict social penalties on members of lower castes located at the bottom of the caste hierarchy

Effects of Globalisation on Indian Society
- Increase in **nuclear families** and number of **old age homes**
- Fast food leading to homogenisation of food
- Foreign languages like French, German and Spanish being increasingly taught in schools
- Within marital institutions, adopting **professional** and **contractual** approaches has led to a rise in **divorces**, **live-in relationships** and **single parenting**

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Note:

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WHO Study on Adolescent Girls

Why in News?

Recently, a **World Health Organization** study published in the Lancet medical journal revealed that **adolescent girls aged between 15 and 19 who have been in relationships have experienced physical or sexual violence.**

➢ The survey was conducted with thousands of adolescent girls from 154 countries and regions.

What are the Key Highlights of the WHO Study on Adolescent Girls?

➢ **Key Highlights:**

  ○ **Prevalence:** It reveals that **nearly a quarter (24%) of adolescent girls** who have been in a relationship have **experienced physical and/or sexual intimate partner violence** by age 20.

    ● Approximately 1 in 6 (16%) adolescent girls reported experiencing such violence in the past year.

    ● **No country is currently on track** to eliminate violence against women and girls by the 2030 **Sustainable Development Goal** (**Goal 5**) target date.

  ○ **Regional Variations:** The **highest prevalence rates are in Oceania (47%)** (e.g. 49% of girls reporting intimate partner violence in **Papua New Guinea)** and 40% in central sub-Saharan Africa (e.g. In the Democratic Republic of Congo 42% reporting intimate partner violence).

    ● The **lowest rates are in central Europe (10%)** and central Asia (11%).

➢ **Factors Influencing Prevalence:** Higher rates of violence are found in **lower-income countries**, regions with fewer girls in secondary education, and areas where girls have weaker legal property ownership and inheritance rights.

  ○ **Child marriage significantly increases** the risk of intimate partner violence due to power imbalances, economic dependency, and social isolation.

    ● According to the UN, **1 in 5 young women worldwide (19%) were married in childhood in 2022.**

➢ **Implications of Intimate Partner Violence:**

  ○ **Increased likelihood of injuries**, depression, anxiety disorders, unplanned pregnancies, and **sexually transmitted infections.**

  ○ Long-term physical and psychological impacts.

  ○ **Negative effects on educational achievement,** future relationships, and lifelong prospects.

What are the Steps Needed to Empower Adolescent Girls?

➢ **WHO Recommendations and Interventions:**

  ○ **Strengthening support services** and early prevention measures tailored for adolescents.

  ○ **School-based programs** to educate both boys and girls on healthy relationships and violence prevention.

  ○ **Legal protections and economic empowerment** initiatives for women and girls.

    ● Ensuring **secondary education** for all girls.

    ● Securing **gender-equal property rights.**

    ● **Ending harmful practices** such as **child marriage.**

  ○ **Supporting countries to measure and address violence** against women.

➢ **Other Steps Needed:**

  ○ **Access to Healthcare:** Ensure that **healthcare providers are trained to recognize** and respond to signs of intimate partner violence.

    ● Provide **mental health services** and counselling for affected girls.

  ○ **Challenging Gender Norms:** Work to change societal norms and attitudes that perpetuate gender inequality and violence against women and girls.

Note:

- **Raise awareness in communities** about the signs and consequences of intimate partner violence and the importance of gender equality.
  - Ensure that girls and women have **equal property ownership and inheritance rights.**
- ○ **Continuous Monitoring:** Conduct **regular surveys and studies to monitor** the prevalence of intimate partner violence and the effectiveness of intervention programs.
  - **Use data to inform and develop policies** and programs aimed at reducing intimate partner violence.
- ○ **Global Efforts:** Collaborate with **international organizations like WHO** to share best practices and resources.
  - **Develop comprehensive national action plans** to address intimate partner violence, integrating health, education, and legal sectors.

Initiatives for Adolescent Girls in India

- ➢ **Beti Bachao Beti Padhao (BBBP)**
- ➢ **Mahila Shakti Kendra (MSK)**
- ➢ **Sukanya Samriddhi Yojna (SSY)**
- ➢ **Nirbhaya Fund Framework**
- ➢ **One Stop Centres (OSCs)**
- ➢ **Constitution (106th Amendment) Act, 2023**
- ➢ **Pradhan Mantri Mudra Yojana (PMMY)**
- ➢ **Gender Budget** has been made a **part of the Union Budget of India** since 2005 and entails fund allocation towards programmes/schemes dedicated to women.
- ➢ The **Vigyan Jyoti programme** aims to **encourage girls to pursue higher education and careers in STEM** (Science, Technology, Engineering and Mathematics), especially in the areas where women's participation is low in order to balance the gender ratio across the streams.

Strengthening Suicide Prevention Efforts in India

Why in News?

The recent *Lancet* article highlights the **need for greater political will** to address the pressing public health issue of **suicide prevention in India**, where over 1 lakh lives are lost annually.

➢ It also discusses the **National Suicide Prevention Strategy (NSPS)** launched in 2022, aimed to tackle this issue but has seen little progress since its inception.

What is the National Suicide Prevention Strategy?

➢ The National Strategy for Suicide Prevention in India aims to reduce **suicide mortality by 10% by 2030** through multisectoral collaboration, inclusiveness, and innovation.

- ○ It provides an action framework for key stakeholders to implement, monitor, and take corrective actions towards achieving the strategy's goal.

➢ **Vision:** Establish a society where individuals value their lives and receive the support they need during critical times.

➢ **Objectives:** It plans to set up psychiatric outpatient departments in all districts within five years through the **District Mental Health Programmes.**

- ○ It seeks to integrate a **mental well-being curriculum into all educational institutions within eight years.**
- ○ Calls for developing guidelines for responsible media reporting of suicides and restricting access to means for suicide.

What is the Suicide Scenario in India?

➢ **Annual Deaths:** The **National Crime Records Bureau (NCRB) annual report for 2022** revealed that India reported a total of over 1.7 lakh suicides in 2022, with nearly one-third of the victims being daily wage earners, agricultural laborers, and farmers.

Note:

○ From 2019 to 2022, the suicide rate increased from 10.2 to 11.3 per 1,00,000.

➤ **Primary Affected Groups:** 9.6% of suicides were of self-employed or salaried professionals. 9.2% of suicides were of unemployed persons, and over 12,000 students died by suicide.

   ○ Among the approximately **48,000 women who died by suicide, over 52% were homemakers, constituting about 14% of the total suicides.**

   ○ **Maharashtra reported the highest number of suicides (22,746)**, followed by Tamil Nadu (19,834), Madhya Pradesh (15,386), Karnataka (13,606), Kerala (10,162), and Telangana (9,980).

➤ **Causes of Suicides:** The most common causes were family problems, **unemployment, Farmers Distress, financial problems and illness,** accounting for almost half of all suicides.

   ○ Other causes included **drug abuse, alcohol addiction, and marriage-related issues**, with a significant number of women citing **dowry-related problems.**

   ○ The rise of suicides among young women in India is driven by multiple factors, including the clash between increased **education and rigid societal norms, leading to feelings of relative deprivation.**

     ● The shift toward modern relationships, such as **love and inter-caste marriages,** fosters individualism but also loneliness. Persistent **patriarchy and gender discrimination**, alongside high rates of **domestic violence** affecting 31% of married women, exacerbate these challenges.

     ● Limited **social and financial opportunities** further compound their struggles, contributing to the alarming suicide rates in this demographic.

   ○ **Academic performance pressures** are frequently cited as a leading cause of student suicides, linked to exam failures in the 18-30 age group.

● The **Supreme Court** noted that intense competition and parental pressure are significant contributors to rising suicide rates, highlighting the need for balanced expectations from children.

What is the Need to Address the Suicide Prevention in India?

➤ **Impact on Individuals and Society:** Each suicide death profoundly impacts close individuals, including family and friends, underscoring the widespread social and emotional ramifications.

➤ **Mental Health Stigma:** Cultural and social stigma surrounding mental health issues **often prevent individuals from discussing their challenges openly or seeking help**.

   ○ Suicide is misinterpreted as an act of cowardice, a crime, or a sin, rather than a **manifestation of deep psychological distress,** deterring preventive measures.

   ○ Societal norms regarding academic and career achievements, gender roles, and marital expectations exert significant pressure, making it challenging for many to speak out or seek help against these norms.

➤ **Economic Burden:** The economic cost of suicide includes healthcare expenses and loss of productivity, which affects the nation's economy.

What are the Challenges Related to Suicide Prevention in India?

➤ **Lack of Resources:** The healthcare system in India often lacks the resources to provide adequate mental health support.

   ○ Despite recent efforts, **India still faces a shortage of mental health professionals and limited access to affordable mental healthcare,** especially in rural areas, amplifying the mental health crisis and contributing to the rise in suicides.

➤ **Insufficient Data Collection:** Inadequate reporting, lack of comprehensive studies, and **under-reporting of suicide attempts** hinder understanding the extent of the crisis and designing effective interventions.

Note:

➢ **Lack of Political Will:** Both central and state governments show insufficient commitment.

   ❍ Political leaders often exhibit a **fatalistic attitude towards suicide prevention, believing it cannot be completely eliminated.**

   ❍ Despite the introduction of the **Mental Healthcare Act, 2017 and the NSPS,** there are significant gaps in the implementation of policies.

➢ **Inadequate Media Involvement:** The media often lacks the **will to educate itself on responsible reporting of suicides**. Proper guidelines for media reporting of suicides need to be developed and followed.

What are the Initiatives Related to Suicide Prevention in India?

➢ **National Mental Health Programme (NMHP):**

   ❍ **District Mental Health Programme (DMHP)** is Implemented in 738 districts, offering outpatient services, counselling, continuing care, and a 10-bedded inpatient facility at the district level.

➢ **National Tele Mental Health Programme:** Launched in 2022 to improve access to quality **mental health counselling and care services across the country.**

   ❍ As of December 2023, 34 States/UTs have established 46 Tele MANAS Cells, handling over 500,000 calls on the helpline.

   ❍ The Ministry of Social Justice and Empowerment has launched a **24/7 toll-free helpline "KIRAN" to provide mental health support.**

➢ **Ayushman Arogya Mandirs:** More than 1.6 lakh Sub-Health Centres (SHCs), Primary Health Centres (PHCs), Urban Primary Health Centres (UPHCs), and Urban Health and Wellness Centres (UHWCs) have been upgraded to **Ayushman Arogya Mandirs.**

   ❍ Mental health services are included in the Comprehensive Primary Health Care package at these centres.

   ❍ Guidelines on Mental, Neurological, and Substance Use Disorders (MNS) have been released under **Ayushman Bharat.**

➢ **Manodarpan Initiative:** Manodarpan is an initiative of the **Ministry of Education under Atmanirbhar Bharat Abhiyan** to provide psychosocial support for mental health and well-being during Covid-19.

> **Note:**
>
> ➢ **Section 309 of the Indian Penal Code, 1860** deals with the provision regarding attempt to **commit suicide, which is punishable** with simple imprisonment for up to one year or fine, or both.
>
>   ❍ The legality and correctness of this provision have been subject to judicial debate, with some courts condemning it as unconstitutional, while the **Supreme Court** has upheld its validity.
>
> ➢ The new **Bharatiya Nyaya Sanhita, 2023 (BNS) removes the section on attempting suicide but retains the provision for punishing** those who attempt suicide with the **intent to compel or restrain a public servant from discharging their official duty.**
>
>   ❍ This amendment aligns the law with the **Mental Healthcare Act, 2017.**

The State of Food Security and Nutrition in the World 2024

Why in News?

Recently, the **"State of Food Security and Nutrition in the World 2024"** (SOFI 2024) report, published by **FAO, IFAD, UNICEF, WFP, and WHO**, presents a critical analysis of global food security and nutrition trends.

➢ This year's report **emphasises the urgent need for increased financing to end hunger, food insecurity,** and **malnutrition** in all its forms.

What are the Key Findings of the SOFI 2024 Report?

➢ **Global Prevalence of Undernourishment:** Between 713 and 757 million people faced hunger in 2023, with **one out of eleven people in the world and one out of every five** in Africa facing hunger.

   ❍ Asia, despite having a lower percentage, still **harbours the largest number of undernourished people** (384.5 million).

GLOBAL HUNGER ROSE SHARPLY FROM 2019 TO 2021 AND PERSISTED AT THE SAME LEVEL TO 2023

Prevalence of undernourishment (left axis)   Number of undernourished (right axis)
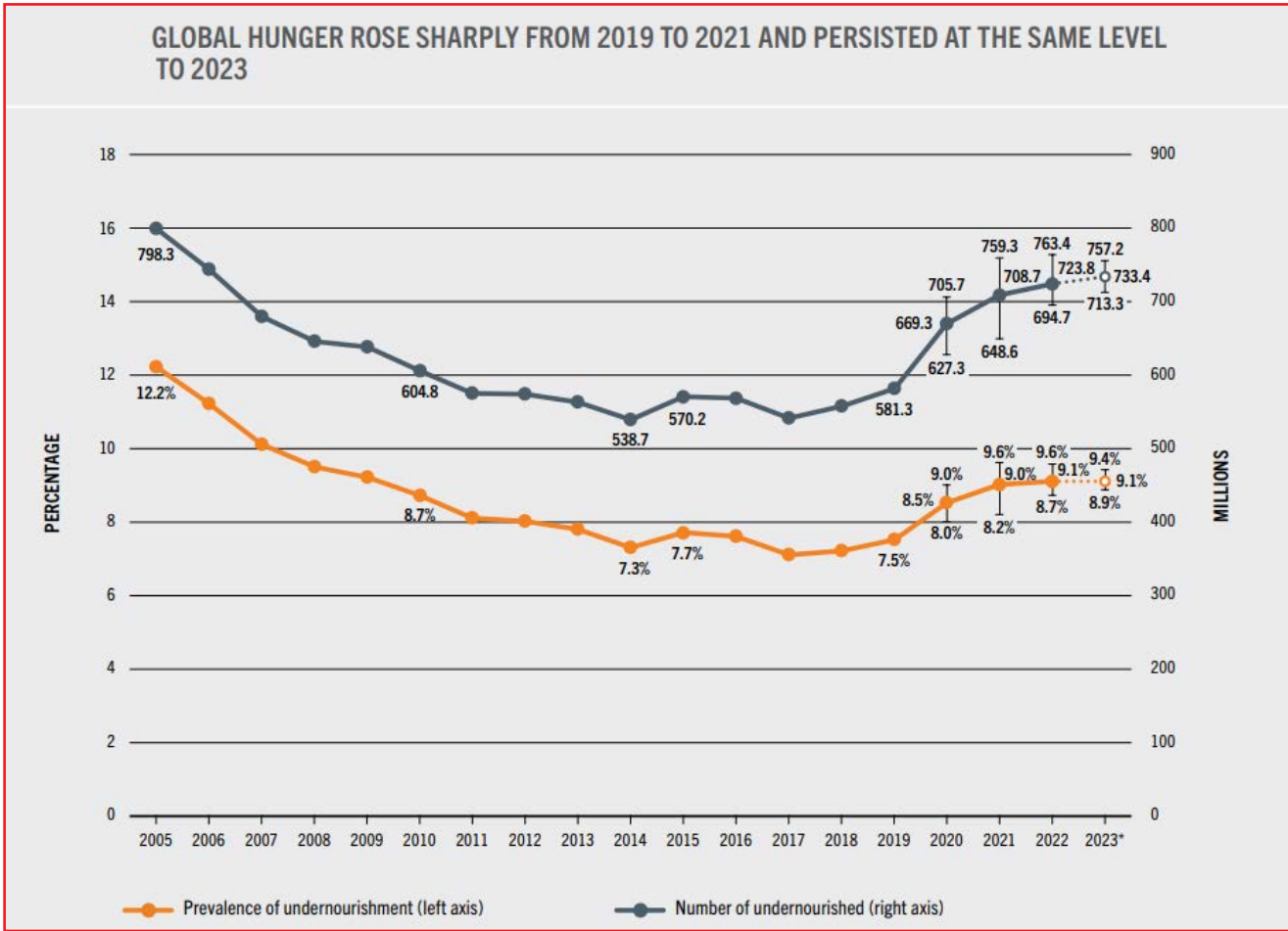
- ➤ **Food Insecurity:** Approximately 2.33 billion people experienced moderate or severe **food insecurity** in 2023. Severe food insecurity affected more than 864 million people globally.

THE CONCENTRATION AND DISTRIBUTION OF FOOD INSECURITY BY SEVERITY IN 2023 DIFFERED GREATLY ACROSS THE REGIONS OF THE WORLD

Total population   Moderate or severe food insecurity   Severe food insecurity
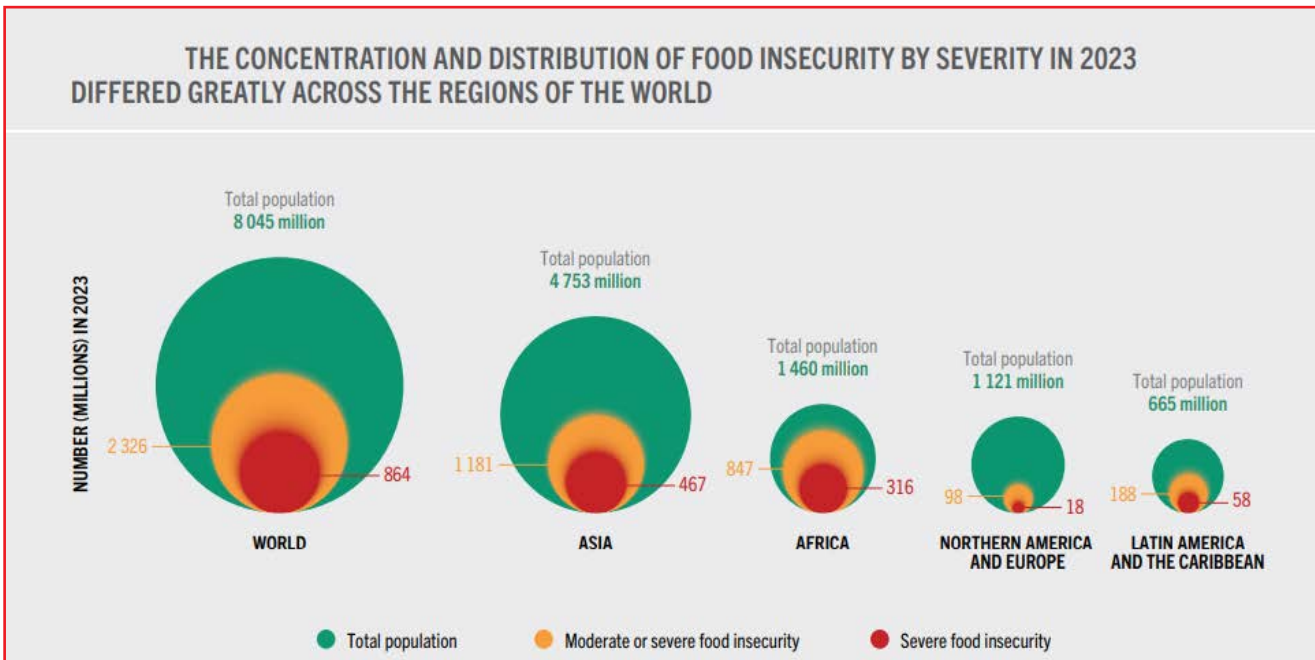
Note:

➢ **Cost of a Healthy Diet:** The global average **cost of a healthy diet rose** to USD 3.96 in purchasing power parity (PPP) terms per person per day in 2022. Despite this increase, the number of people unable to afford a healthy diet fell to 2.83 billion in 2022.

➢ **Regional Disparities:** The **cost of a healthy diet is highest in Latin America** and the Caribbean and lowest in Oceania. The recovery in affordability has been uneven, with significant setbacks in Africa.

➢ **Stunting and Wasting:** There have been **improvements in reducing the prevalence of <u>stunting</u> and <u>wasting</u>** among children under five. However, progress is insufficient to meet the 2030 (<u>SDG</u>) targets.

   ○ The rate of exclusive breastfeeding among infants under six months has increased but is **still below the 2030 target.**

➢ **Obesity and Anaemia:** Obesity rates are rising globally, and <u>anaemia</u> **in women aged 15 to 49 years is increasing**, posing significant public health challenges.

➢ **Current Levels and Gaps:** Public spending on **food security and nutrition remains inadequate**, particularly in low-income countries. Private financing flows are also difficult to track, exacerbating the funding gap.

COMPOSITION OF PUBLIC SPENDING ON FOOD SECURITY AND NUTRITION IN SELECTED LOW- AND MIDDLE-INCOME COUNTRIES

	Benin	Brazil	Georgia	India	Kenya	Mexico	Nigeria	Philippines	South Africa	Uganda
	(% annual average)									
Food consumption and health status (core definition)	65	31	50	85	75	56	55	40	55	73
Food consumption	50	14	39	83	53	40	33	37	35	59
Food availability	23	11	30	45	21	34	23	33	10	28
Food access	19	1	7	35	31	0	8	3	18	25
Food utilization	9	1	2	3	0	6	2	1	7	6
Health status	14	17	11	2	20	17	21	3	19	14
Practices	0	0	0	0	1	0	0	0	0	1
Health services and environmental health	14	17	11	4	22	17	21	3	19	13
Major drivers of food insecurity and malnutrition (extended definition)	35	69	50	15	25	44	45	60	45	27

What are the Key Highlights Related to India in the Report?

➢ **India is home to 194.6 million undernourished individuals**, the highest in the world.

   ○ The number of undernourished people has decreased from 240 million in the 2004-06 period to the current figure.

➢ **55.6% of Indians**, translating to 790 million people, **cannot afford a healthy diet.**

   ○ This proportion has improved by about 3% points compared to 2022.

➢ **13% of India's population suffers from chronic undernourishment**, indicating prolonged food insecurity.

   ○ In **the <u>Global Hunger Index (GHI) 2023</u>,** India ranked 111th, highlighting significant issues in food security.

➢ India has the highest **prevalence of wasting (18.7%) in South Asia** and a high prevalence of stunting (31.7%) in children under five years.

   ○ 27.4% of babies born in India have **low birth weight**, the highest in the world, reflecting maternal malnutrition.

Note:

➢ **53% of women in India are anaemic, the highest in South Asia**. The global prevalence of anaemia in women aged 15-49 is expected to increase, driven significantly by South Asia.

➢ The prevalence of **obesity in children under five years is 2.8%**, and in adults, it has risen to 7.3%. A significant portion of the Indian population is **physically inactive, contributing to the rise in obesity.**

➢ The report highlights the **increasing issue of both undernutrition and obesity co-existing within the same population**, driven by common factors such as poor diet quality.

➢ The **consumption of ultra-processed foods is linked to adverse health outcomes**. The **majority of food products** by top global manufacturers in key countries, including India, are **deemed unhealthy by WHO standards.**

➢ India's public spending on food security and nutrition has seen some increases, but the report suggests that **there is still a need for more effective allocation and utilisation of resources to address the root causes** of food insecurity and malnutrition.

  ❍ The **Covid-19 pandemic has exacerbated food insecurity and malnutrition issues in India**. The economic downturn, loss of livelihoods, and disruptions in food supply chains have had lasting impacts on food access and affordability.

What are the Related Initiatives Taken in India?

➢ **National Food Security Act (NFSA) 2013**

➢ **National Food Processing Mission**

➢ **Mission Poshan 2.0**

➢ **Integrated Child Development Services (ICDS) Scheme**

➢ **Pradhan Mantri Matru Vandana Yojana (PMMVY)**

➢ **Mid-Day Meal Scheme**

➢ **Scheme for Adolescent Girls (SAG)**

➢ **Mother's Absolute Affection (MAA)**

➢ **Poshan Vatikas**

➢ **Other Policies:**

  ❍ **Minimum Support Prices (MSP) for Agricultural products**

  ❍ **Pradhan Mantri Fasal Bima Yojana (PMFBY)**

  ❍ **National Horticulture Mission**

What are the Key Recommendations in the Report?

➢ **Increase Public Investment:** The report highlights the need to **increase public spending on food security and nutrition** by boosting budgets for programs that reduce hunger and malnutrition and involving local communities in their **planning and implementation** to improve effectiveness and sustainability.

➢ **Mobilise Private Sector Investment:** Encouraging **private sector investment through innovative financing** mechanisms such as **social bonds, green bonds, and sustainability-linked bonds** can provide additional resources for food security initiatives.

  ❍ Strengthening global partnerships and aligning national policies with international frameworks can enhance the exchange of knowledge, technology, and resources for greater impact.

➢ **Promote Climate-Resilient Agriculture:** Developing and implementing **climate-resilient agricultural practices** is critical to mitigate the **impact of climate change** on food production. This includes **investing in research and development** of **drought-resistant crops** and sustainable farming practices.

➢ **Improve Agrifood Systems:** Enhancing the **efficiency and sustainability of agrifood systems** through better infrastructure, logistics, and market access can help reduce food loss and waste.

➢ **Comprehensive Nutrition Programs:** The report calls for **integrated nutrition programs** that address both undernutrition and overnutrition. This includes initiatives to promote balanced diets and physical activity to combat rising obesity rates.

➢ **Focus on Vulnerable Populations:** Policies should focus on supporting **vulnerable groups**, like small farmers, women, and children, by improving nutrition for **pregnant women** and young children through exclusive breastfeeding and providing essential vitamins and minerals.

➢ **Strengthen Data Collection, Monitoring and Reporting:** Improving **data collection and integration with national databases** is essential for **tracking food security** and nutrition, enabling **better policy-making** and identifying areas that need improvement.

Note:

Right to Shelter as Fundamental Right

Why in News?

The **Supreme Court** called for a **balance** between developing **railway infrastructure** in Haldwani, and the **fundamental right to shelter** for people accused of illegally occupying railway land.

➢ The court further said that its orders cannot also be **misinterpreted** as a note of encouragement for **future encroachments** on public land.

What is Right to Shelter and Important Constitutional Provisions Involved?

➢ The **Right to Shelter** in India is recognised as a **fundamental right** under the broader ambit of the **Right to Life** guaranteed by **Article 21** of the Indian Constitution.

   ❍ This right ensures that every citizen has access to **adequate housing**, which is considered essential for living a **life with dignity**.

   ❍ It implies **not** just a **roof** over one's head but also includes **adequate privacy**, space, security, lighting, ventilation, basic infrastructure, and proximity to workplaces and social amenities.

➢ **Forced evictions** without proper **rehabilitation** and due process violate the **Right to Shelter**.

What are Ethical Considerations Regarding Eviction of People?

➢ **Human Rights Violations:** Every person has the right to a **secure home**, and **evictions** without adequate alternative arrangements **undermine** this right.

➢ **Disproportionate Impact:** Evictions disproportionately affect **marginalised groups**, including the **poor, disabled** and **elderly**, who may have fewer resources to relocate or adapt.

➢ **Lack of Alternatives:** Evictions are sometimes executed **without offering alternative** housing solutions or support services, leaving people without a place to go.

What are the Associated Judicial Verdicts Regarding Right to Shelter?

➢ **Olga Tellis v. Bombay Municipal Corporation (1985):** Slum dwellers filed a PIL arguing against **eviction** without alternate accommodation. The court held that eviction breached the **right to livelihood**, emphasising the State's duty to secure **adequate means of livelihood** and avoid depriving people of their rights.

➢ **State of Maharashtra v. Basantibhai Khetan (1986):** The Supreme Court upheld **land ceiling laws**, stating they do not violate fundamental rights. However, the State is responsible for providing **rehabilitation** and **resettlement**.

➢ **Chameli Singh v. State of UP (1995):** Justice Ramaswamy held that the **right to shelter** is a fundamental right under **Article 21** and the **right to residence [Article 19(1)(e)]**.

➢ **Ahmedabad Municipal Corporation v. Ahmed Singh and Gulab Singh (1996):** Similar to **Olga Tellis case**, the court allowed the eviction of pavement dwellers on the condition that they were provided with **alternate accommodation**.

➢ **Sudama Singh and others v. State of Delhi and others (2010):** Petitioners sought **relocation** from slum clusters. The Delhi High Court ruled that any eviction must include adequate **compensation** or **alternate accommodation**.

What are Government Initiatives to Provide Shelter to People?

➢ **Pradhan Mantri Awas Yojana (PMAY):** It is a **credit-linked subsidy** scheme by the government of India to facilitate access to **affordable housing** for the low and moderate-income residents of the country.

➢ **National Urban Housing Fund (NUHF):** It provides **financial assistance** to **states** and **Union Territories** for the implementation of **housing schemes**.

➢ **National Rural Livelihood Mission:** It aims to reduce poverty by enabling the poor households to access **gainful self-employment** and **skilled wage employment** opportunities, resulting in appreciable improvement in their livelihoods on a **sustainable** basis.

➢ **Deen Dayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM):** It focuses on providing **shelter** equipped with **essential services** to the urban homeless.

➢ **Slum Rehabilitation Authority (SRA) Scheme:** Particularly active in Maharashtra, this scheme focuses on rehabilitating **slum** dwellers by providing them with housing.

Note:

What Laws are Made to Support the Right to Shelter in India?

➢ **Slum Areas (Improvement and Clearance) Act, 1956:**
  ○ It authorises the government to **clear slum areas** that are unfit for habitation due to health and safety risks.
  ○ In such cases, **redevelopment plans** are formulated to replace substandard housing with better, more durable structures.

➢ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006:
  ○ It provides the right to hold and live in forest land under **individual** or **common occupation** for habitation or self-cultivation for livelihood.
  ○ It also recognizes the rights of forest communities to use and manage **forest resources**.

➢ **Real Estate (Regulation and Development) Act, 2016 (RERA):**
  ○ It regulates the **real estate sector** to ensure transparency, accountability, and timely delivery of housing projects.
  ○ It protects homebuyers by mandating registration of projects and providing a grievance redressal mechanism.

➢ **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013:**
  ○ It includes detailed provisions for **resettlement** and **rehabilitation** of those affected by **land acquisition**.
  ○ This ensures that displaced families receive support to relocate and rebuild their lives, including housing.

➢ **Model Tenancy Act, 2021**:
  ○ It seeks to establish a speedy adjudication mechanism for **dispute resolution**, regulate renting of premises, and **protect interests** of landlords and tenants.

How Balance between Development Projects and Right to Shelter can be Maintained?

➢ **Alternative Housing Solutions:** Provide adequate **alternative housing** options for those **displaced** by development projects.

➢ **Legal Protections and Fair Procedures:** Ensure that evictions, if necessary, are conducted in a **lawful and just manner**, with appropriate compensation and support.

➢ **Community Development and Integration:** Incorporate community development programs into the project to enhance **local infrastructure**, services, and economic opportunities.

➢ **Long-Term Planning:** Develop long-term strategies for **urban planning** and **housing** that integrate development goals with the need for affordable and accessible housing.

UNAIDS Global AIDS Update

Why in News?

Recently, the 2024 **UNAIDS** Global AIDS Update, titled **"The Urgency of Now: AIDS at a Crossroads",** presented a critical overview of the current state of the HIV/AIDS epidemic and the global response to it.

What are the Key Highlights of the Reports?

➢ **About:**
  ○ The report **underscores the potential to end AIDS as a public health threat** by 2030, emphasising the necessity of addressing inequalities, **increasing access to prevention and treatment**, and ensuring sustainable resources.

➢ **Progress and Challenges:**
  ○ Reduction in New HIV Infections and AIDS-Related Deaths:
    ● There has been a 39% reduction in new HIV infections globally since 2010, with **sub-Saharan Africa achieving the steepest decline (56%).**
    ● **In 2023, fewer people acquired HIV than at any point** since the late 1980s, and almost 31 million people were receiving antiretroviral therapy (ART).
    ● **AIDS-related deaths have decreased** to their lowest level since the peak in 2004, largely due to increased access to ART.
  ○ Regional Disparities:
    ● While sub-Saharan Africa has seen significant progress, regions such as Eastern Europe, Central Asia, Latin America, and the Middle East and North Africa have experienced rising numbers of new HIV infections.
    ● **For the first time**, more new HIV infections **occurred outside sub-Saharan Africa** than within it.

Note:

❍ Key Affected Groups:
- Key populations, including sex workers, men who have sex with men, people who inject drugs, transgender people, and people in prisons, continue to **face high risks of HIV infection** due to inadequate prevention programs and persistent stigma and discrimination.
- **Community-led interventions are critical** but often underfunded and unrecognized.

❍ Prevention and Treatment Gaps:
- HIV prevention efforts are falling short, with notable deficiencies in access to services like pre-exposure prophylaxis (PrEP) and harm reduction for people who inject drugs.
- About 9.3 million people living with HIV are not receiving ART, with children and adolescents particularly affected.

UNAIDS

➢ **UNAIDS is a model for United Nations reform** and is the **only cosponsored Joint Programme in the United Nations system.**
- ❍ It draws on the experience and expertise of 11 United Nations system Cosponsors and is the **only United Nations entity with civil society** represented on its governing body.
➢ UNAIDS is **leading the global effort to end AIDS** as a public health threat by 2030 as part of the Sustainable Development Goals.

Number of new HIV infections, global, 1990–2023, and 2025 target
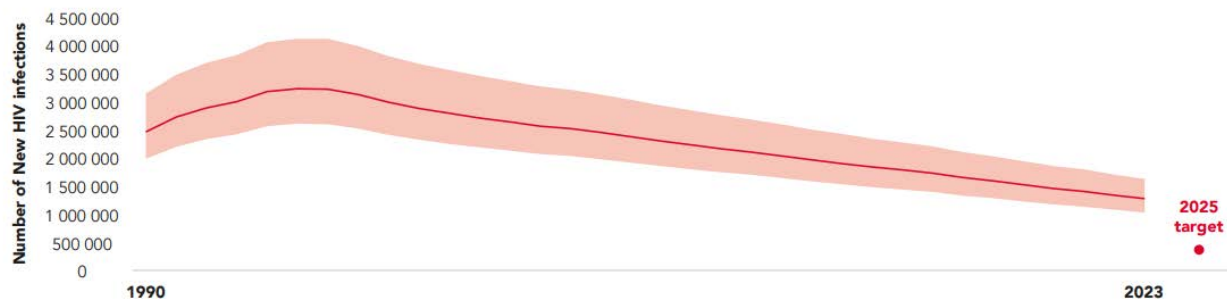
Number of AIDS-related deaths, global, 1990–2023, and 2025 target
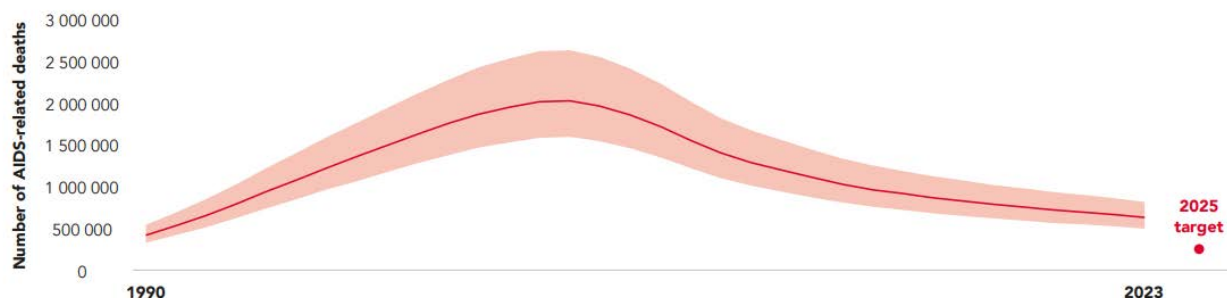
What is HIV/AIDS?

➢ **About:**
- ❍ **HIV/AIDS is a viral infection** that attacks the immune system, specifically the **CD4 cells (T cells)**, which help the immune system fight off infections.
- ❍ Left untreated, HIV reduces the number of CD4 cells (T cells) in the body, making the person more likely to get infections or infection-related cancers.

Note:

- ○ **AIDS is the final stage of HIV infection** when the immune system is severely damaged and can no longer fight off infections.
- ➢ **Causes of HIV/AIDS:**
  - ○ HIV infection is **caused by the human immunodeficiency virus (HIV)**. The virus is **transmitted through contact with infected bodily fluids**, such as blood, semen, vaginal fluids, rectal fluids, and breast milk.
  - ○ It can be spread through sexual contact, sharing needles or syringes, from mother to child during childbirth or breastfeeding, and rarely, through blood transfusions or organ transplants.
- ➢ **Symptoms of HIV/AIDS:**
  - ○ Clinical Latent Infection:
    - **HIV is still active but reproduces** at very low levels. People may not have any symptoms or only mild ones.
  - ○ Acute HIV Infection:
    - **Symptoms can resemble those of the flu**, including fever, swollen lymph nodes, sore throat, rash, muscle and joint aches, and headache.
  - ○ AIDS:
    - The **symptoms of AIDS are severe and include rapid weight loss, recurring fever or profuse night sweats**, extreme and unexplained tiredness etc.
- ➢ **Diagnosis of HIV/AIDS:**
  - ○ **HIV antibody/antigen tests:** These tests detect antibodies or antigens produced by the virus and are usually done on blood or oral fluid.
  - ○ **Nucleic acid tests (NATs):** These tests look for the virus itself and can detect HIV infection earlier than antibody tests.
- ➢ **Treatment and Management:**
  - ○ **Antiretroviral therapy (ART):** ART involves taking a combination of HIV medicines every day. ART can't cure HIV, but it can control the virus, allowing people with HIV to live longer, healthier lives and reducing the risk of transmitting the virus to others.
  - ○ **Pre-exposure prophylaxis (PrEP):** PrEP is a daily pill for people who don't have HIV but are at risk of getting it. When taken consistently, PrEP can reduce the risk of HIV infection.
  - ○ A **revolutionary HIV drug that reduces t**he need for a daily **cocktail of drugs to half a dozen injections a year has recently** been approved in the UK.

India's Efforts to Prevent HIV

- ➢ **HIV and AIDS (Prevention and Control) Act, 2017**
- ➢ Access to **Antiretroviral Therapy (ART)**
- ➢ **Memorandum of Understanding (MoU):** The Ministry of Health and Family Welfare signed a MoU with the Ministry of Social Justice and Empowerment in 2019 for **enhanced HIV/AIDS outreach and to reduce the incidence of social stigma** and discrimination against victims of drug abuse and Children and People Living with HIV/AIDS.
- ➢ **Project Sunrise:**
  - ○ Project Sunrise was **launched by the Ministry of Health and Family Welfare in 2016,** to tackle the rising HIV prevalence in **north-eastern states in India**, especially among people injecting drugs.
- ➢ **Targets:** India sought to **leverage the targeted interventions** to achieve **UNAIDS's 90-90-90 targets** (90% of HIV-infected individuals diagnosed, 90% of those diagnosed to be on anti-retroviral therapy (ART), and 90% of people on ART to achieve sustained virologic suppression), and **end AIDS by 2030**

International Initiatives

- ➢ **Joint United Nations Programme on HIV/AIDS:**
  - ○ It is leading the **global effort to end AIDS as a public health threat by 2030** as part of the **Sustainable Development Goals.** It was started in 1996.
  - ○ UNAIDS has a **vision of zero new HIV infections**, zero discrimination and zero AIDS-related deaths, and a principle of leaving no one behind.
  - ○ The **UN Political Declaration on Ending AIDS** was adopted in 2016 which seeks to end AIDS as a public health threat by 2030.
- ➢ The **World Health Organization's (WHO)** "Treat All" guidance of September 2015, recommended that **all individuals be treated as soon as possible** after HIV infection and diagnosis.
  - ○ In addition, because the reduction in HIV viral load to undetectable levels eliminates the risk of onward transmission, **the Treat All approach** has the potential to provide the population health benefit of reducing HIV incidence.
- ➢ **Global AIDS Strategy 2021-2026** - End Inequalities. End AIDS. is a bold new approach to using **an inequalities lens to close the gaps that are preventing progress towards ending AIDS.**

Note:

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What are the Key Suggestions From the Report?

Accelerating HIV Prevention:

The report emphasises the **need to expand access to HIV prevention services**, particularly for key populations including sex workers, men who have sex with men, people who inject drugs, transgender people, and people in prisons.

Reinstate and fund condom programs for safe sex, especially in regions where their use has declined.

Scale up the **availability and use of PrEP, aiming to reach the global target** of 21.2 million people using PrEP by 2025.

Enhancing Treatment and Care:

Ensure that **95% of people living with HIV are on ART by 2025.** Currently, only 77% of people living with HIV are receiving ART.

Improve the diagnosis and treatment of children with HIV. Only 48% of children living with HIV are receiving ART, compared to 78% of adults.

Integrate HIV services with broader health services to improve outcomes and address comorbidities such as tuberculosis, hepatitis, and non-communicable diseases.

Addressing Inequalities and Stigma:

Remove harmful laws that criminalise HIV transmission, exposure, and non-disclosure, as well as those targeting key populations. Currently, punitive laws are prevalent in most countries.

Implement programs to reduce stigma and discrimination in health care and community settings. Ensure legal protection and support for people living with HIV and key populations.

Community-Led Responses:

Strengthen the role of community-led organisations in delivering HIV services.

The goal is for these organizations to deliver 30% of testing and treatment services and 80% of HIV prevention services for high-risk populations.

Sustainable Financing:

Address the significant shortfall in funding for HIV programs. An estimated additional USD 9.5 billion is needed by 2025 to meet the targets.

Explore new funding sources and mechanisms to sustain the HIV response, especially in low- and middle-income countries.

Recruitment Concerns in Eklavya Model Residential Schools

Why in News?

The recent centralisation of recruitment (introduced in Union Budget 2023) for **Eklavya Model Residential Schools (EMRS)** nationwide has made **Hindi competency mandatory.**

➢ This change has led to numerous transfer requests; many staff members recruited from Hindi-speaking states are protesting against postings in southern states, where they find the language, food, and culture unfamiliar.

➢ Another concern associated with this is the **potential impact on tribal students** being **taught by teachers who are unfamiliar with the local language and culture.**

What are Eklavya Model Residential Schools (EMRS)?

➢ EMRS is a scheme for making **model residential schools for Indian tribals (ST- Scheduled Tribes) across India.** It **started in** the year **1997-98.** Its **nodal ministry** is the **Ministry of Tribal Affairs.**

  ❍ These schools are being developed to **provide quality education to tribal students**, focusing on academic as well as overall development.

  ❍ The EMR Schools generally follow the **CBSE curriculum.**

➢ The scheme aims to **build schools similar to Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas,** with a focus on **state-of-the-art facilities for preserving local art and culture,** as well as providing training in sports and skill development. The EMRS scheme was revamped in FY 2018-19.

Note:

➢ During the **2023 Budget session of Parliament,** the Finance Minister announced that the responsibility for recruiting staff in EMRS would be transferred to the **National Education Society for Tribal Students (NESTS).**

  ❍ NESTS has now been tasked with **staffing 38,000 positions in over 400 Eklavya schools nationwide.**

  ❍ The centralization of recruitment aimed to **address the severe teacher shortage** in the EMRS system and to **standardize recruitment rules across states.**

Note: National Education Society for Tribal Students (NESTS) is an **autonomous organization** established **under the Ministry of Tribal Affairs (MoTA).** Its objective is to **conduct training and capacity-building programs for teachers and students** of Eklavya Model Residential Schools **(EMRSs).**

Other Initiatives for Tribal Education

➢ **Rajiv Gandhi National Fellowship Scheme (RGNF):** RGNF was introduced in 2005-2006 with the objective to encourage the students belonging to ST community to pursue higher education such as regular and full time M. Phil and Ph. D degree in Sciences, Humanities, Social Sciences and Engineering & Technology.

➢ **Vocational Training Center in Tribal Areas:** The aim of this scheme is to develop the skill of ST students depending on their qualification and present market trends.

➢ **National Overseas Scholarship Scheme:** It is a **Central Sector Scheme** to facilitate the **low income students** belonging to the **Scheduled Castes, Denotified Nomadic and Semi-Nomadic Tribes,** Landless Agricultural Labourers and Traditional Artisans category to **obtain higher education by studying abroad.**

➢ **Initiative for Digital Transformation of Tribal Schools:** This initiative aims to build an inclusive, **skills-based economy by providing Artificial Intelligence curriculum, training teachers, and mentoring students** on AI-based projects for societal good and sustainable development

What is the Recent Issue Related to Recruitment to EMRS?

➢ **Requirement of Hindi Competency:**

  ❍ The recent **centralization of recruitment introduced Hindi competency** as a **mandatory requirement.**

  ❍ This has resulted in a large number of **staff recruited from Hindi-speaking states being posted to EMRS in southern states,** where the language, food, and culture are unfamiliar to them.

  ❍ The government has stated that the **requirement of basic Hindi language competency is not unusual,** as it is **mandatory for Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas** recruitment as well.

➢ **Impact on Tribal Students:**

  ❍ Most tribal students in Eklavya schools would benefit from teachers who understand their local cultural contexts, as the **communities have very specific contexts** under which **learning can be made conducive.**

    ● Government officials have **stated that teacher recruits are expected to learn the local language within two years,** but there have been **apprehensions among the recruited teachers to learn** a new, completely **different language.**

  ❍ The posting of **non-local teachers can negatively impact the learning of tribal students,** as they may not be able to adjust to teachers who are not aware of their cultural context.

Political Representation of Women

Why in News?

The recently concluded general elections in the United Kingdom have seen a record **40% women representation** in the **House of Commons,** highlighting the significant progress made by other countries in enhancing women's political participation.

➢ In contrast, **India's women's representation** in the **Parliament** remains **well below** the global average of 25%.

Note:

Country wise data on women representation*

Women representation in parliament varies across different democracies

Country	% of elected women	Quota in Parliament	Quota in political parties
Sweden	46%	No	Yes
South Africa	45%	No	Yes
Australia	38%	No	Yes
France	38%	No	Yes
Germany	35%	No	Yes
U.K.	40%	No	Yes
U.S.	29%	No	No
Pakistan	16%	Yes	No
Bangladesh	20%	Yes	No

Moving forward: Trinamool Congress MPs take selfies at the Parliament House complex during the first session of the 18th Lok Sabha, on June 25. PTI

*(as of September 2023) | Source: PRS legislative research

What is the Status of Women's Representation in Indian Parliament?

➢ **Women's Representation in Parliament:** In the **Lok Sabha**, the percentage of women members has risen from **5-10% until 2004** to **13.6% in the current 18th Lok Sabha,** while in the **Rajya Sabha, it is 13%**.

Historical comparison

16th Lok Sabha (2014-2019): **64 women MPs**

17th Lok Sabha (2019-2024): **78 women MPs (highest)**

18th Lok Sabha (2024-Present): **74 women MPs**

TOI

○ Also, the **number of women contesting elections** has shown a gradual increase over the past 15 years.
  ● In 1957, just 45 women candidates were contesting the Lok Sabha election; in 2024 there were 799 (9.5% of the total candidates contested).

Note:

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- ❍ **West Bengal leads in electing the most women MPs,** with 11 representatives. The Trinamool Congress has the highest proportion of women among its Lok Sabha MPs, at 38% in the 18th Lok Sabha.
  - ● This is far below the **global average** of around **25%**.
- ➢ **Women's Representation in State Legislatures:** The **national average** of women's representation in State Legislative Assemblies stands at a mere **9%,** with **no state having more than 20% women legislators.**
  - ❍ Even **Chhattisgarh**, the state with the highest representation, has only 18% women MLAs.
- ➢ **Global Scenario: India ranks 143** out of 185 countries in terms of **women's representation** in the lower house of Parliament.
  - ❍ **Sweden** has **46% female MPs,** South Africa (45%), the UK (40%) and the US (29%).
  - ❍ India lags behind countries like Vietnam, the Philippines, Pakistan, and China in gender representation.

Women in parliaments of select countries (%)
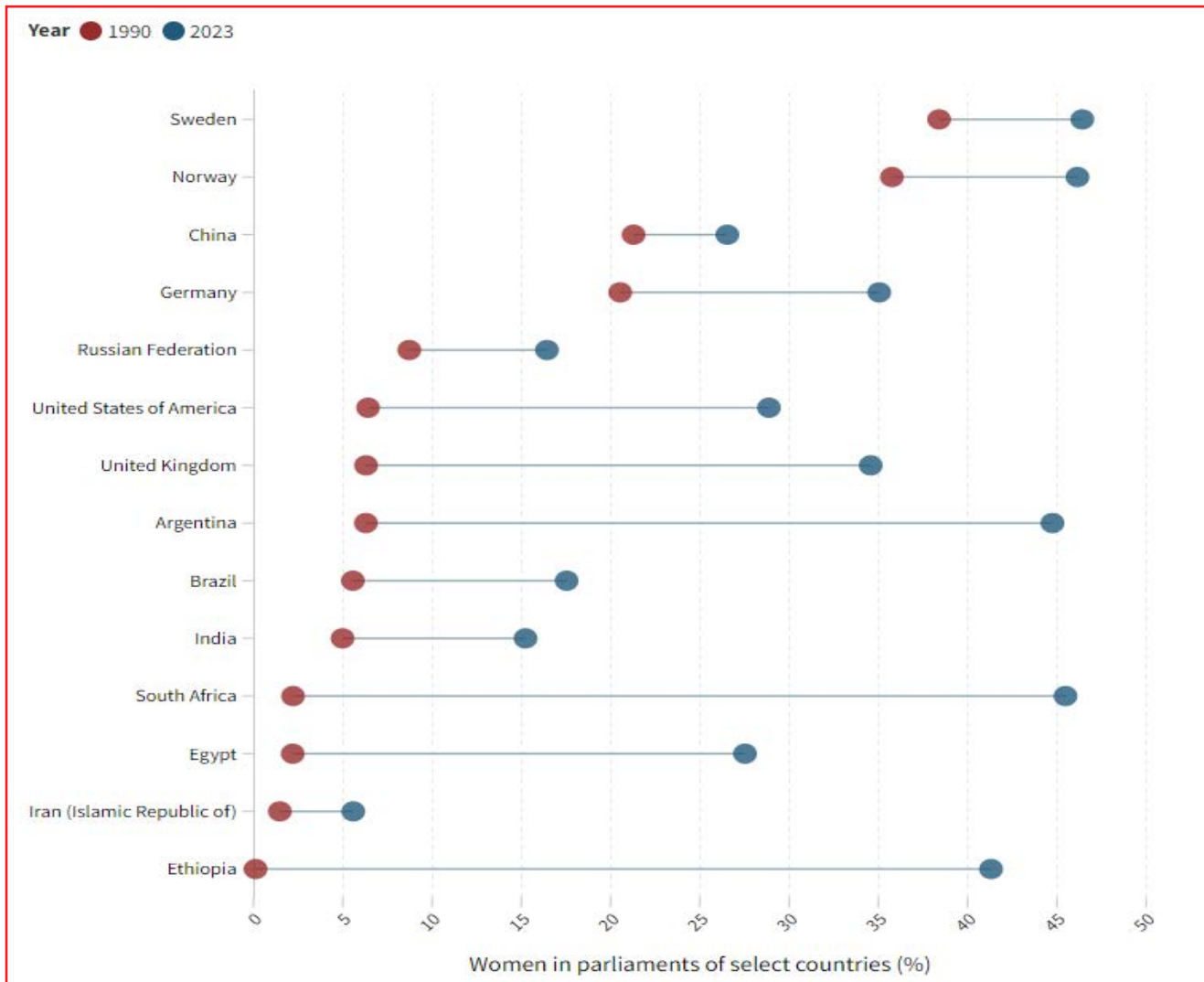
What are the Reasons for the Underrepresentation of Women in Politics?

- ➢ **Socio-Cultural Barriers: Patriarchal norms** and **gender stereotypes** limit women's participation in politics. Household responsibilities and lack of family support, along with disparities in education and economic empowerment, especially in rural areas contributes to such barriers.

Note:

➢ **Political Party Dynamics:** Male-dominated parties often hesitate to field women candidates, relegating them to "safe" or "unwinnable" seats. The lack of internal quotas or affirmative action policies further hinders women's candidacy.

➢ **Electoral System Challenges:** The **first-past-the-post system** favours established male candidates with strong financial and organisational backing. High election costs and the prevalence of criminalisation and money power in politics further disadvantage women.

➢ **Institutional and Legal Barriers:** The delayed implementation of the **73rd and 74th constitutional amendments,** which provide for **one-third reservation for women** in **local bodies**, has limited the pipeline of women entering politics.

  ○ The repeated failure to pass the **Women's Reservation Bill,** which proposed 33% reservation for women in Parliament and state legislatures, is another major institutional barrier.

➢ **Lack of Political Will:** Insufficient prioritisation of women's political empowerment by major **parties and lack of sustained pressure from women's movements** and civil society perpetuate the status quo.

What are the Arguments in Favour of Women's Reservation in Indian Parliament?

➢ **Enhancing Women's Political Representation:** Currently, women's representation in Parliament is far below the global average of around 25%. **A 33% reservation would help bridge this gap and ensure a more equitable representation of women** in the Indian Parliament.

➢ **Promoting Gender Equality and Inclusive Governance:** Women in India face socio-cultural, economic, and political barriers to political participation, including patriarchal norms, lack of resources, and gender-based violence.

  ○ Also, they make up **nearly 50% of India's population** but are underrepresented in political decision-making. Increasing **their representation** would lead to more **gender-sensitive policies** and better address the unique challenges women face.

➢ **Strengthening Democratic Participation:** Reserving one-third of seats for women would empower their active participation in politics, strengthen inclusive democracy and will initiate **more women and children-centric policies** that will help in human development.

  ○ For instance, in many villages, women representatives have played a crucial role in eradicating child marriage, improving maternal health, and ensuring access to clean drinking water.

What Measures Have Been Taken to Address the Underrepresentation of Women in Indian Politics?

➢ **Constitutional Amendments:**

  ○ The **73rd and 74th Constitutional Amendments (1992/1993)** provided for **one-third reservation** of seats for **women in Panchayats and Municipalities,** increasing their participation in local governance.

  ○ The **106th Constitutional Amendment (2023)** proposes a **one-third reservation of seats for women in the Lok Sabha** and **state legislative assemblies**, though its implementation is contingent on the next delimitation exercise.

    ● The reservation will be implemented after the first census following the commencement of the 106th Amendment Act including a delimitation exercise.

➢ **The Women's Reservation Bill:**

  ○ The bill, **first introduced in 1996,** proposed **33% reservation for women** in the Lok Sabha and state legislative assemblies. Despite several attempts, the bill has not been passed due to a lack of political consensus among major parties.

➢ **Women Candidates by Political Parties:** Several political parties in India have female representation in their candidates for elections.

  ○ The Naam Tamilar Katchi stands out with 50% women candidates, followed by Lok Janshakti Party and Nationalist Congress Party with 40% each.

  ○ Jharkhand Mukti Morcha, Biju Janata Dal, and Rashtriya Janata Dal had 33%, 33%, and 29% female representation, respectively.

  ○ Meanwhile, the Samajwadi Party had 20% and All India Trinamool Congress had 25% women candidates.

Note:

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➤ **Empowerment Schemes and Programs:**
  ❍ Initiatives like the **Mahila Shakti Kendra**, **Beti Bachao Beti Padhao**, and **STEP** have aimed to improve women's socio-economic status, **but have had limited direct impact on enhancing their political participation.**

➤ **Civil Society and Women's Movements:**
  ❍ There has been sustained advocacy by women's rights groups, activists, and organisations for greater political representation.

WOMEN
Reservation Act, 2023
(106th Constitutional Amendment Act)

OBJECTIVE

↘ Reserve 1/3rd of total seats in LS and state Legislative Assemblies (LAs) for women

BACKGROUND

↘ Bill previously introduced in: 1996, 1998, 2009, 2010, 2014
↘ Related Committees:
  » Committee on the Status of Women in India (1971)
  » Committee under Margaret Alva (1987)
  » Geeta Mukherjee Committee (1996)
  » Committee on the Status of Women (2013)

Key Features

■ *Articles Inserted:*
  ↘ **Article 330A –** Reservation for Women in LS
  ↘ **Article 332A –** Reservation for Women in State LAs
  ↘ **Article 239AA –** Reservation for Women in NCT of Delhi
  ↘ **Article 334A –** Reservations to become effective after delimitation is undertaken and Census is conducted
■ *Time Period:*
  ↘ Reservation to be provided for **15 years** (can be extended)
■ *Rotation of Seats Reserved:*
  ↘ After each delimitation

NEED

↘ Political Underrepresentation:
  » Only **82 Women MPs in LS (15.2%)** and 31 in RS (13%)
  » On avg, women constitute only **9% of the total** members in State LAs

ARGUMENTS

↘ In Favour:
  » Vital step towards gender equality
  » Broader range of perspectives to the decision-making process
  » Helps eliminate discrimination against women in political/public life
↘ Against:
  » Delimitation based on 2021 census (yet to be conducted) is mandatory
  » No women's reservation in RS and State Legislative Councils

STEPS AHEAD

↘ Reservation for women within political parties
↘ Independent political decision-making by women; **overcoming Sarpanch-patism**

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Note:

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WHO and UNICEF Estimates of National Immunisation Coverage (WUENIC)

Why in News?

Recently released **WHO** and **UNICEF** **estimates of national immunisation coverage (WUENIC)** revealed a **slight dip in childhood immunisation** in 2023 compared to 2022.

➢ In another development, a **quiet digital revolution is unfolding** as part of the government's pilot project to register **pregnant women and children on U-Win**.

What are the Key Highlights of the WUENIC?

➢ **About:**
  ○ Each year, **WHO and UNICEF jointly review reports** submitted by Member States **regarding national immunisation coverage,** finalized survey reports, and data from published and grey literature.

➢ **Major Findings:**
  ○ **Immunisation was stalled globally** in 2023, leaving 2.7 million additional children **either unvaccinated or under-vaccinated**, as compared to the pre-pandemic year of 2019.
  ○ It reveals a **slight dip in childhood immunisation** in India in 2023 compared to 2022.
  ○ There was a **two percentage point dip (from 95% in 2022 to 93% in 2023)** in the coverage of **diphtheria, pertussis, and tetanus (DPT) vaccines**, used as a proxy for the number of "zero-dose" children.
    ● Zero-dose children are those who have not received any routine immunisation.
  ○ It shows that there were **1.6 million zero-dose children in India in 2023**, up from 1.1 million in 2022, but much less than 2.73 million seen in 2021.
  ○ In 2023, **91% received the third DPT vaccine dose**, down 2% from 2022 but still above the global average of 84%.

  ○ In absolute terms, **2.04 million children remained under-vaccinated in 2023**, slightly lower than the 2.11 million children in 2019.

What is U-Win?

➢ **About:**
  ○ **U-WIN**, the initiative aimed at digitising India's **Universal Immunisation Programme (UIP)**, has been rolled out in a pilot phase**.**
    ● Following the success of the **Co-WIN platform**, the government has **established an electronic registry for routine vaccinations.**

➢ **Objective:**
  ○ The **platform will be used to register and vaccinate every pregnant woman**, record her delivery outcome, register every newborn delivery, administer birth doses and all vaccination events thereafter.
  ○ The U-WIN is going to be the **single source of information for immunisation services**, updating vaccination status, delivery outcome, and reports like antigen-wise coverage, etc.

➢ **Benefits:**
  ○ Healthcare workers and programme managers will be **able to generate real-time data** on routine immunisation sessions and vaccination coverage for better planning and vaccine distribution.
  ○ For pregnant women and children, vaccine acknowledgement and immunisation cards linked to **ABHA ID (Ayushman Bharat Heath Account)** will be generated and all states and districts can access a common database to track and vaccinate beneficiaries.
  ○ Upon complete digitisation of the immunization programme, **beneficiaries will receive instant certificates** which can also be downloaded and stored in **digi-lockers.**
  ○ An effective surveillance system will help create an **evidence base to enable the planning and deployment of effective interventions.**

Note:

UNEP Foresight Report 2024

Why in News?

Recently, the **United Nations Environment Programme (UNEP)** released a report titled **"Navigating New Horizons: A Global Foresight Report on Planetary Health and Human Wellbeing, 2024.**

➢ The report urges the world to address emerging challenges that could disrupt planetary health. It highlights **8 critical global shifts accelerating the triple planetary** crisis of climate change, biodiversity loss, nature loss, and pollution.

What are the Key Highlights of the Report?

➢ **No Significant Progress in UN SDG Goals: 85%** of the 169 **SDG** targets are **off track** and **37%** of the targets have shown **no progress or have regressed** since 2015, as of the latest **2023 SDG Progress Report.**

  ○ **42.85%** of the targets for **SDG 6 (Clean Water and Sanitation)**, **SDG 13 (Climate Action)**, **SDG 14 (Life Below Water)**, and **SDG 15 (Life on Land)** are either **stagnating or regressing.**

  ○ **60%** of environmental indicators remain either deteriorating or unclear in their status.
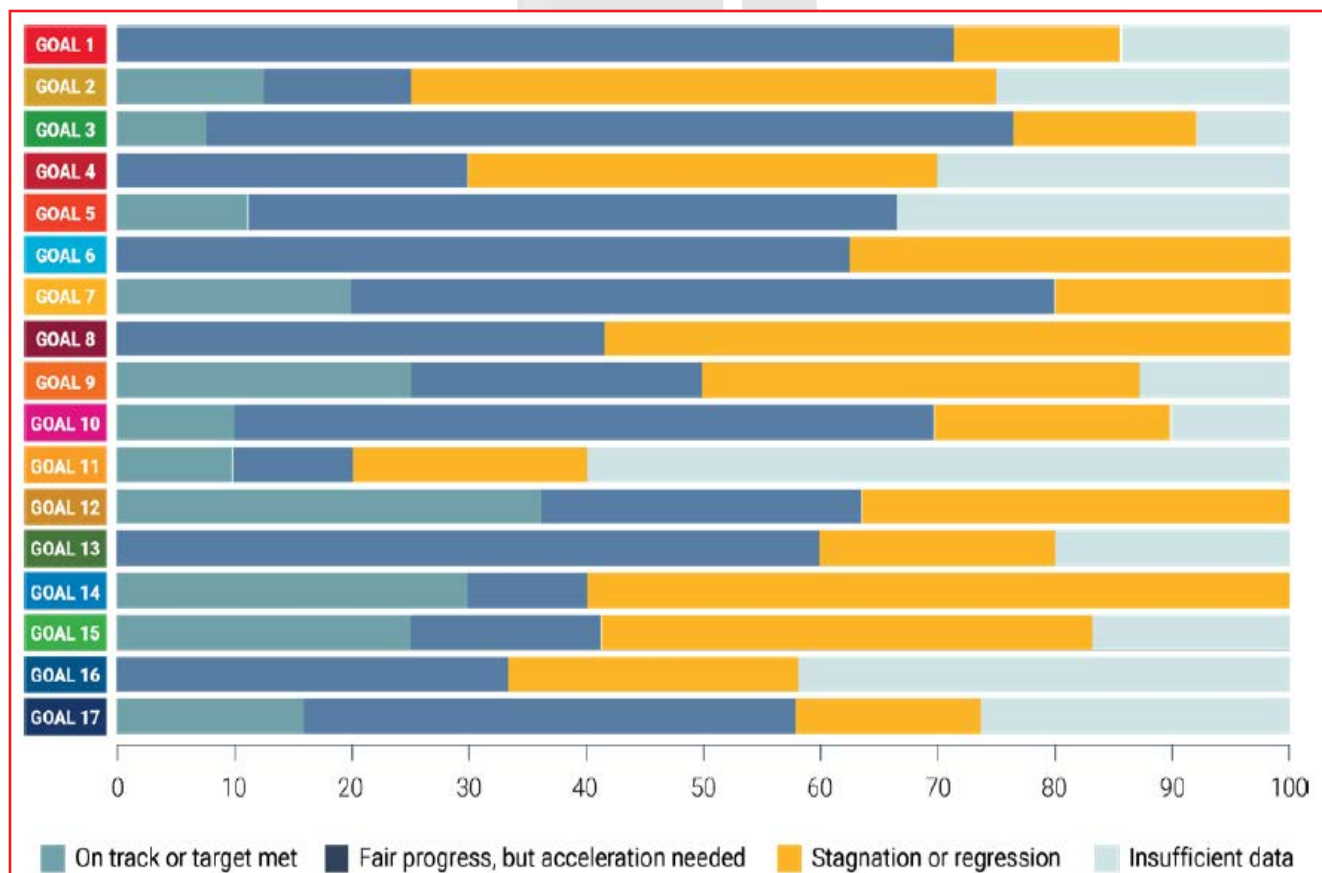
➢ **8 Shifts, 18 Signals of Change:** The UNEP report identified **8 critical shifts** with **18** potential **signals of change**.

  ● These signals are **not inherently good or bad, but are early signs of potential future developments** and could have a **big impact on the future** if they do happen.

Note:
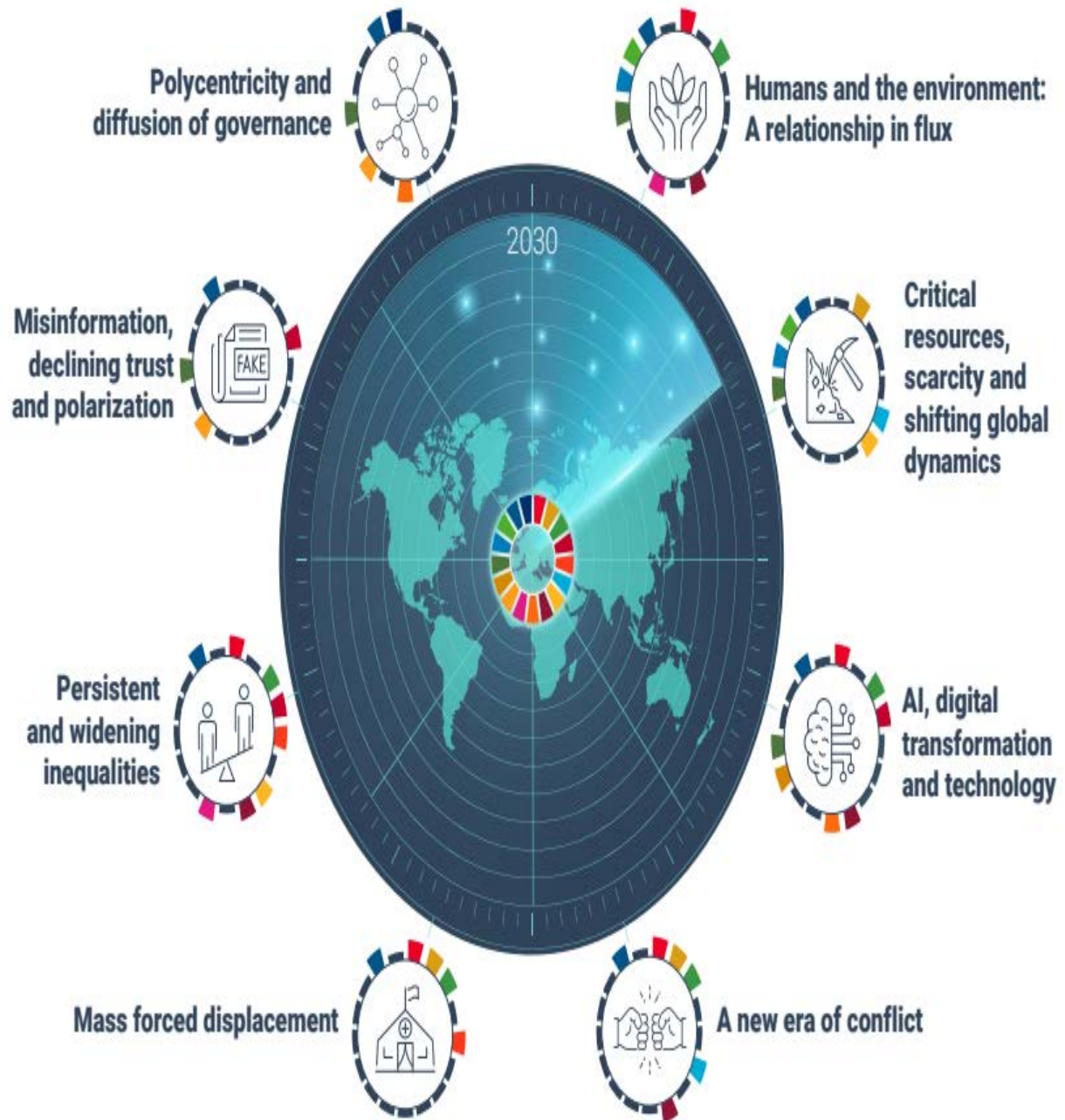
Eight critical global shifts or phenomena that emerged from the foresight process. These shift together with the 18 signals of change (Figure 2) provide insights about unconsidered and/or underestimated threats and opportunities on the horizon.

Note:

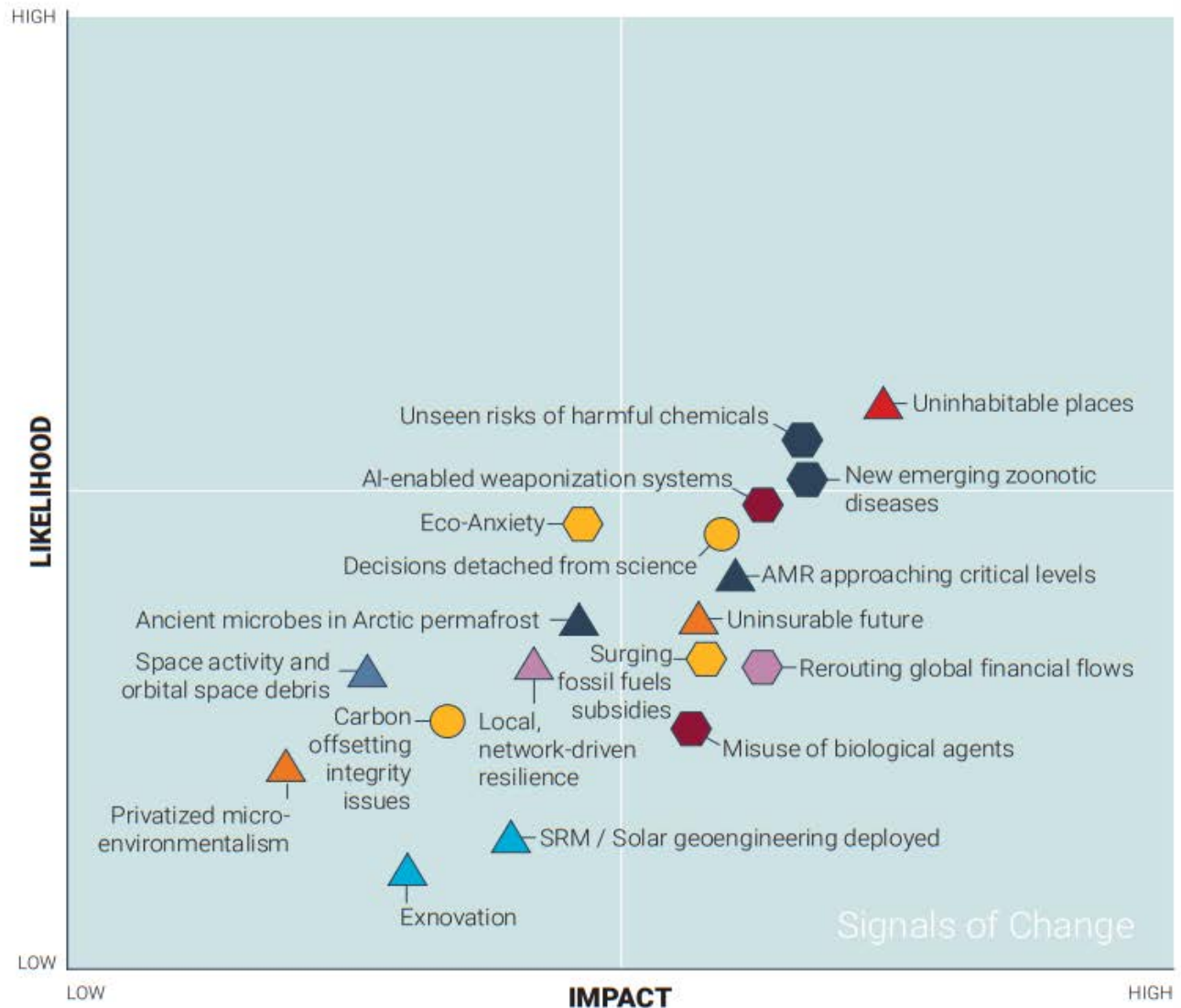**Figure 2:** Eighteen signals of change and potential disruptions depicted along three dimensions: likelihood, impact and time horizon.

➤ **Rapidly Changing Relationship Between Humans and Environment:** Human activities are predicted to **affect over 90% of land** by 2050. Up to **46% of species may face extinction.**

  ❍ Global temperatures are projected to **rise 2.1-3.9°C by 2100**.

  ❍ **Greenhouse gas** emissions, mainly from fossil fuels, are driving these changes, with developed nations responsible for most emissions.

➤ **Scarcity and Competition for Critical Resources:** The global competition for critical resources is reshaping international security. Demand outpaces supply, amplifying volatility and potential conflicts, especially in regions with concentrated reserves.

  ❍ The **most fundamental resources, water and food**, face growing threats from climate change and unsustainable management, disproportionately affecting vulnerable populations.

  ❍ The projected **growth in demand for critical minerals in 2050 to achieve net zero emissions** is given below:

Copper 40,713 / ×1.63 Projected growth in demand / 25,915	**Cobalt** 539 / ×2.51 Projected growth in demand / 215
Lithium 1,728 / ×10.5 Projected growth in demand / 165	
Nickel 3,104 / ×1.94 Projected growth in demand / 6,030	**Rare earths** 202 / ×2.19 Projected growth in demand / 93
Graphite 16,352 / ×3.53 Projected growth in demand / 4,632	■ 2023 ■ 2050 — All units in kilo tonnes

Projected growth in demand for critical minerals in 2050 to achieve net zero emissions.

➤ **AI, Digital Transformation and Technology:** The key drivers of rapid advancement of digital technologies and AI include mobile devices, internet access, and the growth of **AI** that offer prospects for progress, **their environmental implications require consideration**.

  ❍ There are over **8.89 billion mobile subscriptions,** with around **5.6 billion users** owning a device. As per **ITU** reports, **67.4%** of the world's population were **internet users in 2023.**

Note:

Waves of Innovation

SIXTH WAVE

FIFTH WAVE

FOURTH WAVE

THIRD WAVE

SECOND WAVE

FIRST WAVE

FIRST WAVE
- Water Power
- Textiles
- Iron

SECOND WAVE
- Steam
- Rail
- Steel

THIRD WAVE
- Antibiotics
- Advances in chemical production
- Electrification

FOURTH WAVE
- Electronics
- Space
- Aviation
- Petro-chemicals

FIFTH WAVE
- ICT
- Internet
- Biotech-nology

SIXTH WAVE
- AI
- IoT
- Nanotech
- Robotics

85 YEARS	55 YEARS	50 YEARS	40 YEARS	30 YEARS	25 YEARS
1760	1845	1900	1950	1990	2020

Key Breakthroughs and Transitions

FIRST WAVE
Mechanization drives the emergence of the first factories and a major shift away from agrarian lifestyles.
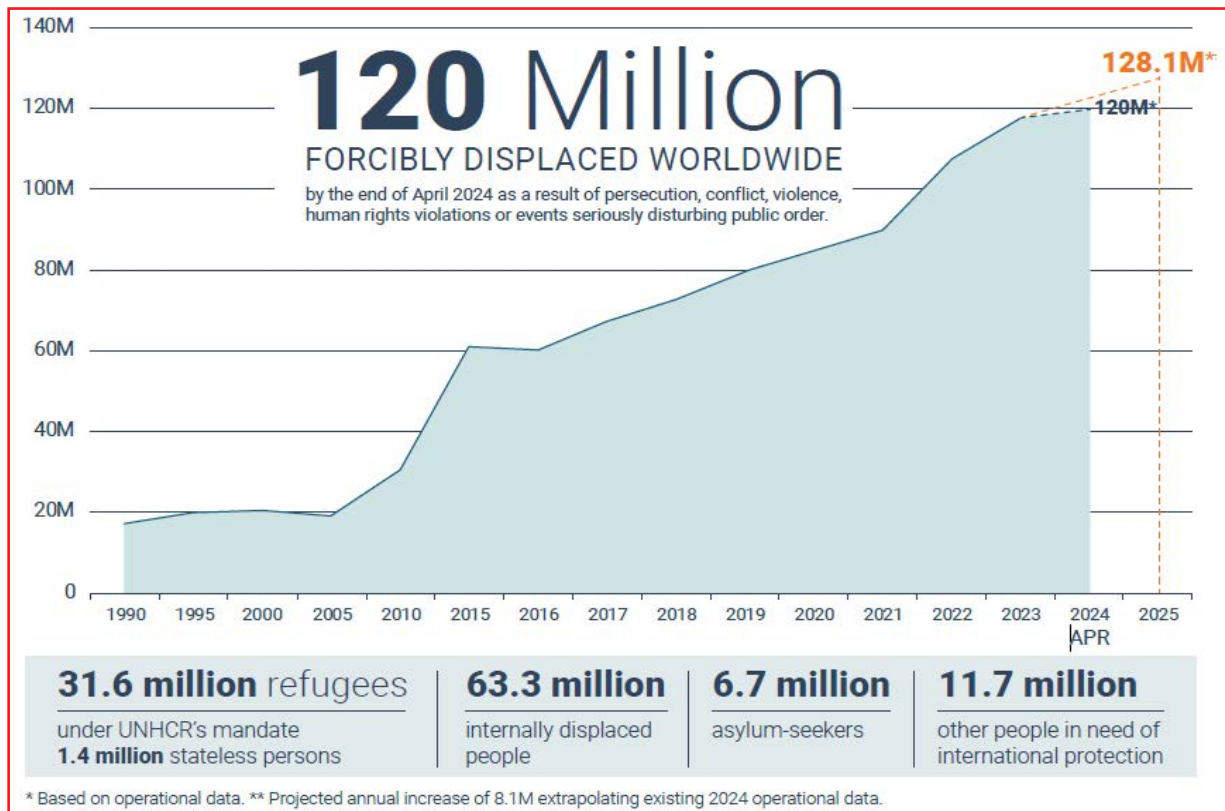
THIRD WAVE
Assembly lines, electrification and innovations in the chemicals industry enable a new era of mass production and the evolution of consumerism.

FIFTH WAVE
Global communications and digitalization reshape work and leisure; drastic rise in internet users from 2.6 million in 1990 to 5.4 billion in 2023.

SECOND WAVE
Mass production of steel, combined with steam-powered railways and ships enabling faster, reliable movement of goods and people, and urbanization.

FOURTH WAVE
Containerization and aviation trigger a major rise in global flows, movement and integration; 6-fold increase in crude oil production (1950 to 1990).

SIXTH WAVE
Convergence of AI, ICT and clean energy systems set to radically transform business models, lifestyles and trajectory of energy use and distribution.

➢ **A New Era of Conflict:** The report warns that **AI-based and autonomous weapons** could cause **major global disruptions** in 4-6 years without human oversight.
  ○ Experts believe there is a **high likelihood (59%)** of such disruptions occurring, with a high perceived intensity of impact.
  ○ Examples include the **Ukrainian military using AI-equipped drones** to strike Russian targets in the **Russia-Ukraine war**, and the **risk of AI-controlled bioweapons.**

➢ **Mass Forced Displacement:** The report reveals that **1.5%** of the global population is forcibly displaced, nearly double the number from a decade ago.
  ○ **Climate change** is a major driver, with extreme conditions like wildfires, flooding, poor air quality, and intolerable heat contributing significantly.
  ○ **Africa, Central America, Pacific Islands, and South Asia** face higher risks of climate-induced migration and displacement.
  ○ **By 2070, 3 billion people** could live outside suitable climate conditions if no mitigation occurs and **environmental migrants** could be 25 million-1 billion by 2050.
  ○ **Internally displaced persons** have **increased by 340% in 20 years**, with climate-related disasters now displacing more people than conflicts.

Note:

120 Million
FORCIBLY DISPLACED WORLDWIDE

by the end of April 2024 as a result of persecution, conflict, violence, human rights violations or events seriously disturbing public order.

128.1M*

120M*

31.6 million refugees
under UNHCR's mandate
1.4 million stateless persons

63.3 million
internally displaced people

6.7 million
asylum-seekers

11.7 million
other people in need of international protection

* Based on operational data. ** Projected annual increase of 8.1M extrapolating existing 2024 operational data.

➢ **Widening Inequalities:** The report highlighted that global inequality is worsening, with the **top 10% holding over 75% of wealth**, while the **bottom 50% own just 2%**.
   ❍ Inequality within nations is driven by **unequal access to education, jobs, and services**, as well as **globalisation**.
   ❍ **Wealth inequality** also leads to **ecological inequities,** as the wealthy drive climate change, while the poor face the greatest environmental harm.
➢ **Misinformation, Declining Trust and Polarisation:** The erosion of trust in science and public institutions has undermined evidence-based policymaking and democratic governance.
   ❍ This decline in trust, from perceived failures and 'fake news', makes it **harder to implement effective policies** to address challenges like the climate crisis.

What are the Future Outlook and Recommendations of UNEP?

➢ **Broadening Stakeholder Engagement:** Actively involve a **diverse range of stakeholders, including women**, indigenous groups, and young people, using technological and **social innovations to enhance public participation**, combat misinformation, and build trust.
➢ **Stronger Voice for Young People:** Ensure young people have a significant role in decision-making at all governance levels to achieve intra- and inter-generational equity.
➢ **Redefining Progress Beyond GDP:** Incorporate broader indicators of human and environmental well-being, such as the **Inclusive Wealth Index and Multidimensional Vulnerability Index**, to guide investments towards Sustainable Development Goals.
➢ **Community Empowerment:** Promote agile and adaptive governance that empowers **communities to experiment, innovate, and share knowledge**, while setting flexible long-term environmental goals and targets.
➢ **Data-Driven Decision-Making:** Leverage data, monitoring, and knowledge-sharing platforms to inform evidence-based policymaking across sectors and scales, **enhancing environmental monitoring from local to global levels.**
➢ **Sustainable Prosperity:** Transform economies and societies to achieve prosperity within environmental limits, **guided by shared values of equity, sustainability, and resilience, and reimagine the role of businesses,** markets, and governance to prioritise people and the planet.

■■■

Note:

Security

Highlights

- Maharashtra Special Public Security Bill 2024
- Concerns Regarding Opium Stockpiles in Afghanistan
- 5th Positive Indigenisation List
- Need for an Internal Security Plan for India
- Rise in Militancy in Jammu

Maharashtra Special Public Security Bill 2024

Why in News?

Recently the Maharashtra government has proposed a comprehensive new law, the **Maharashtra Special Public Security (MSPS) Bill, 2024**, aimed at **addressing the increasing presence of Naxalism in urban areas.**

➤ The Bill has sparked significant controversy and debate due to its **broad and stringent provisions.**

Note:

➤ **State of Naxalism in India:** During the period from 2018 to 2023 there were **3,544 LWE-related incidents and 949 deaths**.

➤ **Urban Naxalism:** The term **'Urban Naxal'** is based off a **Maoist strategy** where they look to **urban regions for leadership**, organising masses and engaging in military tasks like providing personnel and infrastructure.

  ○ The strategy is based off a **document by the CPI (Maoist) called "Urban Perspective,"** which explains that the focus has to be on organising the working class, which is "the leadership of our revolution".

➤ However, there is **no official definition** of the term Urban Naxal.

What are the Provisions of the Maharashtra Special Public Security Bill, 2024?

➤ **Background:**

  ○ The government contends that **Naxalism**, traditionally confined to remote regions, is now **infiltrating urban areas through frontal organisations** that provide **logistics and safe havens** for armed Naxal cadres.

○ The existing laws, including the **Unlawful Activities Prevention Act (UAPA)** and the **Maharashtra Control of Organised Crime Act (MCOCA)**, are deemed inadequate to tackle this evolving threat.

○ The MSPS Bill is **modelled after similar legislation** in states like Chhattisgarh, Telangana, Andhra Pradesh, and Odisha, which have enacted **Public Security Acts to curb Naxal activities.**

➤ **Key Provisions of the Bill:**

  ○ The government can **declare any organisation as unlawful** based on its activities.

  ○ The Bill outlines **four main offences related to unlawful organisations**: being a member, raising funds, managing, and assisting in unlawful activities.

    ● Penalties range from imprisonment for 2-7 years and fines between Rs 2-5 lakh.

  ○ The offences under the Bill are **cognisable** allowing arrests without a warrant, and **non-bailable.**

  ○ The Bill allows for **faster prosecution by permitting district magistrates** or police commissioners to grant the necessary permissions, bypassing the need for sanction from higher authorities.

➤ **Comparison with UAPA:**

  ○ While the UAPA also targets unlawful activities, the MSPS Bill **expands the definition of "unlawful activity"** to include acts that interfere with public order, and administration of law, and generate fear among the public.

  ○ The UAPA's definitions have been refined by judicial interpretation over the years, whereas the **MSPS Bill's definitions are apparently broader**.

  ○ Moreover, the MSPS **Bill simplifies the prosecution process,** which the government argues **will reduce delays and improve enforcement.**

Note:

Unlawful Activities (Prevention) Act (UAPA)

➢ The **Unlawful Activities (Prevention) Act, 1967** was enacted to provide for more effective **prevention of certain unlawful activities** of individuals and associations, for dealing with terrorist activities, and for matters connected therewith.

  ○ Unlawful activities are **defined as actions supporting or inciting the cession** or **secession of any part of India**, or actions questioning or disrespecting its sovereignty and territorial integrity.

➢ The **National Investigation Agency (NIA)** is empowered by the UAPA to investigate and prosecute cases nationwide.

➢ It underwent multiple amendments (2004, 2008, 2012 and 2019) expanding provisions related to terrorist financing, **cyber-terrorism,** individual designation as terrorist, and property seizure.

➢ Major Provisions:

  ○ Till the year 2004, **"unlawful" activities referred to actions related to secession and cession of territory.** Following the 2004 amendment, the "terrorist act" was added to the list of offences.

    ● The 2019 amendment empowers **the government** to designate individuals as terrorists.

  ○ The Act **gives the central government complete authority** to declare any activity as unlawful. If the government considers an activity unlawful, it can **officially declare it** so by publishing a notice in the Official Gazette.

  ○ Under the UAPA, the **investigating agency can file a charge sheet** in maximum of 180 days after the arrests and the duration can be extended further after intimating the court.

  ○ Both Indian and foreign nationals can be charged. It will be **applicable to the offenders** in the same manner, even if the crime is committed on a foreign land, outside India.

  ○ It has the **death penalty** and life imprisonment as the **highest punishments.**

➢ **Related Judgments:**

  ○ In *Arup Bhuyan vs State Of Assam, 2011* the Supreme Court ruled that **mere membership of a banned organisation will not incriminate a person**. It can be done if a person resorts to violence or incites people to violence or does an act intended to create disorder.

    ● However, in 2023 the Supreme Court ruled that **membership alone in such organisations can be considered an offence** even without the presence of overt violence.

  ○ In the *People's Union for Civil Liberties v. Union of India, 2004*, the Court decreed that if human rights are violated in combating terrorism, it will be self-defeating.

    ● The court held that a former police officer is not a good choice to be appointed as a member of the **National Human Rights Commission (NHRC)** as their experience is more related to investigating crimes rather than protecting and promoting human rights.

  ○ In the *Mazdoor Kisan Shakti Sangathan v. Union of India, 2018*, the Court said that protests against governmental and parliamentary actions are legitimate, although such protests and assemblies are supposed to be peaceful and non-violent.

Note:

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Initiative of Government Against Naxalism
➢ **National Policy and Action Plan to address Left Wing Extremism 2015**
➢ **SAMADHAN**
➢ **Aspirational Districts Programme**
➢ **Security Related Expenditure (SRE) Scheme:** Scheme implemented in 10 LWE affected States for Security Related Expenditure.
❍ It **relates to training and operational needs of security forces,** ex-gratia payment to the family of civilians/ security forces killed/injured in LWE violence, rehabilitation of surrendered LWE cadres, community policing, village defence committees and publicity materials.
➢ **Special Central Assistance (SCA) for most LWE Affected Districts:** It aims to fill the critical gaps in **Public Infrastructure and Services,** which are of emergent nature.
➢ **Scheme of Fortified Police stations:** Under the scheme, 604 fortified police stations have been constructed in LWE affected areas.
➢ **Road Connectivity Project for LWE Affected Areas (RCPLWE):** It aims at improving road connectivity in LWE affected States.

What are the Criticisms and Implications of the Bill?

➢ **Criticism:**

  ❍ **Vagueness and Overreach**: Critics argue that the Bill's **definitions are too vague and broad**, which could lead to misuse. Terms like "menace to public order" and "encouraging disobedience" are seen as subjective and open to interpretation.

  ❍ **Threat to Civil Liberties**: There are concerns that the Bill could be **used to suppress dissent and target activists**, journalists, and political opponents under the guise of combating Naxalism.

  ❍ **Judicial Oversight**: Unlike the UAPA, which requires **confirmation of unlawful organisation declarations by a High Court judge-led tribunal,** the MSPS Bill allows an advisory board of ex-judges or eligible persons to perform this function, raising concerns about adequate judicial oversight.

  ❍ **Potential for Misuse**: Provisions allowing the **seizure of property and eviction without proper notice** or hearing are seen as prone to abuse. The Bill's power to penalise non-members for aiding unlawful organisations also raises concerns about overreach.

➢ **Legal and Social Implications:**

  ❍ **Impact on Freedom of Expression**: The broad definitions of unlawful activities could **criminalise legitimate protests,** criticism of the government, and investigative journalism.

  ❍ **Judicial Precedents**: Courts have emphasised the **need for stringent laws to be narrowly defined** and strictly interpreted. The MSPS Bill's broader definitions could conflict with established judicial principles.

  ❍ **Role of Civil Society**: The Bill's potential to curb civil liberties may **lead to increased activism** and opposition from human rights organisations, highlighting the delicate balance between security and freedom in democratic societies.

Note:

Concerns Regarding Opium Stockpiles in Afghanistan

Why in News?

Recently, the latest report by the **United Nations Security Council (UNSC)** highlights significant concerns regarding **Afghanistan's extensive opium stockpiles** despite the Taliban's ban on poppy cultivation.

What are the Key Findings of the Report?

➢ Despite the **Taliban's April 2022 ban on poppy** cultivation, Afghanistan retains substantial stockpiles of opium.
  ❍ The report suggests it could **take several years to assess the full impact** of the ban due to these stockpiles.
➢ The trade-in narcotics remains significant, with **no noticeable reduction in drug exports** based on seizure data.
  ❍ Senior Taliban figures and well-connected traders, including the Haqqani Network, continue to profit from drug trafficking.
  ❍ **Key Taliban figures control** various narcotics trafficking routes.
➢ **Methamphetamine production** has surged, with significant quantities of fentanyl also being recorded.
  ❍ Major hubs for methamphetamine production include Farah, Herat, and Nimroz, with active labs in Bahramcha, Dishu district, and Helmand province.

What are the Implications of Opium Stock Piles and Drug Trafficking?

➢ **Trafficking Networks:** A majority of drugs trafficked to India **originate from Afghanistan,** with Pakistan's Inter-Services Intelligence (ISI) agency controlling these networks.
➢ **Terrorism Funding:** Drug money is increasingly being used to fund **anti-India terror groups** such as Lashkar-e-Taiba (LeT).
  ❍ Narcotics procured from Afghanistan are labelled in clandestine laboratories in Balochistan and then smuggled into India.
➢ **Significant Seizures:** Indian security agencies have uncovered direct links between Kandahar-based cartels and drug smuggling networks.
  ❍ Notable seizures include the **National Investigation Agency (NIA)** intercepting 3,000 kg of heroin at **Mundra port** in September 2021.
➢ **Government Response: The** Union Home Minister has urged security agencies to adopt a ruthless approach towards smuggling networks.
  ❍ The central government is **working on installing container scanners** at all ports and land border crossings to curb drug trafficking.

Initiatives to Tackle Drug Abuse

➢ **Global Initiatives:**
  ❍ Single **Convention on Narcotic Drugs**, 1961
  ❍ The **Convention on Psychotropic Substances, 1971**
  ❍ The UN Convention against Illicit Traffic in **Narcotic Drugs and Psychotropic Substances, 1988.**
    ● India is a signatory to all three and has enacted the **Narcotics Drugs and Psychotropic Substances (NDPS) Act, 1985**
  ❍ Every year, the UN publishes a **World Drug Report, the Global Drug Policy Index**.
  ❍ **United Nations Office on Drugs and Crime:** It was established in 1997 and was named the United Nations Office on Drugs and Crime (UNODC) in 2002.
    ● It acts as the **Office for Drug Control and Crime Prevention** by combining the **United Nations International Drug Control Program (UNDCP)** and the Crime Prevention and **Criminal Justice Division of the United Nations Office in Vienna**.
➢ **Indian Initiatives:**
  ❍ **Nasha Mukt Bharat Abhiyaan/Drugs-Free India Campaign**
  ❍ **National Action Plan for Drug Demand Reduction**
  ❍ **Narco-Coordination Centre**
    ● **National Fund to Control Drug Abuse**

Famous Hotspot of Illicit Drugs
➢ The **Golden Triangle** refers to a region in **Southeast Asia known for the production of illicit drugs**, particularly Opium. It's an area where the borders of three countries meet: Myanmar (formerly Burma), Laos, and Thailand. ➢ **Golden Crescent** or "Death Crescent" region **includes Afghanistan and Iran** – making it a natural transit point for drugs **being smuggled out of Pakistan.**

Note:

Opium Regulation and Uses

➤ Narcotics Commissioner under the **Narcotic Drugs & Psychotropic Substances Act 1985 and Narcotic Drugs & Psychotropic Substances Rules, 1985** performs all functions relating to superintendence of the **cultivation of the opium poppy and production of opium.**

➤ The opium poppy can be **cultivated only in such tracts as are notified by the Government.**
  ❍ At present these tracts are **confined to three States, viz. Madhya Pradesh, Rajasthan and Uttar Pradesh.**
  ❍ Mandsaur district of Madhya Pradesh and Chittorgarh and Jhalawar Districts of Rajasthan **constitute about 80% of the total area cultivated.**

➤ **Uses of Opium:**
  ❍ Opium is unique in its **therapeutic value and is indispensable in the medical world.**
  ❍ It also finds use in **Homeopathy and Ayurveda or Unani systems** of indigenous medicines.
  ❍ Opium which is used as an **analgesic, Anti-Tussive, Anti spasmodic** and as a source of edible seed oil, acts as a medicinal herb.

5th Positive Indigenisation List

Why in News?

The **Ministry of Defence (MoD)** has recently notified a **fifth Positive Indigenisation List (PIL)** comprising defence items, aimed at boosting self-reliance and minimising imports and encouraging the domestic defence sector.

What are the Key Highlights of the Fifth Positive Indigenisation List?

➤ **Purpose and Scope:** The fifth PIL comprises 346 items aimed at advancing **Aatmanirbharta (self-reliance) in defence** and reducing **import dependence by Defence Public Sector Undertakings (DPSUs).**
  ❍ It ensures that these items are procured exclusively from the Indian industry, including **Micro, Small, and Medium Enterprises (MSMEs)** and startups.
  ❍ Items include strategically important Line Replacement Units (LRUs), systems, sub-systems, assemblies, sub-assemblies, spares, components, and raw materials.

➤ **Implementation:** The list is available on the **MoD's Srijan portal,** which provides a platform for DPSUs and service headquarters (SHQs) to offer **defence items for indigenisation to private industries.**

  ❍ DPSUs like **Hindustan Aeronautics Limited (HAL), Bharat Electronics Ltd (BEL), Bharat Dynamics Ltd (BDL)**, and others have initiated processes for issuing Expressions of Interest (EoIs) and Requests For Tender or Proposals (RFPs).

➤ **Impact:** The indigenisation of these items is expected to have an **import substitution value worth Rs 1,048 crore.**
  ❍ The initiative provides **assurance to the domestic defence industry, encouraging** them to develop defence products without the risk of competition from imports.

➤ **Future Goals:** The MoD aims to continue expanding the **list annually up to 2025,** further increasing the number of items to be indigenised.
  ❍ This incremental approach supports the long-term goal of achieving greater self-reliance in defence production.

Positive Indigenisation List

➤ **About:** The PIL is a list of items that can only be purchased by the Indian armed forces from domestic manufacturers, including private sector or DPSUs.
  ❍ The concept was introduced in the **Defence Acquisition Procedure (DAP) 2020,** focusing on import substitution for major systems, platforms, weapon systems, sensors, and munitions.
  ❍ The list includes a diverse range of items crucial for bolstering India's defence capabilities and promoting self-reliance in the defence sector.

➤ **Progress:**
  ❍ The first PIL was promulgated in August 2020, followed by successive lists, bringing the total to 4,666 items.
    • So far, 2,972 items, worth Rs 3,400 crore in import substitution value, have been indigenised.
    • These five lists for DPSUs are in addition to the five positive indigenisation lists of 509 items notified by the **Department of Military Affairs (DMA).** These lists include **highly complex systems, sensors, weapons and ammunition.**
  ❍ Over 36,000 defence items have been offered to the industry for indigenisation, with more than **12,300 items indigenised in the last three years. As a result, the DPSUs have placed orders on domestic vendors to the tune of Rs 7,572 crore.**

What is the Need for Indigenisation of Defence in India?

➤ **Import Dependency:** India continues to hold the **title of the world's largest arms importer,** despite ongoing efforts to bolster its defence-industrial base.

Note:

○ Between 2019 and 2023, the country accounted for a **significant 9.8% of the total global arms imports,** reflecting a strategic vulnerability in its defence procurement.

➢ **Strategic Autonomy:** Heavy reliance on foreign arms imports compromises India's strategic autonomy. By indigenising defence production, India can **reduce dependency on external sources and ensure self-reliance** in critical defence technologies.

○ Dependence on foreign arms can pose risks **during geopolitical tensions.** Indigenous production enhances national security by ensuring uninterrupted supply and availability of defence equipment during crises.

○ A self-reliant defence industry enhances India's political leverage in international relations. It strengthens India's position in **global negotiations and defence collaborations.**

➢ **Economic Benefits:** Indigenisation supports the domestic economy by creating jobs, fostering innovation, and stimulating industrial growth.

○ It reduces the outflow of **foreign exchange,** contributing to economic stability.

○ Indigenous production can be more cost-effective in the long run. It reduces the **procurement cost, maintenance, and logistical challenges** associated with importing arms from abroad.

➢ **Sustainable Development:** Indigenisation promotes sustainable development by ensuring that the defence industry grows in harmony **with national interests and environmental considerations.**

What is the Status of Indigenisation Defence Sector?

➢ **Rise in Exports:** In FY 2023-24, defence exports reached a record Rs 21,083 crore (approx. USD 2.63 Billion), showing a **32.5% increase** from the previous fiscal year.

○ Over the last 10 years, there has been a 31-fold increase in defence exports compared to FY 2013-14.

○ The private sector and DPSUs have contributed about 60% and 40% respectively to this growth.

○ This growth is attributed to policy reforms**, 'Ease of Doing Business' initiatives,** and digital solutions provided by the Government to promote defence exports.

➢ **Achievements:** The Indian defence sector has seen the production of several advanced systems, including the **155 mm Artillery Gun 'Dhanush', Light Combat Aircraft 'Tejas', INS Vikrant: Aircraft Carrier,** and various other platforms and equipment, notably the **Advanced Towed Artillery Gun (ATAG) howitzer.**

➢ **Reduction in Import Dependency:** The expenditure on foreign defence procurement has decreased **from 46% to 36% over the past four years,** demonstrating the impact of indigenisation efforts in reducing reliance on imports.

➢ **Growth in Domestic Procurement Share:** The share of domestic procurement in total defence procurement has risen from **54% in 2018-19 to 68% in the current year, with 25%** of the defence budget allocated for procurement from private industry.

➢ **Value of Production:** The value of production by public and private sector defence companies has increased from Rs 79,071 crore to Rs 84,643 crore in the past two years, reflecting significant growth in the sector's capacity and output.

What are the Initiatives Related to Indigenisation in the Defence Sector?

➢ **Defence Procurement Policy (DPP), 2016: DPP 2016** has introduced the **"Buy-IDDM" (Indigenous Designed and Manufactured)** Developed category of acquisition and accorded it the top most priority.

○ This policy shift is designed to enhance local production capabilities and reduce import dependency.

➢ **Defence Acquisition Procedure (DAP) 2020:** It aims to promote **Atmanirbhar Bharat Abhiyaan** in the defence manufacturing sector. It includes features such as PIL, priority to indigenous procurement, reservation for MSMEs and small shipyards, increased indigenous content, and introduction of new categories to promote **'Make in India' initiative.**

○ Additionally, it focuses on indigenisation of imported spares to enhance self-reliance through import substitution.

➢ **Industrial Licensing:** The licensing process has been streamlined with extended validity, facilitating easier investment in the defence sector.

➢ **Foreign Direct Investment (FDI):** The **FDI policy** now allows up to 74% under the automatic route, promoting foreign investment in defence manufacturing.

➢ **Make Procedure:** The **"Make" procedure** in the Defence Procurement Procedure (DPP) promotes indigenous design, development, and manufacturing of defence equipment.

○ It is a key part of the **Make in India initiative,** involving both public and private sectors to build indigenous capabilities.

➢ **Defence Industrial Corridors:** Two corridors, in **Uttar Pradesh and Tamil Nadu, have been established** to attract investments and build a comprehensive defence manufacturing ecosystem. Investments totaling approximately Rs 6,089 crore have been made in these corridors.

Note:

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➤ **Innovative and Supportive Schemes:**
  ○ **Mission DefSpace:** Launched to advance space technology for defence applications.
  ○ **Innovations for Defence Excellence (iDEX):** This scheme, launched in April 2018, supports innovation in defence by engaging start-ups, MSMEs, and research institutions. The **'iDEX Prime' framework**, introduced in 2022, offers up to Rs 10 crore in grants for high-end solutions.
  ○ **SRIJAN Portal:** Launched to facilitate indigenisation, the **SRIJAN portal** has listed 19,509 previously imported items for local production. To date, 4,006 items have attracted interest from the Indian industry.
➤ **Research and Development (R&D):** 25% of the R&D budget is allocated for industry-led R&D, fostering technological advancement and innovation in the defence sector.

Need for an Internal Security Plan for India

Why in News?

As India solidifies its international position and strengthens its economy, the necessity for a comprehensive internal security plan becomes increasingly apparent. Recent developments highlight the need of **addressing internal security challenges to maintain national cohesion and stability.**

What is the Need and Way Forward for an Internal Security Plan for India?

➤ **National Security Doctrine (NSD):** The country should have a NSD to address internal and external challenges. The **National Security Advisory Board** has worked on drafts, but they were never approved.
  ○ It is important to have a consistent approach to internal security, especially during changes in government.
  ○ It will guide policy decisions and strategic actions, reducing ad-hoc responses and improving coherence in handling security issues.
➤ **Internal Security Ministry:** The Ministry of Home Affairs is too heavy and unwieldy, leading to delayed and inadequate attention to internal security matters. It is time to appoint a young, junior minister to independently handle internal security.
  ○ According to **Article 355 in Constitution of India,** the Union is responsible for **protecting every State from external aggression and internal disturbance,** and for ensuring that each State's government operates in accordance with the Constitution.
➤ **Recent Issues in Jammu and Kashmir:** The Home Minister claims terror incidents are down by 66% since the abrogation of **Article 370,** but **recent attacks in Jammu** show the situation is far from normal.
  ○ The government needs to reorganise the security grid, restore statehood to J&K, and hold elections for the Assembly to address the objectives of the Pakistani deep state.
➤ **Stabilizing the Northeast Region:** The Prime Minister has described the **Northeast as "a piece of our heart",** but the region continues to face challenges.
  ○ The **2015 Framework Agreement with the rebel Nagas** has not been fully realised due to the **National Socialist Council of Nagaland - Isak-Muivah's (NSCN-IM)** demand for a separate flag and constitution.
  ○ The government needs to **ensure strict implementation of the ceasefire agreement and prevent rebel activities** like **extortion** and forcible recruitment.
  ○ Manipur is still struggling with **ethnic conflicts and occasional violence,** despite the formation of a multi-ethnic peace committee by the Home Ministry.
    • It's time for the Prime Minister to personally address these issues.
  ○ Additionally, addressing problems like **illegal migration, drug trafficking, and arms smuggling** would require a comprehensive approach.
➤ **Naxal Problem:** The Minister of State for Home Affairs reported in the Rajya Sabha that the **"national policy and action plan"** has led to a significant decrease in **left-wing extremism (LWE) violence and its geographical influence**.
  ○ Violence and deaths have decreased by 73% since 2010, and the number of police stations reporting LWE-related violence has also decreased.
  ○ With Naxals on the backfoot, it is time for the government to offer them a **unilateral cease-fire, persuade them to negotiate,** address their grievances, and try to integrate them into mainstream society.
  ○ Strategies to combat Naxalism include security measures, development projects, and welfare initiatives, leading to a decline in related incidents.
➤ **Intelligence and Investigation Agencies:** The **Intelligence Bureau** and the **Central Bureau of Investigation (CBI)** need restructuring. The IB was set up through an administrative order in 1887. It is high time that it is given a statutory basis to **prevent misuse of intelligence for political gain.**

Note:

- ○ The CBI was set up through a resolution in 1963, and it derives the power to investigate from the **Delhi Special Police Establishment Act, 1946.**
  - ● It is an anomalous arrangement and, as recommended in the **24th report of the parliamentary committee,** "the need of the hour is to strengthen the CBI in terms of legal mandate, infrastructure and resources".
- ➤ **Reforming State Police Forces:** Legacy issues from colonial policing models and insufficient focus on community needs.
  - ○ **Transform state police** from **"Ruler's Police" to "People's Police"** to enhance public trust and effectiveness.
  - ○ Adopting best practices from global reforms can modernise and improve policing standards.
- ➤ **Central Armed Police Forces:** The **Central Armed Police Forces (CAPFs),** with over a million personnel, face internal issues such as unplanned expansion, haphazard deployment, inadequate training, declining discipline standards, vague criteria for top officer selection, and **friction between cadre and All India Service officers.**
  - ○ The government should appoint a high-powered commission to address these problems for long-term solutions.
- ➤ **Technology:** The police in the country can benefit greatly from incorporating **technological advancements.** Setting up a high-powered technology mission to recommend the latest technologies for addressing current and future challenges is crucial.
  - ○ By enhancing internal cohesion and addressing security issues, the country can project its strength internationally.

What Measures has the State Taken to Address Internal Security Challenges?

- ➤ **Counterterrorism Efforts:** Post the 2008 Mumbai attacks, there has been a significant focus on counterterrorism, including the **abolition of Article 370** and strategic operations in Jammu and Kashmir.
  - ○ Maritime security, especially coastal security, has seen significant improvements since the Mumbai attacks. Efforts include strengthening **coastal security and maritime surveillance**, improving the capabilities of the **Indian Coast Guard,** and enhancing interstate coordination.
- ➤ **Northeast Insurgency Management:** Through a combination of development and diplomacy, the government has worked to control insurgency in the Northeast.

- ➤ **Dealing with Left-Wing Extremism:** Enhanced strategies and coordination have improved the handling of Naxalism and related activities.
  - ○ The **CAPFs** have been equipped to handle extremism more effectively, resulting in positive outcomes.
- ➤ **Border Management:** Significant resources have been invested in improving border security, including fencing and development in border regions.
  - ○ Efforts are made not only to secure borders but also to improve development and connectivity in border regions. Special attention is given to managing borders prone to **drug and arms smuggling,** particularly with China and Pakistan.
- ➤ **Institutional Framework Support:** Institutions involved in internal security, such as police forces and CAPFs, have received enhanced resources, technology, and training. There is a heightened focus on emerging threats, including **cybercrime, preventing atrocities against women,** and addressing new-age crimes.
  - ○ The Ministry of Home Affairs, with a budget of nearly Rs 200,000 crore for 2023-24, plays a key role as the nodal agency for internal security, overseeing about one million CAPF personnel and supporting national security efforts through state police forces.

What are the Key Acts and Institutions Involved in India's Internal Security?

- ➤ **Legislative Framework:** Key acts include the **Code of Criminal Procedure Act(1973), Unlawful Activities (Prevention) Act (1967)**, **National Security Act (1980), Prevention of Money Laundering Act (PMLA) (2002)** and various other laws aimed at addressing security challenges.
- ➤ **Institutions and Agencies:**
  - ○ **Ministry of Home Affairs:** The central agency responsible for internal security, with a substantial budget and numerous departments.
  - ○ **National Investigation Agency (NIA):** Established under the **National Investigation Agency Act of 2008.** It is the primary federal agency for investigating terrorism and related crimes in India.
    - ● Handles cases involving terrorism with cross-state connections, illicit trafficking, and other severe offences.
    - ● The **National Investigation Agency (Amendment) Act 2019** expanded its jurisdiction to include human trafficking, counterfeit currency, prohibited arms, explosive substances, and cyber-terrorism.

Note:

○ **Intelligence Bureau:** It was established by the British in the 19th century, the **Director of Intelligence Bureau (DIB)** is typically the most senior police officer in the country and has direct access to the Minister of Home Affairs, the Prime Minister, and the National Security Advisor.

○ **Multi-Agency Centre (MAC):** It has been strengthened by the Ministry of Home Affairs (MHA) to operate 24x7 for collecting and sharing security-related information.

○ **National Intelligence Grid: NATGRID** is an IT platform created to aid security and law enforcement agencies in countering terrorism for national security.

● It links various databases such as railways, police, stolen vehicles, immigration, airlines, passports, vehicle ownership, driving licences, PAN data, and more to monitor terror activities and serve national security interests.

○ **Combating Financing of Terrorism(CFT) Cell:** The MHA's CFT Cell handles policy matters on combating financing of terrorism and fake Indian currency notes.

● States have raised Special Forces, Anti-Terrorism Squad (ATS) to deal with terrorism incidents, and also Central Armed Police Forces (CAPFs) & **National Security Guards (NSG)** have been stationed at various locations to assist the States.

Conclusion

To address internal security challenges effectively, India must adopt a unified National Security Doctrine, streamline its security institutions, and integrate advanced technologies. Strengthening regional stability and modernising law enforcement will ensure a comprehensive and adaptive response to emerging threats. Enhanced coordination and strategic planning are essential for a secure and resilient nation.

Rise in Militancy in Jammu

Why in News?

The **Jammu region of Jammu and Kashmir (J&K) has** witnessed a **notable increase in militant attacks** since mid-2021, culminating in recent incidents including the ambush on Army vehicles in Kathua district and targeted strikes in other areas.

➢ This **resurgence marks a shift from historical patterns,** raising alarms about security vulnerabilities and implications for regional stability.

What are the Reasons for Rise in Militancy in Jammu?

➢ **Strategic Shift:** The pursuance of **zero terror policy in Kashmir** have provided **militants to an opportunity to operate in Jammu.**

○ In 2020, perceived low militancy in Jammu led to troop movements to Ladakh (along **LAC** after the **Galwan Accident**), potentially prompting militants to relocate.

➢ **Strategic Importance of Jammu:** Jammu serves as a **crucial gateway to the rest of India**, making it an attractive target for militants aiming to disrupt normalcy and create fear.

➢ **Geostrategic Considerations:** The proximity to the Line of Control (LoC) provides militants **easier access from Pakistan-occupied Kashmir**, facilitating infiltration and logistics support.

○ Recent incidents indicate **a deliberate effort to establish footholds in hilly and forested terrains** across districts like Rajouri, Poonch, and Reasi.

➢ **Economic Disparities**: Lack of economic opportunity and development in remote and border areas of Jammu **create fertile ground for recruitment of local youths by militant groups.**

➢ **Political Alienation**: Perceived political alienation among certain communities, **exacerbated by historical grievances and administrative challenges**, can foster sympathy or support for militant ideologies.

➢ **Lack of Human Intelligence:** The locals who provided information decades ago are now in their 60s or 70s, and the **security forces have not nurtured relations** with younger generations, highlighting a **gap in human intelligence gathering.**

Note:

➢ **Terrorism:** Terrorism under the Unlawful Activities (Prevention) Amendment Act, 2012, involves **using violence or threats to create fear for political**, ideological, or extremist aims, impacting national or global security.

➢ **Militancy:** Militancy refers to a **readiness to use violence or combativeness**, encompassing various groups or individuals including armed religious factions, often used interchangeably with terrorism but **suggesting a potentially less extreme level of violent expression** compared to terrorism.

SHIFT IN TERROR

SOUTH OF PIR PANJAL*
TERROR INCIDENTS

2021	2
2022	10
2023	3

NORTH OF PIR PANJAL*
TERROR INCIDENTS

2021	129
2022	100
2023	7

CIVILIAN CASUALTIES

2021	1
2022	7
2023	7

CIVILIAN CASUALTIES

2021	36
2022	23
2023	1

(2023 data as of May 30)

NO. OF TERRORISTS
(■ Local Terrorists ■ Foreign Terrorists)

SOUTH OF PIR PANJAL

May 2022	83	78
May 2023	36	78

NORTH OF PIR PANJAL

May 2022	14	2
May 2023	13	2

*South of Pir Panjal: Poonch, Rajouri and Jammu districts in Jammu region ** North of Pir Panjal: Valley districts*

Note:

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What are Historical Reasons for Militancy in Jammu and Kashmir?

➤ **Eroding Credibility of Political Parties:** The credibility of political parties has been **undermined by ineffective administration**, corruption, and poor developmental outcomes.

➤ **Increasing Trust Deficit:** Incidents of **excessive force by security personnel** have deepened the mistrust among the population.

➤ **Support from Pakistan-Sponsored Terrorism:** Pakistan's Inter-Services Intelligence (ISI) provides **financial and ideological backing** to anti-India groups like Lashkar-e-Taiba (LeT) and Jaish-e-Mohammed (JeM).

➤ **Controversy over 1987 Election Rigging:** The Muslim United Front (MUF), a coalition of radical groups aiming **to implement Sharia law and resist central political interference, claimed election rigging** leading to increased insurgency.

➤ **Unemployment:** Elevated levels of unemployment and limited opportunities drive youth towards militancy.

➤ **Radicalisation:** Increasing **religious radicalization** and communal propaganda exacerbate instability.

➤ **Glorification of Gun Culture:** The glorification of militants who achieve instant fame, recognition, and respect, encourages a militant culture. Social media and mainstream media also contribute to this glorification.

What are the Challenges in Dealing with Rise in Militancy?

➤ **Geographical Terrain:** The 192-km international border (IB) in Jammu and the 740-km **Line of Control (LoC)** in Kashmir are potential infiltration points.
  ○ **Despite security measures, militants may have exploited tough terrains** and forested areas along these borders for infiltration. The recent attacks in Kathua suggest a **revival of old infiltration routes.**

➤ **Community Relations:** Building and maintaining trust between **security forces and local communities, essential for intelligence gathering**, remains a persistent challenge amid historical grievances and demographic diversity.
  ○ Though efforts are **underway to revive Village Defence Guards (VDGs)** to counter militant threats, these efforts are complicated by past allegations of crimes committed by VDG members.

➤ **Intelligence Gathering:** Gathering accurate and timely intelligence is difficult due to the **presence of local sympathisers** and the use of sophisticated communication technologies by militants.

  ○ The **challenge lies in facing high-tech, well-trained militants** who adeptly cover their tracks by using locals' phones and apps like Telegram to evade detection by police and security forces.

➤ **External Support:** Allegations of cross-border support from Pakistan, including **weapons supply via drones,** underscore the external dimensions influencing local militancy dynamics.

➤ **Communal Fault Lines:** Jammu's demographic diversity, with a mix of Hindu, Muslim, and other communities, has **historically been vulnerable to communal tensions** during periods of heightened violence.
  ○ Recent incidents, such as the **killings in Dangri village and targeted strikes on specific communities**, indicate a deliberate strategy to stoke communal fears and divisions.

Steps Taken by Government to Deal With Militancy in Jammu and Kashmir

Initiative	Objective
Revocation of Special Status	Removed special status and privileges of Jammu and Kashmir for closer integration with India.
Shimla Agreement (1972)	India-Pakistan committed to resolving differences peacefully.
Confidence-Building Measures	Efforts to improve relations like bus services and trade routes.
2015 Ufa Declaration	Resumption of dialogue between India and Pakistan.
PARVAAZ Scheme	Subsidy for air cargo transport of perishable goods from Jammu and Kashmir.
Himayat	Training and placement program for unemployed youth in Jammu and Kashmir.
Udaan	Industry initiative for **skill development and training of youth in Jammu and Kashmir.**
Nai Manzil	Program for school dropouts or Madrasa-educated youth for mainstream education and employment.
USTAAD Scheme	Upgrade skills and training of minority communities in traditional arts and crafts.
Panchayat-Level Youth Clubs	Engage youth in development and recreation to reduce militancy.

▪▪▪

Note:

Science & Technology

Discovery of Dark Oxygen

Why in News?

Recently, scientists reported an unknown process is producing **oxygen deep in the world's oceans**, where **photosynthesis** can't occur due to the lack of sunlight.

➢ This discovery is significant because oxygen supports marine life and suggests that there may be previously unknown ecosystems.

What is Dark Oxygen?

➢ **About:**
- ❍ Scientists observed an **unexpected increase in oxygen concentration** in some areas of the abyssal **zone** (where sunlight is extremely low and insufficient for photosynthesis).
- ❍ Researchers noted that this finding represents a **new source of oxygen** where photosynthesis does not occur, and **termed it as 'dark oxygen'**.

➢ **Possible Cause of Generation of Dark Oxygen:**
- ❍ Typically oxygen is provided by the '**Great Conveyor Belt**', a global circulation system which should decrease without local production, as small animals consume it.
- ❍ **One hypothesis** for oxygen production is that **polymetallic nodules** are transporting electric charges that **split water molecules, releasing oxygen.**
  - Polymetallic nodules are lumps of iron, manganese hydroxides, and rock found on the ocean floor.
  - However, **the exact energy source for the nodules' ability to produce oxygen remains unclear**.

➢ **Place of Study:**
- ❍ The study was conducted in the **Clarion-Clipperton Zone Region off Mexico's west coast.**
  - The Zone is noted for having the highest concentration of **polymetallic nodules** in the world.

What is Deep-Sea Mining?

➢ **About:**
- ❍ **Deep-sea mining** involves extracting mineral deposits and metals from the ocean floor. There are three main types of Deep-sea mining.
  - Removing polymetallic nodules rich in deposits from the seabed.
  - Mining massive deposits of seafloor sulfides.
  - Extracting cobalt crusts from rock formations.
- ❍ These nodules, deposits, and crusts contain valuable materials like **nickel, rare earth elements, and cobalt**, which are essential for batteries, renewable energy technologies, and everyday devices such as cell phones and computers.
- ❍ The **deep-sea mining** is anticipated to become a major marine resource extraction activity in the coming decades due to availability of polymetallic nodules.

➢ **Environmental Concerns:**
- ❍ The discovery of '**dark oxygen**' raises concerns about **potential damage to ecosystems** that rely on this oxygen source. Experts worry that deep-sea mining (that removes polymetallic nodules) could be harmful to these marine environments.
- ❍ In November 2023, a study indicated that **deep-sea mining could harm deep-sea jellyfish** (by creating **mud plumes in ocean water which interfere with the nutrient** and reproductive cycle of marine species).
- ❍ Limited scientific knowledge of **abyssal zone ecosystems** compared to those aboveground, may complicate efforts to gauge the potential impact of deep-sea mining on these ecosystems and their role in global climate processes.
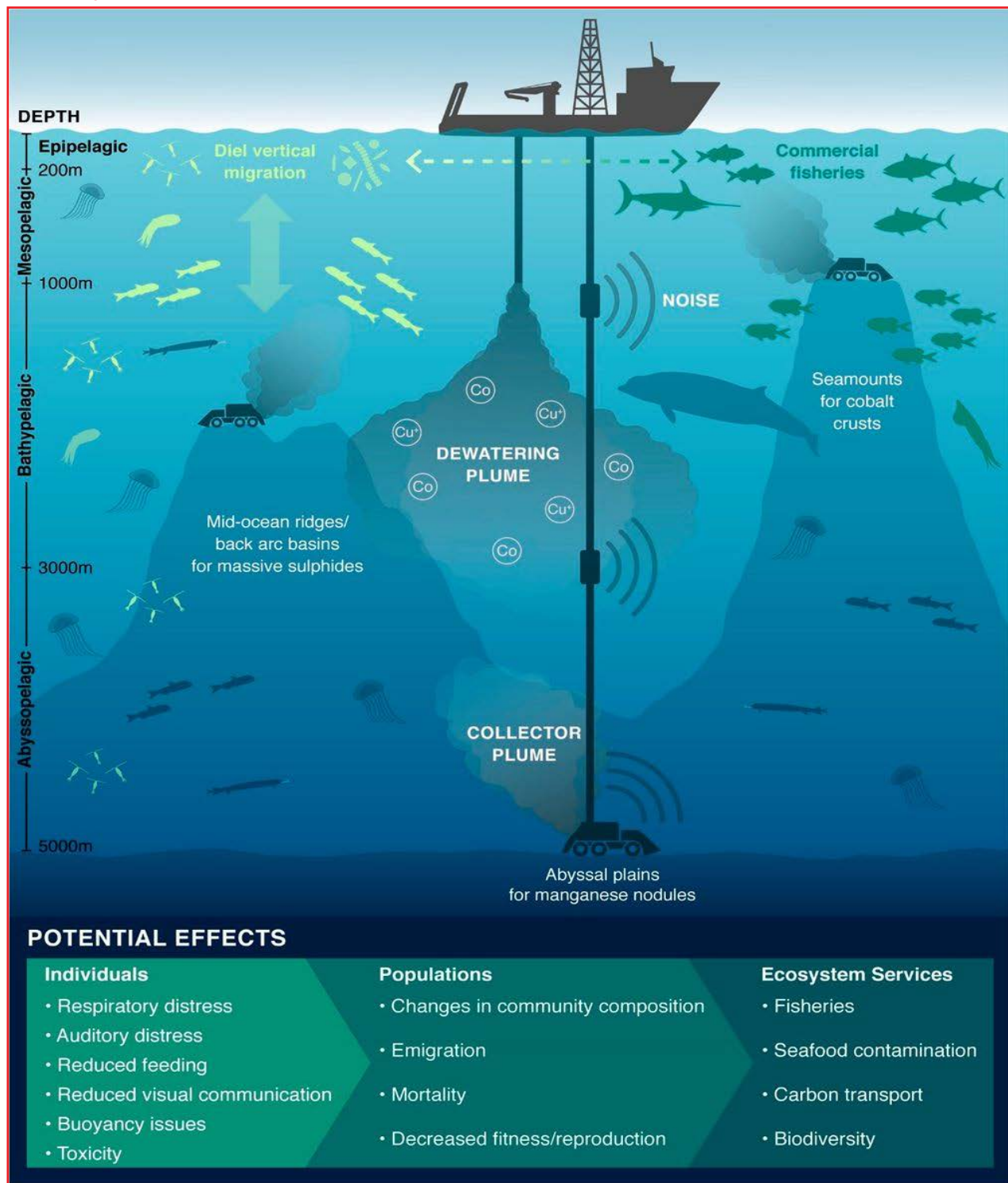
➢ **Indian Context:**
- ❍ India intends to apply for licenses to explore **deep-sea minerals** in the **Pacific Ocean.**
  - Also, **India was the first country to receive the status of a 'Pioneer Investor' in 1987** and was given an area of about 1.5 lakh sq. km in the **Central Indian Ocean Basin (CIOB) for nodule exploration.**

- India's exclusive rights to explore polymetallic nodules from seabed in the **Central Indian Ocean Basin** was extended in 2017 for five years.
- India in 2024, applied for Rights to Explore the Indian Ocean Seabed beyond its jurisdiction, including **Cobalt-Rich Afanasy Nikitin Seamount** **(AN Seamount)**
  - India's Ministry of Earth Sciences is developing a submersible vehicle (**Samudrayaan Misssion**) as part of its '**Deep Ocean Mission**' to search for and mine similar resources in the **Indian Ocean**.

DEPTH

Epipelagic
200m
Mesopelagic
1000m
Bathypelagic
3000m
Abyssopelagic
5000m

Diel vertical migration

Commercial fisheries

NOISE

Seamounts for cobalt crusts

(Co) (Cu⁺) (Cu⁺) (Co)

DEWATERING PLUME

(Co) (Co)

(Cu⁺)

Mid-ocean ridges/ back arc basins for massive sulphides

COLLECTOR PLUME

Abyssal plains for manganese nodules

POTENTIAL EFFECTS

Individuals	Populations	Ecosystem Services
• Respiratory distress	• Changes in community composition	• Fisheries
• Auditory distress	• Emigration	• Seafood contamination
• Reduced feeding		
• Reduced visual communication	• Mortality	• Carbon transport
• Buoyancy issues	• Decreased fitness/reproduction	• Biodiversity
• Toxicity		

Note:

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IndiaAI Mission

Why in News?

The Indian government's commitment to advancing artificial intelligence (AI) technology is evident with its new budgetary allocation for the IndiaAI Mission.

➢ The Ministry of Electronics and Information Technology has been allocated Rs 551.75 crore in the Union Budget 2024-25 to enhance AI infrastructure, including the procurement of high-performance Graphic Processing Units (GPUs).

➢ This move aims to support domestic AI development and reduce reliance on expensive foreign hardware.

What is the IndiaAI Mission?

➢ **Objective**: The mission aims to establish a robust AI computing infrastructure in India to support the development and testing of AI systems.

  ○ The Mission aims to enhance data quality, and develop indigenous AI technologies. It focuses on attracting top talent, fostering industry collaboration, supporting impactful AI startups, and promoting ethical AI practices.

➢ **Financial Support:** The Union Cabinet approved the Rs 10,372 crore IndiaAI Mission in March to establish a computing capacity of over 10,000 GPUs and develop foundational models with a capacity of more than 100 billion parameters trained on datasets covering major Indian languages for priority sectors like healthcare, agriculture, and governance.

➢ **Current Focus**: Initial efforts will involve procuring 300 to 500 GPUs to kickstart the project.

➢ **Importance of GPU Procurement:** GPUs are critical for training and building large-scale AI models, essential for advanced AI applications.

  ○ Data centre GPUs are crucial for parallel operations, AI, media analytics, and 3D rendering solutions, making them essential for advanced use cases like machine learning, modelling, and cloud gaming.

  ○ The procurement will provide Indian startups with essential computing power, addressing a gap in the current market.

➢ **Key Components of the IndiaAI Mission:**

  ○ **IndiaAI Compute Capacity**: Creation of a high-end AI computing ecosystem with over 10,000 Graphics Processing Units (GPUs) to support AI startups and research, along with an AI marketplace for resources.

  ○ **IndiaAI Innovation Centre:** Development of indigenous Large Multimodal Models (LMMs) and foundational models for various sectors. Close to Rs 2,000 crore has been earmarked for this centre

  ○ **IndiaAI Datasets Platform:** A unified platform to provide seamless access to quality non-personal datasets for startups and researchers.

  ○ **IndiaAI Application Development Initiative:** Promotion of AI applications targeting problem statements from various governmental sectors, aiming for large-scale socio-economic transformation.

  ○ **IndiaAI FutureSkills:** Expansion of AI education through undergraduate, master's, and Ph.D. programs, as well as establishing Data and AI Labs in smaller cities.

  ○ **IndiaAI Startup Financing:** Provision of streamlined funding access for deep-tech AI startups to support innovative projects.

    ● The Cabinet has approved government financing for deep tech startups at different growth stages, with approximately Rs 2,000 crore allocated for this purpose.

  ○ **Safe & Trusted AI:** Development of guidelines and frameworks to ensure responsible AI practices, including indigenous tools for project assessment.

What are the Key Highlights of India's Artificial Intelligence Market?

➢ **Key Trends:**

  ○ **Adoption Across Sectors:** AI adoption is growing in India across different sectors due to initiatives like the National AI Strategy and the National AI Portal launched by the Government of India.

    ● Sectors like healthcare, finance, retail, manufacturing, and agriculture are rapidly integrating AI technologies.

Note:

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- ○ **Focus on Data Analytics:** Clive Humby's assertion that **"data is the new oil"** underscores the growing importance **of AI-driven data analytics.**
    - Companies are leveraging AI-driven analytics to gain valuable insights, improve operations, and foster innovation, supported by initiatives like the **AI for All program** launched by **National Association of Software and Service Companies (NASSCOM).**
- ○ **Government Initiatives:** Initiatives like **Digital India, Make in India**, and **Smart Cities Mission**, **GI Cloud (MeghRaj)** and **Global INDIAai Summit** hosted by India are driving AI adoption across sectors.
- ○ **Research and Development:** Indian research institutions and academic organizations, such as IITs, ISI, and IISc, are actively involved in AI research and development, contributing to the global knowledge base.

- ➢ **Clusters:** AI clusters are emerging in Indian cities due to factors such as supportive policies, research institutions, and increasing demand for AI technologies. **Major cities include Bengaluru, Hyderabad, Mumbai, Chennai, Pune, and the National Capital Region (NCR).**
    - ○ Bengaluru is known as the **"Silicon Valley of India"** with a thriving ecosystem of multinationals, startups, and academic institutions. It has over 2,000 active **startups** and annual IT exports exceeding USD 50 billion. The city also has a strong presence in **AI research, filing over 400 patents annually.**

- ➢ **Opportunities to Invest in India's AI Market:**
    - ○ Using the **Internet of Things (IoT)** and AI-powered **precision farming and crop monitoring** can boost productivity.
    - ○ AI-driven **fraud detection, risk assessment,** and customer service automation are in demand and can collaborate with Indian banks to deploy AI solutions.
    - ○ AI offers opportunities for **predictive diagnostics, personalized treatment,** and drug discovery.
    - ○ AI technologies like recommendation engines and chatbots are reshaping the retail sector.

What are the Challenges Anticipated for IndiaAI Mission?

- ➢ **Limited GPU Capacity and Infrastructure:** The mission's objective to build a high-end AI compute capacity of 10,000 GPUs is ambitious. Yet, there are concerns about the **timely procurement and deployment** of these GPUs to meet the growing demand for AI applications.
    - ○ **High costs of GPUs,** like Nvidia's A100 chip costing up to USD 10,000, pose a barrier for smaller businesses.
    - ○ Availability of GPUs is a bottleneck, and accelerating the acquisition and integration of this hardware is crucial for advancing AI capabilities.
- ➢ **Data Access and Quality:** Training AI models on diverse datasets, particularly for Indic languages, is crucial. However, the current datasets are inadequate for developing effective indigenous AI models.
- ➢ **Limited AI Expertise and High Costs:** There is a shortage of skilled AI professionals in India. Efforts are being made to address this but bridging this gap remains a challenge.
- ➢ **High Implementation Costs**: The cost of deploying AI solutions, particularly in sectors like manufacturing, can be prohibitively high.
    - ○ This includes capital investments for infrastructure and integration, which may hinder widespread adoption.
- ➢ **Infrastructure Deficiencies:** Effective AI deployment requires advanced **cloud computing infrastructure.** While efforts like **AIRAWAT** represent progress, India still **lacks comprehensive AI and cloud computing facilities** necessary for scaling AI applications.
- ➢ **Ethical and Integrity Concerns:** As AI algorithms increasingly influence **decision-making,** ensuring ethical use and **avoiding biases in AI models are critical.**
    - ○ The potential for skewed results due to tampered datasets or flawed training data poses significant risks.
    - ○ Handling **sensitive and personal data introduces risks** related to **data security and privacy.**

Note:

➢ **Geopolitical and Regulatory Issues:** Geopolitical tensions and export control regulations can restrict access to essential AI technologies and components, impacting India's ability to develop and deploy AI solutions effectively.

➢ **Environmental Concerns:** AI queries, especially to **OpenAI's ChatGPT,** use significantly **more energy than regular Google searches**. Image-based AI searches **consume even more energy.** AI models process and sift through a larger amount of data than simple searches, requiring more electrical signals for processing, storing, and retrieving data.

○ The increased data processing generates more heat, leading to the **need for powerful air-conditioning and cooling systems in data centers.**

○ AI tools are expected to significantly increase global energy consumption. Currently, data centres account for 1% to 1.3% of global electricity demand, projected to rise to 1.5% to 3% by 2026, according to the **International Energy Agency (IEA).**

○ Experts view that **India will soon face the significant environmental toll of AI and data centres**. The increased demand for water resources for cooling data centres adds to the environmental concerns.

Material for Energy Harvesting and Power Generation

Why in News?

Recently, scientists have come up with a recent study that **explores the electronic mechanisms governing chemical bonding in a new class of materials called incipient metals**, with a focus on Metavalent Bonding (MVB) within a single 2D layer of Group IV chalcogenides.

What are the Key Highlights of the Study?

➢ **About:**

○ The study was conducted at Theoretical Sciences Unit at Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR).

➢ **Findings:**

○ The study discovered that group IV chalcogenide materials can transition from **amorphous to crystalline forms** in less than 100 nanoseconds when heated or cooled.

➢ **Significance:**

○ The **new material** can have applications in various fields like efficient **energy harvesting, and power generation.**

○ Also, the research connects with the emerging field of **quantum materials** which will help in **India's national mission on quantum technology.**

➢ **Related Terms:**

○ Incipient Metals:

● They exhibit electrical conductivity similar to metals, with **high thermoelectric efficiency** characteristic of **semiconductors**, and unusually **low thermal conductivity**, creating a triad of properties that cannot be explained by traditional chemical bonding concepts.

○ Chalcogenides:

● **Chalcogenides** are compounds containing at least one chalcogen elemental ion (such as **Sulphur, Selenium, and Tellurium**) and at least one metallic element.

■ Group IV chalcogenides possess intriguing properties making them suitable for technological applications.

● Chalcogenides are important in energy harvesting and power generation due to their **high electrical conductivity and effective thermal-to-electrical energy conversion.**

● Chalcogenides are **already used in computer flash memories**, leveraging their ability to change optical properties during transitions between crystalline and amorphous states.

○ Metavalent Bonding:

● The bonding, **which defies the classical octet rule** (the tendency of atoms to prefer to have eight electrons in the valence shell) in chemistry, has properties of both the bonding present in metals and those found in glasses.

Note:

NATIONAL QUANTUM MISSION

Aims to put India among the top six leading nations involved in the R&D in quantum technologies

▮ *Presently, R&D works in quantum technologies are underway in the US, Canada, France, Finland, China and Austria* ▮

- **Duration:** 2023-24 to 2030-31
- **Nodal Ministry:** Ministry of Science & Technology
- **Highlights of the Mission:**
  - Four Thematic Hubs (T-Hubs) in different domains across the country
  - Wide-scale applications ranging from healthcare and diagnostics, defence, energy and data security

- Strengthening of indigenously building quantum -based computer
- Help develop magnetometers with high sensitivity in atomic systems and atomic clocks
- Support design and synthesis of quantum materials

A huge boost to National priorities like digital India, Make in India, Skill India, Stand-up India, Start-up India, Self-reliant India and SDGs

Quantum Technology

▮ *Works by using the principles of quantum mechanics (the physics of sub-atomic particles), including quantum entanglement and quantum superposition* ▮

Quantum Superposition

▮ The ability of a quantum system to be in multiple states simultaneously

▮ While digital computers store data as bits (the ones and zeros of binary), quantum computers use qubits that exist as one, zero or both at the same time

▮ This superposition state creates a practically infinite range of possibilities, allowing for fast simultaneous and parallel calculations

Quantum Entanglement

▮ It means the two members of a pair (Qubits) exist in a single quantum state

▮ If you change the properties of one of them, the other changes instantly

▮ This can be used to create a secure encryption key in quantum cryptography

▮ If an eavesdropper tries to intercept the transmission, the entangled state of the particles will be disturbed, making the attempt detectable

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QUANTUM TECHNOLOGY

- Quantum Key Distribution
- Quantum Networks
- Quantum Simulators
- Post-Quantum Cryptography
- Quantum Sensors Particle Generators Atomic Clocks
- Quantum Cloud Computing
- Quantum Memories Quantum Repeaters Quantum Chips
- Quantum Software
- Quantum Computing Quantum Annealers
- Quantum Materials

Smaller Black Hole in OJ 287 Galaxy

Why in News?

Recently, a study carried out by a group of 32 scientists from 10 countries including India has confirmed the presence of a **smaller black hole orbiting a larger black hole** in the **Galaxy OJ 287**. This discovery was made using NASA's TESS satellite.

➢ It marked the **first direct observation of an orbiting black hole pair,** supporting previous theories proposed by astronomers.

Note:

BLACK HOLES

ABOUT

- A place in space with extremely high gravity pull; even light can't escape (hence, invisible)
- The strong gravity is due to matter being squeezed into a tiny space

The term 'black hole' was coined in the mid-1960s by American physicist John Archibald Wheeler

DETECTION

- By seeing how stars very close to black holes act differently than other stars
- In April 2019, scientists at the Event Horizon Telescope Project released the first-ever image of a Black Hole (shadow, more precisely)

Albert Einstein and Black Hole

- First predicted their existences in Theory of General Relativity
- It showed that when a massive star dies, it leaves behind a small, dense remnant core

India's first dedicated satellite, AstroSat observed for the very first-time rapid variability of high energy X-ray emission from a black hole system
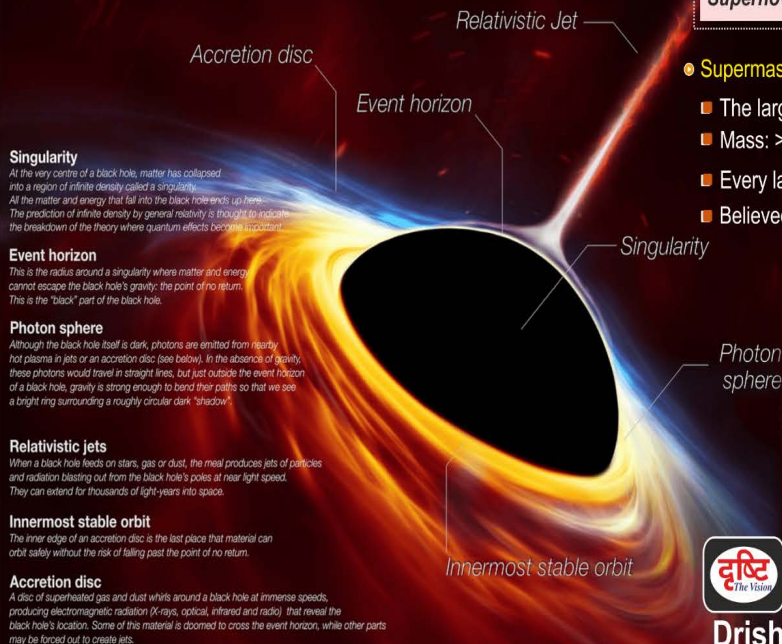
TYPES

- Miniature (Hypothetical):
  - The smallest; size of just 1 atom
  - Mass: varies from 1/100th of a milligram to the mass of a large mountain
  - Believed to be formed when universe began
- Stellar:
  - Mass: 20x the mass of sun
  - Believed to be formed due to Supernovae explosion

Supernova is an exploding star that has reached the end of its life

- Supermassive
  - The largest
  - Mass: >1 million suns together
  - Every large galaxy has a supermassive black hole at its centre
  - Believed to be made at the same time as their home galaxy

Sagittarius A is the supermassive black hole at the centre of Milky Way (mass: ~about 4 mn suns)
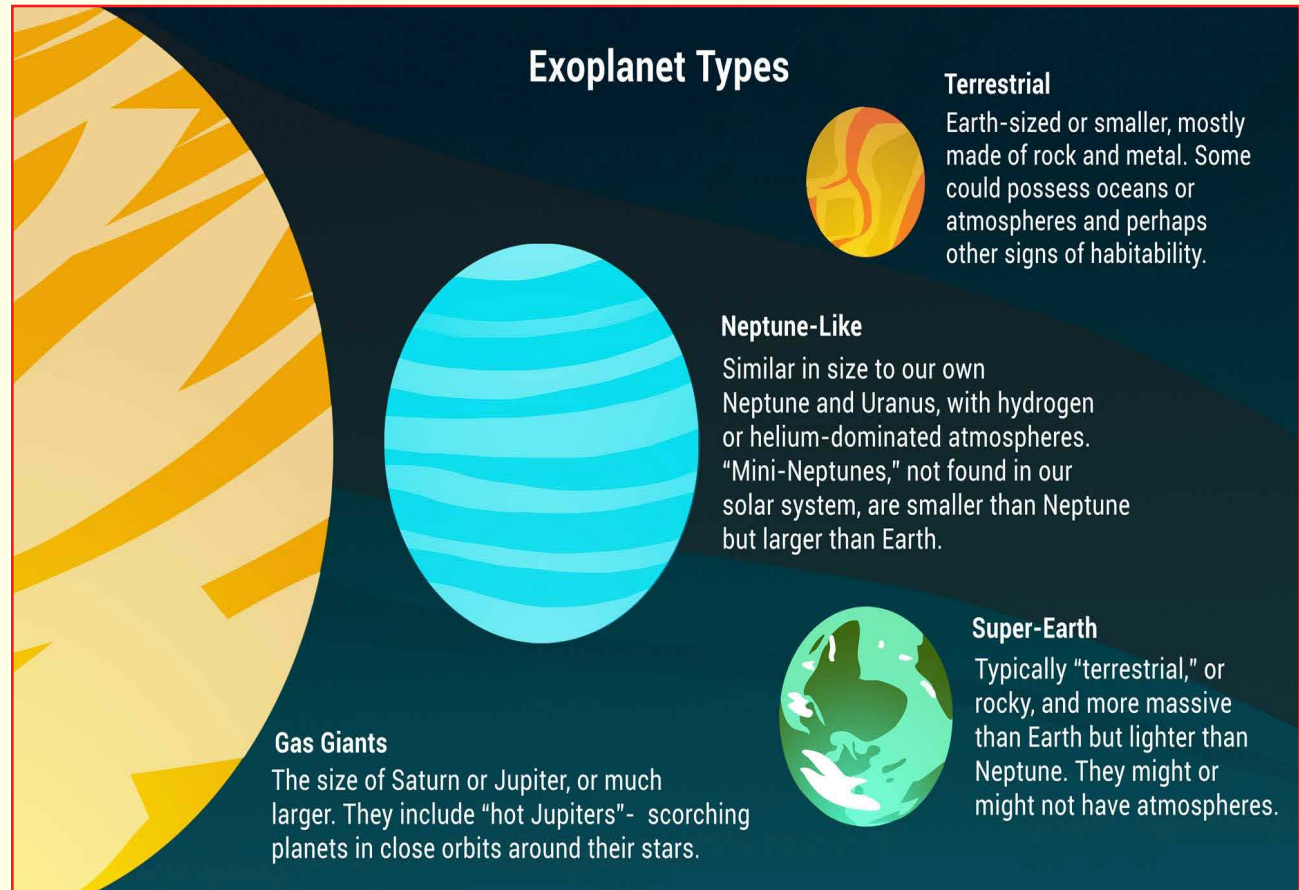
The Sun will never turn into a black hole as it is not big enough to make a black hole

Diagram labels

Relativistic Jet

Accretion disc

Event horizon

Singularity
At the very centre of a black hole, matter has collapsed into a region of infinite density called a singularity. All the matter and energy that fall into the black hole ends up here. The prediction of infinite density by general relativity is thought to indicate the breakdown of the theory where quantum effects become important.

Event horizon
This is the radius around a singularity where matter and energy cannot escape the black hole's gravity: the point of no return. This is the "black" part of the black hole.

Photon sphere
Although the black hole itself is dark, photons are emitted from nearby hot plasma in jets or an accretion disc (see below). In the absence of gravity, these photons would travel in straight lines, but just outside the event horizon of a black hole, gravity is strong enough to bend their paths so that we see a bright ring surrounding a roughly circular dark "shadow".

Relativistic jets
When a black hole feeds on stars, gas or dust, the meal produces jets of particles and radiation blasting out from the black hole's poles at near light speed. They can extend for thousands of light-years into space.

Innermost stable orbit
The inner edge of an accretion disc is the last place that material can orbit safely without the risk of falling past the point of no return.

Accretion disc
A disc of superheated gas and dust whirls around a black hole at immense speeds, producing electromagnetic radiation (X-rays, optical, infrared and radio) that reveal the black hole's location. Some of this material is doomed to cross the event horizon, while other parts may be forced out to create jets.

Singularity

Photon sphere

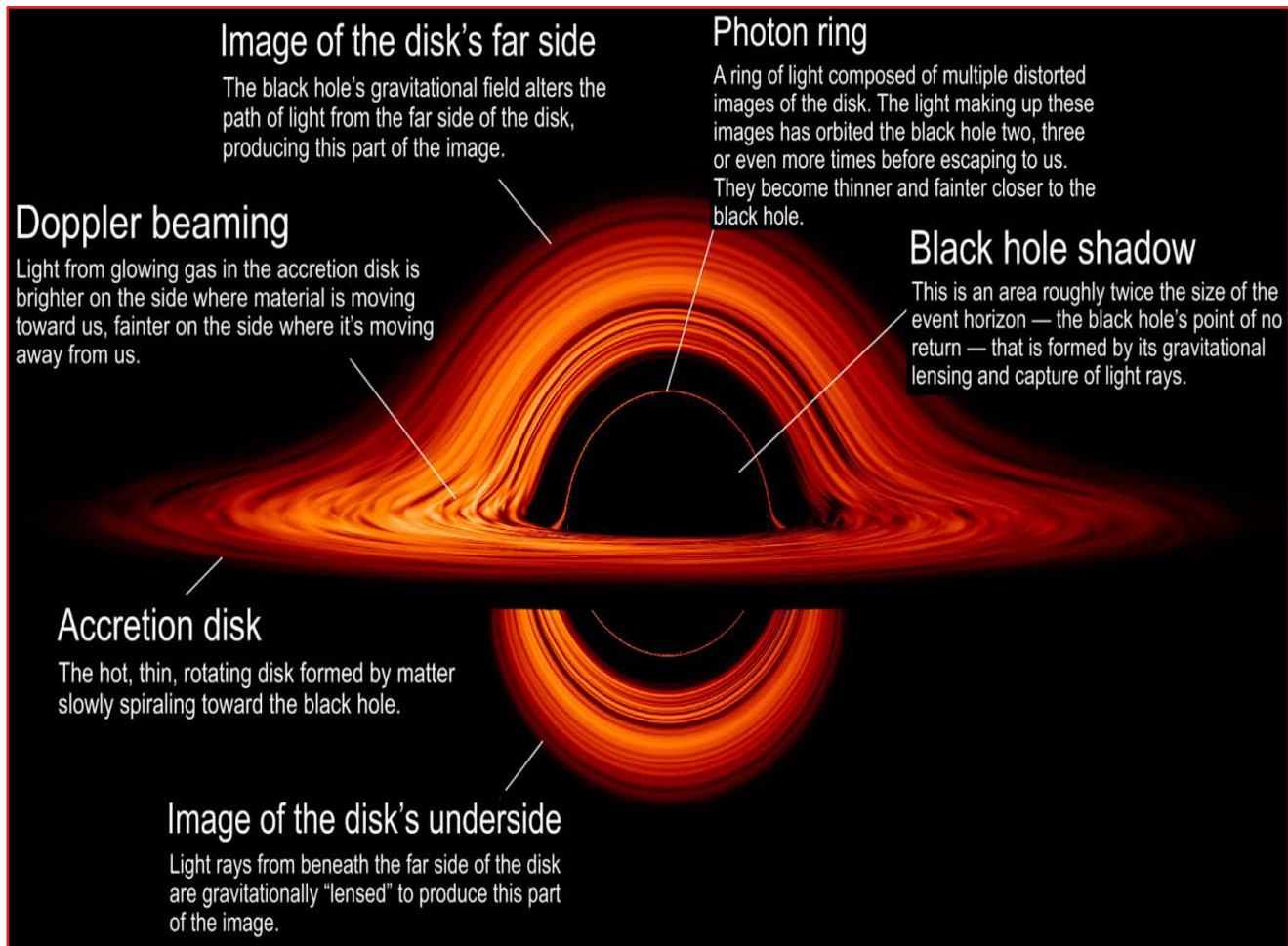**Innermost stable orbit**

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Note:

Note:

➢ NASA's **Transiting Exoplanet Survey Satellite (TESS)**, launched in April 2018, discovers exoplanets by monitoring the brightness of over 200,000 stars to detect periodic dips caused by planetary transits.

➢ **Black holes** are highly dense objects with such **strong gravity that they prevent light from escaping,** making them challenging to detect.

  ○ They form when a **massive star collapses at the end of its life,** resulting in a dense entity that significantly warps the surrounding space-time.

➢ **Exoplanets** are planets that orbit other **stars and are beyond our solar system.**

Exoplanet Types

Terrestrial
Earth-sized or smaller, mostly made of rock and metal. Some could possess oceans or atmospheres and perhaps other signs of habitability.

Neptune-Like
Similar in size to our own Neptune and Uranus, with hydrogen or helium-dominated atmospheres. "Mini-Neptunes," not found in our solar system, are smaller than Neptune but larger than Earth.

Super-Earth
Typically "terrestrial," or rocky, and more massive than Earth but lighter than Neptune. They might or might not have atmospheres.

Gas Giants
The size of Saturn or Jupiter, or much larger. They include "hot Jupiters"- scorching planets in close orbits around their stars.

What are the Implications of these Findings?

➢ **Black Hole Growth and Mergers:** This discovery suggests that **black holes grow by accreting mass and merging,** which is crucial for understanding supermassive black hole evolution.

➢ **Accretion Disks and Jet Formation:** The interaction of the smaller black hole with the larger one's accretion disk provides insights into jet formation, key to understanding **active galactic nuclei (AGN)** and galaxy evolution.

➢ **Gravitational Waves and Cosmic Events:** The emission of **nano-Hertz gravitational waves** offers new **opportunities to study cosmic events** and black hole pair dynamics, aiding in **understanding black hole merger rates and galaxy evolution.**

➢ **Insights into Dark Matter and Energy:** Studying black hole behaviour may provide indirect **insights into dark matter** and **dark energy.**

Note:

Image of the disk's far side
The black hole's gravitational field alters the path of light from the far side of the disk, producing this part of the image.

Photon ring
A ring of light composed of multiple distorted images of the disk. The light making up these images has orbited the black hole two, three or even more times before escaping to us. They become thinner and fainter closer to the black hole.

Doppler beaming
Light from glowing gas in the accretion disk is brighter on the side where material is moving toward us, fainter on the side where it's moving away from us.

Black hole shadow
This is an area roughly twice the size of the event horizon — the black hole's point of no return — that is formed by its gravitational lensing and capture of light rays.

Accretion disk
The hot, thin, rotating disk formed by matter slowly spiraling toward the black hole.

Image of the disk's underside
Light rays from beneath the far side of the disk are gravitationally "lensed" to produce this part of the image.

Read More: Exoplanet, Black Hole Gaia BH3

Thirty Meter Telescope (TMT)

Why in News?

Recently, Indian researchers at the Indian Institute of Astrophysics (IIA) in Bengaluru have developed a **new online tool to create a comprehensive star catalogue** for the **Adaptive Optics System (AOS)** of the upcoming **Thirty Meter Telescope (TMT).**

What are the Key Features of Thirty Meter Telescope (TMT)?

➢ **About:**
  ○ It is an **ambitious international project** coming up at Mauna Kea in Hawaii, involving **India, the US, Canada, China,** and **Japan** that aims to **advance the understanding of the universe significantly.**
    ● **India is a key partner in the TMT project**, with India TMT Center at IIA leading the national collaboration.
  ○ The **TMT is a next-generation astronomical observatory** designed to provide **unprecedented resolution and sensitivity** with its massive 30-meter primary mirror, advanced adaptive optics system, and state-of-the-art instruments.
  ○ The **TMT,** the **Giant Magellan Telescope,** and the **European Southern Observatory's Extremely Large Telescope** represent the **future of ground-based astronomy.**

Note:

➢ **Primary Goals:**

  ❍ **Study the early universe** and the formation and evolution of the first galaxies and stars after the Big Bang.

  ❍ **Investigate the formation, structure, and evolution** of galaxies across cosmic time.

  ❍ **Study the relationship** between supermassive black holes and their host galaxies.

  ❍ **Investigate the formation of stars** and planetary systems.

  ❍ **Characterise exoplanets** and study their atmospheres.

➢ **Adaptive Optics System (AOS) and New Online Tool:**

  ❍ The TMT's AOS, known as the Narrow Field Infrared Adaptive Optics System (NFIRAOS), **uses deformable mirrors and laser guide stars (LGS) to correct atmospheric turbulence**, enhancing image resolution.

  ❍ This facility will **project up to nine lasers into the sky to create artificial guide stars.** However, **atmospheric turbulence affects** these laser beams, so measuring atmospheric tip-tilt is uncertain.

    ● To correct these effects, the AO system **requires feedback from three real stars**, known as **Natural Guide Stars (NGS).**

  ❍ **Researchers have developed an automated code** that can be **used as an online tool** to create a catalogue of Near Infrared (NIR) stars.

    ● The **automated code can compute the expected near-infrared magnitudes of stellar sources** identified in various optical sky surveys using their optical magnitudes.

Other Major Telescopes
➢ **PRATUSH Telescope**
➢ **James Webb Telescope**
➢ **Square Kilometre Array Observatory (SKAO)**
➢ **Kodaikanal Solar Observatory**
➢ **Euclid Mission for Dark Matter and Dark Energy**
➢ **Tokyo Atacama Observatory**
➢ **3-D Map of the Universe**

Other Similar Projects India is Part of
➢ **CERN (European Council for Nuclear Research):** Project of the "God particle"
❍ **CMS:** CMS is one of the experiments that discovered the Higgs Boson, or 'God particle'
❍ **ALICE:** ALICE created conditions that existed at the time of big bang
➢ **International Facility for Antiproton and Ion Research (FAIR):** Studying the building blocks of matter and the evolution of the Universe.
❍ NUSTAR (Nuclear Structure, Astrophysics and Reactions)
❍ CBM (Compressed Baryonic Matter)
❍ PANDA (Antiproton Annihilation at Darmstadt)

Caves on the Moon

Why in News?

Recently, scientists have confirmed the existence of a **cave on the moon,** located near the site where the **Apollo 11 mission** landed 55 years ago.

Note:

➢ This discovery has significant implications for **future lunar exploration** and the establishment of a **sustainable human presence** on the moon.

What are the Key Findings Related to the Moon?

➢ **Key Findings:**
  ❍ An Italian-led team of researchers found evidence of a cave located in the **Sea of Tranquility,** just 400 kilometres from the **Apollo 11** landing site.
    ● The pit, like more than 200 others discovered on the lunar surface, was created by the **collapse of a lava tube**.
  ❍ Analysis of **radar** measurements by **NASA's Lunar Reconnaissance Orbiter** revealed that the cave is at least **40 meters wide and tens of meters long,** and likely even larger.

➢ **Significance/Implications:**
  ❍ **Potential Shelter for Future Astronauts**: Lunar caves offer natural protection against cosmic rays, solar radiation, and micrometeorites, reducing the need for constructing habitats from scratch.
  ❍ **Understanding Lunar Geology and Volcanic Activity:** The rocks and materials inside these caves, which have remained largely unaltered by the surface conditions over the eons.
    ● It can help scientists better understand the evolution of the moon, particularly its volcanic activity
  ❍ **Potential Water and Fuel Sources:** Permanently shadowed craters near the lunar south pole likely contain frozen water, a crucial resource for drinking and rocket fuel.
  ❍ **Advancing Lunar Exploration:** Discovering lunar caves is a major step in understanding the moon's geology and resources, aiding future mission planning and the sustainability of human presence on the moon.

Moon Exploration
➢ In **1959,** the <u>Soviet Union's Luna</u> **1** and 2 were the first robotic missions to visit the Moon.
➢ The **USA** sent 3 classes of robotic missions to the Moon between **1961** and **1968** before the **Apollo 11** mission.
➢ From 1969 to 1972, 12 American astronauts walked on the Moon's surface.
➢ In the 1990s, the USA resumed lunar exploration with robotic missions like Clementine and Lunar Prospector.
➢ In 2009, the USA launched the <u>Lunar Reconnaissance Orbiter (LRO)</u> and the <u>Lunar Crater Observation and Sensing Satellite (LCROSS)</u> for lunar missions.
➢ In 2011, NASA began the <u>ARTEMIS mission</u> for lunar exploration.
➢ The **Gravity Recovery and Interior Laboratory (GRAIL)** spacecraft studied the Moon's gravity in 2012.
➢ **China** landed two rovers on the Moon's surface, including the first-ever landing on the far side of the Moon in **2019**.

India's (ISRO) Moon Mission
➢ <u>Chandrayaan 1</u>**:** The Chandrayaan project started in 2007 through a collaboration between ISRO and Russia's ROSCOSMOS. The mission was initially postponed to 2016 due to delays in developing the lander by Russia.
❍ **Findings:** The **confirmed presence of lunar water**, evidence of lunar caves, and past tectonic activity on the lunar surface.
➢ <u>Chandrayaan-2</u> is India's second moon mission, consisting of an **Orbiter**, **Lander (Vikram**), and **Rover (Pragyan)**. The Rover Pragyan is housed inside the Vikram lander.
➢ <u>Chandrayaan-3</u>: Through this India made history by becoming the **first country** to land near the **lunar south pole** and ISRO became the **fourth** space agency to successfully land on the Moon, following **Roscosmos, NASA,** and the **CNSA.**

Note:

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CHANDRAYAAN 3

India's 3rd lunar mission; a successful attempt at achieving a soft landing on lunar south

BRIEF HISTORY

Lunar Mission	Aim	Launch Vehicle	Success
Chandrayaan 1 (2008)	Create a 3D atlas of moon & Mineralogical mapping	PSLV – C11	Detection of water and hydroxyl on lunar surface
Chandrayaan 2 (2019)	Exploring lunar south pole	GSLV MkIII-M1	Lander and rover crashed but orbiter successfully collected data

COMPONENTS

- Lander - **Vikram;** Rover - **Pragyan** (same as Chandrayaan 2)
  - ▸ Both designed to last for 14 days; not supposed to come back to the earth
- Spectro-polarimetry of Habitable Planet Earth **(SHAPE)**
  - ▸ An experimental payload in propulsion module
  - ▸ Study spectro-polarimetric signatures of Earth (near-infrared wavelength range)

ASPECTS TO STUDY

- Lunar quakes
- Thermal properties of lunar surface
- Changes in plasma near the surface
- Accurately measuring distance b/w Earth and the moon

MISSION LIFE

- 1 lunar day (~14 Earth days)

LAUNCH VEHICLE

- LVM3 - M4

India became the 1st country to successfully land on Lunar south pole and 4th to achieve soft-landing on Lunar surface (after US, Russia and China)

Why Chandrayaan 3 Succeeded?

- **A "failure-based design"**, unlike the "success-based design" of Chandrayaan-2
  - ▸ Even if all the sensors failed and engines stopped, **Vikram was sure to make the landing**
  - ▸ Provision of **multiple attempts** for landing if attempt 1 failed
- Developed accordingly to **rule out the scenario of crash landing**
  - ▸ Expanded landing area for more flexibility to land safely
  - ▸ Equipped with more fuel to enable longer-distance travel

Importance of Lunar South Pole

- Vastly different, more **challenging terrain** compared to lunar equatorial region
- Potential repositories of valuable **information about early Solar System**
- Impact **future deep space exploration** significantly
- **Water may be concentrated** in the moon's southern hemisphere

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Note:

Last Universal Common Ancestor (LUCA)

Why in News?

Recently, in a new study, scientists have said the **last universal common ancestor (LUCA)** could have **formed just 300 million years** after the earth formed.

What are the Recent Key Highlights of the Research?

➢ **About:**

  ❍ Researchers believe all three branches of life namely **bacteria**, **archaea,** and **eukarya** originated from a single cell, called the last universal common ancestor (LUCA).

  ❍ LUCA had a **small genome with about 2.5 million bases** and 2,600 proteins, sufficient for survival in its unique environment.

  ❍ LUCA's metabolites might have created a secondary ecosystem for other microbes to emerge, and it possibly had **immunity** genes to fight off viruses.

  ❍ Though there is no **fossil evidence** to support the existence of LUCA, modern genomes share so many features that provide some insights.

  ❍ However, the **theory of the molecular clock** allowed scientists to **reconstruct the 'tree of life'.**

    ● As per **theory**, the rate at which **mutations are added or removed** from a population's genome is proportional to the **rate of acquiring new mutations,** which is constant.

      ■ The mutation rate varies between species.

    ● Based on the findings, researchers created a method to estimate the time between evolutionary events by using known mutation rates and linking genomes to specific events like the evolution of the first mammal or the age of fossils as benchmarks.

  ❍ Based on the earlier **findings of fossils in the Pilbara Craton in Australia,** the earliest life forms were believed to be **date back to 3.4 billion years ago.**

➢ **Significance of Findings:**

  ❍ Overall, these findings are **crucial for understanding how life began** and evolved on Earth and for seeking similar life forms elsewhere in the universe.

  ❍ These evolutionary insights will **boost efforts to engineer synthetic organisms** for various processes on Earth and to create or manage ecosystems on other planets in the future.

What are Various Competing Theories of Life's Origin?

➢ **Oparin-Haldane Hypothesis**: In 1924 and 1929, Oparin and Haldane respectively suggested the **first molecules making up the earliest life forms gradually self-organised from a "primordial soup"** in a young earth's tempestuous, prebiotic environment. This idea is today called the Oparin-Haldane hypothesis.

➢ **Miller-Urey Experiment**: It showed that **in the right conditions, inorganic compounds could give rise to complex organic compounds.**

  ❍ Under it methane, ammonia, and water were mixed and applied an electric current to produce amino acids, the building blocks of proteins.

➢ **Panspermia Hypothesis**: It suggests that meteorites could have brought life's building blocks to Earth, supported by discoveries of extraterrestrial organic material and amino acids on asteroids.

  ❍ In 2019, French and Italian scientists reported **discovering extra-terrestrial organic material 3.3 billion years old.**

  ❍ Japan's Hayabusa 2 mission to the asteroid Ryugu also indicated the presence of more than 20 amino acids there.

Note:

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THEORIES OF EVOLUTION

The modification of living organisms during their descent, generation by generation from common ancestors.

Oparin-Haldane Theory of Origin of Life

↪ Also known as Materialistic theory

↪ Describes process of origin of life on early Earth as:

Physio-chemical processes of atoms→ Organic compounds→ Macromolecules→ First living system or cells

Theory of Inheritance of Acquired Character (Lamarckism)

↪ First theory of organic evolution

↪ **Evolutionary ideas:**

⊕ Internal forces of life increase the size of organism

⊕ New structures appear because of an 'inner want'

⊕ Direct environmental effect over living organisms

⊕ Inheritance of acquired character

↪ **E.g.;** Long neck of giraffe due to gradual lack of surface vegetation

Theory of Natural Selection (Darwinism)

↪ Foundation of evolutionary biology

↪ **Elements:**

⊕ Universal occurrence of variation

⊕ Rapid multiplication

⊕ **The struggle for existence -** Intraspecific and interspecific

⊕ **Survival of the fittest (Natural Selection)**

⊕ Inheritance of useful variations; Elimination of non-useful variations

↪ **E.g.;** Survival of more dark-winged moths than white-winged ones in post-industrialisation period

Neo-Darwinism
Integration of Darwin's theory of evolution with Gregor Mendel's theory of genetics

Modern Synthetic Theory
- One of the proven theories of organic evolution
- Includes factors such as – Mutation, Variation /Recombination, Heredity, Natural Selection and Isolation

Mutation Theory (Hugo de Vries)

↪ Describes evolution as a jerky process where new varieties of species are formed by mutations (discontinuous variations)

↪ **Salient features:**

⊕ Mutation appears all of a sudden and becomes operational immediately

⊕ Same type of mutation in several individuals of a species

⊕ All mutations are inheritable

⊕ Useful mutations are selected and lethal ones are eliminated by nature

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India's Space Launch Vehicle Supply and Demand Challenges

Why in News?

Recently, the Chairman of the **Indian Space Research Organisation (ISRO),** stated that **ISRO's launch vehicle capability** was three times the demand.

➢ This statement has sparked discussions among experts regarding the challenges facing India's space launch sector, as it appears to be **struggling to create sufficient demand for its services.**

Note:

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What is India's Current Launch Vehicle Landscape?

➢ **Current Launch Vehicles:**

- ❍ **Small Satellite Launch Vehicle (SSLV):** Designed for launching small payloads.
- ❍ **Polar Satellite Launch Vehicle (PSLV):** Versatile for launching Earth Observation, Geo-stationary, and Navigation payloads.
  - ● Known for its high success rate; **considered the workhorse of ISRO**.
- ❍ **Geosynchronous Satellite Launch Vehicle (GSLV):** Used for heavier payloads, particularly communication satellites weighing up to 2 tonnes.
- ❍ **Launch Vehicle Mark-III (LVM-3):** Capable of launching payloads up to 4-tonne class communication satellites and 10-tonne class payloads to Low Earth Orbits (LEOs).

ISRO LAUNCH VEHICLES

BACKGROUND

- ⊕ First rocket developed by ISRO - SLV (Satellite Launch Vehicle)
- ⊕ Successor of SLV - Augmented Satellite Launch Vehicle (ASLV)

Polar Satellite Launch Vehicle (PSLV)

- ⊕ About
  - ● The Workhorse of ISRO
  - ● 3rd gen, 4-Staged launch vehicle (1st, 3rd stages - solid fuel; 2nd, 4th stages - liquid fuel)
- ⊕ Capacity
  - ● Delivers earth-observation/remote-sensing satellites
  - ● Used to launch satellites of lower mass (~1400 Kg)
- ⊕ 4 Variants:
  - ● PSLV-CA   ● PSLV-QL   ● PSLV-DL   ● PSLV-XL
- ⊕ Launches Satellites in
  - ● Low inclination LEO   ● Sub-GTO   ● GTO
- ⊕ Important Launches
  - ● First successful launch - October 1994
  - ● Chandrayaan-1 (2008)
  - ● Mars Orbiter Spacecraft (2013)

PSLV is 1st Indian launch vehicle to be equipped with liquid stages

Geosynchronous Satellite Launch Vehicle (GSLV)

- ⊕ About
  - ● 4th Gen, 3-staged launched vehicle
  - ● Much more powerful rocket, carries satellites much deeper into space
  - ● Has an indigenous Cryogenic Upper Stage
- ⊕ Capacity
  - ● Delivers communication-satellites
  - ● Carries heavier satellites (~2200 kg to GTO)
  - ● Carries 10,000-kg satellites to LEO
- ⊕ Launches Satellites in
  - ● Primarily Geosynchronous Transfer Orbit (GTO) (~36000 Km altitude)
- ⊕ Important Launches:
  - ● Chandrayaan-2   ● Upcoming Gaganyaan

Launch Vehicle Mark-III

- ⊕ About
  - ● Aka GSLV Mk-III
  - ● 3-stage launch vehicle (2 solid propellant and 1 core stage comprising liquid and cryogenic stages)
- ⊕ Capacity
  - ● 4,000-kg of satellites into GTO
  - ● 8,000 kg of payloads into LEO
- ⊕ Launches Satellites in
  - ● GTO   ● Medium Earth orbit (MEO)
  - ● LEO   ● Missions to moon, sun

Mk-III versions have made ISRO entirely self-sufficient in launching its satellites

Small Satellite Launch Vehicle (SSLV)

- ⊕ About
  - ● Developed specifically for small and micro-satellites
- ⊕ Capacity
  - ● Satellites up to 500 kg
- ⊕ Launch Limit
  - ● 500 km planar orbit (LEO) from Satish Dhawan Space Centre

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Note:

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- ➤ **Limitations of Current Launch Vehicles:**
  - ❍ **Low Payload Capacity:** India's LVM-3 has less than one-third the capacity of **China's Long March 5.** India's current vehicles face limitations for more ambitious missions like **Chandrayaan 4,** necessitating upgrades and new vehicle developments.
    - The country currently has a fleet of satellites for various applications such as communications, remote sensing, positioning, navigation and timing (PNT), meteorology, disaster management, space-based internet, scientific missions, and experimental missions. Additionally, it requires launch vehicles for upcoming space missions.
  - ❍ **Future Upgrades Needed:** ISRO plans to upgrade the LVM-3 with a **semi-cryogenic engine to increase its payload capacity** to six tonnes to **geostationary transfer orbit (GTO).**
    - They also intend to develop a new launch vehicle called the **Next Generation Launch Vehicle (NGLV), or Project Soorya,** to carry 10 tonnes to GTO.
    - Currently, ISRO has only submitted a funding proposal for this project.
    - Additionally, the SSLV requires one more successful flight to build confidence for commercial launches of smaller satellites.
  - ❍ **Reliance on Foreign Launch Vehicles:** For heavier payloads, India relies on international providers like **Ariane V and SpaceX's Falcon 9.**

Why is there a Disconnect Between Supply and Demand?

- ➤ **Historical Context:** Previously, ISRO operated on a **supply-driven model, launching satellites first and then seeking customers**. This approach shifted post-2019 to a demand-driven model, which has led to an **oversupply of launch vehicles relative to actual needs.**
  - ❍ The transition has led to a **situation where demand for satellite services needs to precede satellite construction and launch.**
- ➤ **Challenges in Creating Demand:**
  - ❍ **Economic Factors:** Launch vehicles are needed for satellites, with **heavier ones used for national goals like lunar exploration and smaller ones for technology demonstration.**
    - Satellites have **finite operational lifespans, necessitating replacements** that can create additional demand for launch vehicles. However, **technological advancements have extended these lifetimes,** creating uncertainty in the demand for launch vehicles.

- Launch vehicles are also improving, with the ability to deliver multiple satellites in one launch, **reusable rocket stages,** and efforts to replace toxic fuels with greener alternatives.
  - ■ **ISRO is also investing in reusable rocket technology,** which can reduce costs and improve profitability in the long term.
- ❍ **Market Saturation:** In some sectors, like internet services, existing options (e.g., affordable fibre and mobile internet) may **overshadow the perceived need for space-based solutions.** This reduces the urgency in developing satellite capabilities.
- ❍ **Dependency on Government Initiatives:** The **Indian government wants the private sector to stimulate demand,** build and launch satellites, provide customer services, generate revenue from launch services, and upskill workers.
  - **Private companies prefer the government to be their customer** and to provide reliable regulations, aiming for a long-term source of revenue.
  - Without proactive government initiatives to educate and stimulate demand among potential users, the gap between supply and demand is likely to persist.

Electroencephalography (EEG)

Why in News?

Recently, **electroencephalography** has been in the news due to the **centenary year of the first human EEG**, pioneered by German physiologist Hans Berger.

- ➤ Vladimir Pravdich-Neminsky achieved the first mammalian EEG in 1912 with a dog's brain, **followed by Hans Berger in 1924** with the first human EEG.
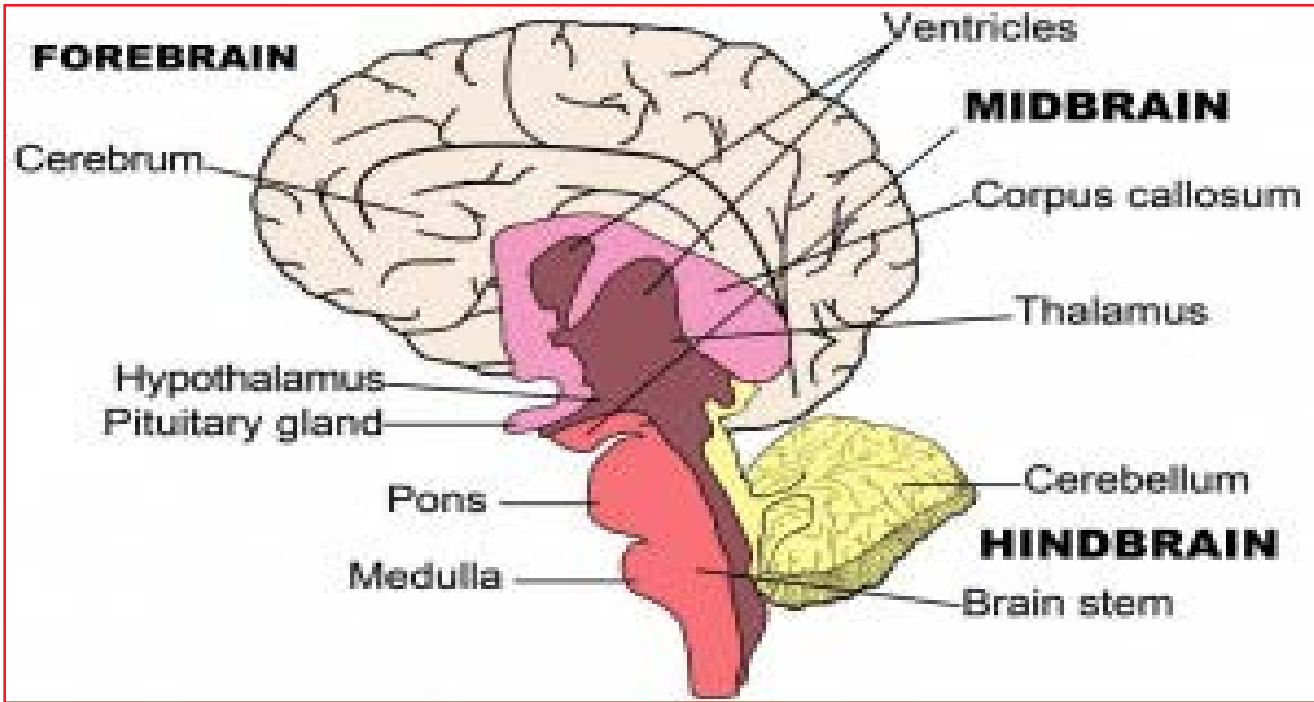
What is EEG?

- ➤ **About:**
  - ❍ EEG stands for electroencephalography. 'Electro-' pertains to electricity; '-encephalo-' refers to the brain; and '-graphy' is a suffix meaning to show or to represent.
  - ❍ The EEG is a remarkable tool in physics and neurobiology, **offering a straightforward glimpse into the human brain's workings**, without invasive procedures.

Note:

❍ An EEG setup is **simple, cost-effective, non-invasive,** portable, space-efficient, and doesn't emit high-energy radiation or sounds, unlike MRI.

➢ **Working:**

❍ Volume conduction is the interference that **happens between the source of an electrical potential** and the electrode measuring that potential.

● It occurs when electrical potentials is measured at a distance from their source.

❍ Neurons in the **brain constantly exchange ions** with their surroundings, **creating waves of electrical activity** that electrodes on the scalp track to produce an electroencephalogram.

➢ **Applications:**

❍ It is the best test available to diagnose **epilepsy** (a neurological condition involving the brain that makes people more susceptible to having recurrent unprovoked seizures).

❍ An EEG test can also reveal the effects of **anaesthesia**, sleeping patterns, neurological activity during a coma, and availability of oxygen.

❍ EEG can also help **confirm brain death**.

❍ Also used for neuroscience, cognitive psychology, neurolinguistics, and neuromarketing studies and to develop **brain-computer interfaces.**

❍ Researchers have linked EEG data to various brain activities, distinguishing effectively between normal and abnormal states.

➢ **Challenges:**

❍ EEG is great at tracking rapid brain activity in milliseconds but is **biased towards signals from the brain's surface** and dendrites, making pinpointing activity origin complex.

❍ Researchers use EEG with **MRI** and advanced methods to overcome these challenges.

Electroencephalogram (EEG)

Electrodes

Brain

EEG reading
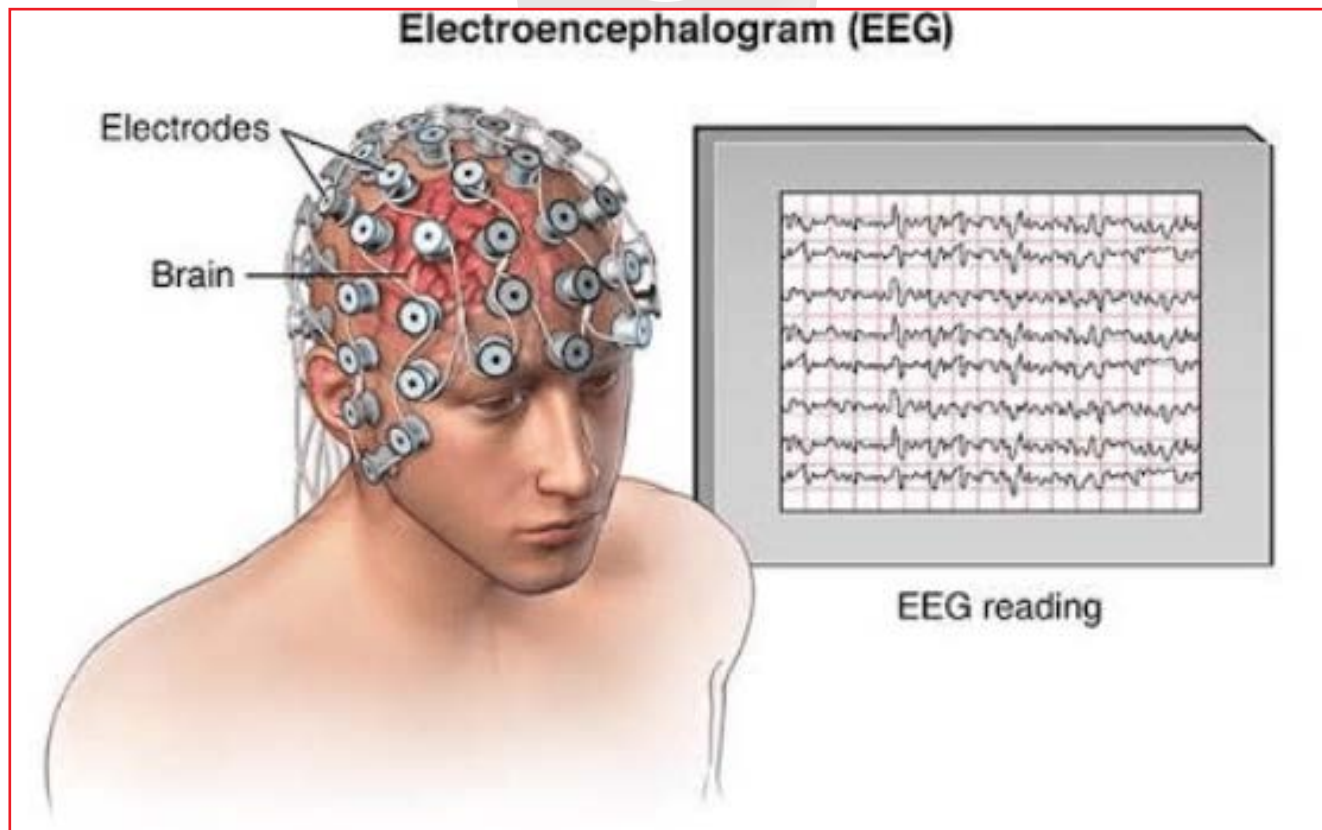
Note:

EEG And Other Similar Technologies				
Feature	EEG	fMRI (functional Magnetic Resonance Imaging)	PET Scan (Positron Emission Tomography Scan)	MEG (Magnetoencephalography)
What it measures	Electrical activity of neurons	Blood flow changes in the brain	Metabolic activity of brain cells	Magnetic fields generated by electrical currents in the brain
Safety	Safe, non-invasive	Safe, non-invasive (with some limitations)	Requires low-dose radiation exposure	Safe, non-invasive
Cost	Relatively inexpensive	Very expensive	Expensive	Expensive
Portability	Portable, can be used in various settings	Not portable, requires a large scanner room	Not portable, requires a specialized scanner	Somewhat portable, requires a magnetically shielded room
Applications	Epilepsy diagnosis, sleep studies, brain function monitoring	Studying brain function during tasks, brain mapping	Identifying metabolic changes associated with diseases, cancer detection	Studying brain function during tasks, epilepsy localisation

■■■

Note:

Environment and Ecology

Highlights

- *Climate Change and Impact on Children's Education*
- *Mid-Year Air Quality Assessment for India: CREA*

- *Forest Advisory Committee (FAC)*

Climate Change and Impact on Children's Education

Why in News?

Recently, a new report by the Global Education Monitoring Report of the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** has highlighted the **long-term impact of climate shocks** experienced in early childhood.

How does Climate Change Impact Children and their Education?

➢ **Vulnerability of Children:**
  ❍ The report says that young children are particularly vulnerable to physical hazards like **floods**, **droughts**, and **heat waves** which can negatively impact **physical abilities, cognitive abilities, emotional well-being, and educational opportunities**.
  ❍ Most **low and middle-income** countries experience annual school closures due to climate-related events, increasing learning loss and dropout rates.

➢ **Impact on Cognitive Abilities of Children:**
  ❍ **In Ecuador**, children exposed to severe **El Nino** floods in utero were shorter and performed worse on cognitive tests later in life.
  ❍ In **India**, rainfall shocks during early life negatively impacted vocabulary at age 5 and mathematics and non-cognitive skills at age 15.
  ❍ Analysis of disasters affecting over 140,000 children in seven Asian countries showed a negative correlation with school enrollment for boys and mathematics performance for girls by age 13-14.

➢ **School Closures and Infrastructure Damage:**
  ❍ Climate-related stressors cause frequent school closures, with 75% of extreme weather events in the past 20 years resulting in such disruptions.

  ❍ **Natural disasters**, including floods and cyclones, have led to deaths and significant damage to educational infrastructure.
    - **For instance**, **Jakarta** floods in 2013 disrupted access to schools; Cyclone Idai destroyed 3,400 classrooms in Mozambique in 2019; **Tropical Cyclone Gita** damaged 72% of schools in Tonga in 2018.
  ❍ **Floods in Ethiopia, India, and Vietnam** caused reductions in educational attainment among youth.

➢ **Impact of Heat and Environmental Variability:**
  ❍ **Heat Effects:** Higher-than-average temperatures during prenatal and early life are linked to fewer years of schooling.
    - Studies show reduced high school graduation and college entrance rates in China due to heat.
    - In **Maharashtra**, India, drought led to a 4.1% reduction in mathematics scores and a 2.7% reduction in reading scores.
    - In **Pakistan**, children in flooded districts were 4% less likely to attend school compared to those in non-flooded areas.

What are the Recommendations of the Report?

➢ **Need for Adaptation:** The report emphasises the need for comprehensive **climate adaptation strategies**, including improved school infrastructure, curriculum reforms, and community engagement.

➢ **Curriculum Integration:** The report underscores the need for incorporating **climate change** education into school curricula to provide both climate science knowledge and skills in **resilience, adaptation, and sustainable development.**

➢ **Proactive Measures:** To mitigate climate impacts on education, proactive measures are recommended, including **strengthening school infrastructure**, **training educators for psychological and academic support, and promoting community resilience through awareness and adaptation initiatives.**

➢ **Investing in Education:** There is a call for increased investment in educational systems to enhance their resilience to **climate-related disruptions, ensuring continuity of education despite environmental challenges**.

Note:

drishti

What Measures Have Been Taken to Mitigate the Impact of Climate Change?

➢ **Global Level:**
  - ○ **Paris Agreement:** Aims to limit global warming to below 2°C with national climate targets and $100 billion annual climate finance support.
  - ○ **UNFCCC:** Facilitates global climate negotiations and progress assessments through COP meetings and the Global Stocktake.
  - ○ **Sustainable Development Goals (SDGs):** Incorporates climate action into broader development goals **(Goal-13)**.
  - ○ **Global Initiatives:** Includes partnerships and funding for climate action and clean technologies.
➢ **Steps Taken in India to Mitigate Climate Change**
  - ○ **LiFE Initiative:** The idea of **LiFE** was introduced by India during the **26th United Nations Climate Change Conference of the Parties (COP26)** in Glasgow in 2021 to promote an environmentally conscious lifestyle that focuses on 'mindful and deliberate utilisation' instead of 'mindless and wasteful consumption.
  - ○ **National Action Plan on Climate Change (NAPCC):** Features missions on solar energy, energy efficiency, and sustainable habitats.
  - ○ **Renewable Energy:** Targets include 500 GW of **solar power** and 60 GW of **wind energy** by 2030.
  - ○ **Electric Mobility:** Promotes **electric vehicles** to cut transportation emissions.
  - ○ **Adaptation and Resilience:** State-specific action plans and disaster management enhancements.
  - ○ **Afforestation: Green India Mission** and large-scale tree planting initiatives.
  - ○ **International Cooperation:** Commitment to the Paris Agreement and participation in global climate finance.

Mid-Year Air Quality Assessment for India: CREA

Why in News?

Recently, the **mid-year air quality assessment for India** by the **Centre for Research on Energy and Clean Air (CREA)**, covering the period from January to June 2024, provides a comprehensive overview of the **nation's air pollution levels.**

➢ This report highlights the **severity and distribution of air pollution** across Indian cities, emphasising the **importance of stringent measures** to combat this environmental crisis.

What are the Key Highlights of the Reports?

➢ **Key Highlights:**
  - ○ **Byrnihat, located on the Assam-Meghalaya border**, emerged as the **most polluted city in India,** with an average PM2.5 concentration of 140 **μg/m³(Micrograms per Cubic Metre).**
  - ○ Among India's top 10 polluted cities, three were in Haryana, two each in Rajasthan and Uttar Pradesh, and one each in Delhi, Assam, and Bihar.
    - ● Delhi ranked as the 3rd most polluted city, with PM2.5 levels at 102 μg/m³, exceeding the **National Ambient Air Quality Standards (NAAQS)** and **World Health Organization (WHO)** guidelines.
  - ○ Out of 256 cities monitored, 163 exceeded the annual NAAQS (40 μg/m³), while all exceeded the WHO standard (5 μg/m³).
    - ● Among the 97 **National Clean Air Programme (NCAP) cities**, 63 exceeded the NAAQS.
  - ○ Only 63 out of 163 cities exceeding the NAAQS are part of the NCAP, leaving 100 cities without action plans to reduce air pollution.
  - ○ The top **10 most polluted cities were spread across 16 states** and union territories, indicating the widespread nature of air pollution in India.
  - ○ Six new **Continuous Ambient Air Quality Monitoring Stations (CAAQMS)** were added, increasing the total to 545.
  - ○ **Karnataka and Maharashtra** had the highest number of cities under the **"Good" and "Satisfactory" categories**, while Bihar had the most cities in the "Moderate" category.
  - ● **Implications:**
  - ○ The high PM2.5 levels in Byrnihat and Delhi underscore the **urgent need for localised pollution control measures.**
    - ● The prevalence of pollution in states like Haryana and Rajasthan calls for **coordinated regional efforts** to tackle air quality issues.
  - ○ The fact that 100 cities exceeding the NAAQS are not covered under the NCAP highlights a **significant gap in India's air quality management framework.**
    - ● Expanding the NCAP to include these cities is crucial for comprehensive air pollution control.
  - ○ **Chronic exposure** to high levels of PM2.5 has severe health implications, including **respiratory and cardiovascular diseases**.
    - ● The report's findings stress the need for public health interventions and awareness programs.

Note:

- ❍ The increase in CAAQMS is a positive step, but the **data gaps and non-operational stations** highlight the need for enhanced monitoring infrastructure and maintenance.
- ➢ **Policy Recommendations:** Strengthening **emission standards, promoting green technologies**, and enhancing public transportation can significantly reduce pollution levels.
 - ❍ **Community participation and stringent enforcement** of environmental laws are essential for sustainable air quality improvements.

Number of cities vs frequency of days with PM₂.₅ concentration above Daily NAAQS and WHO guidelines – January to June 2024
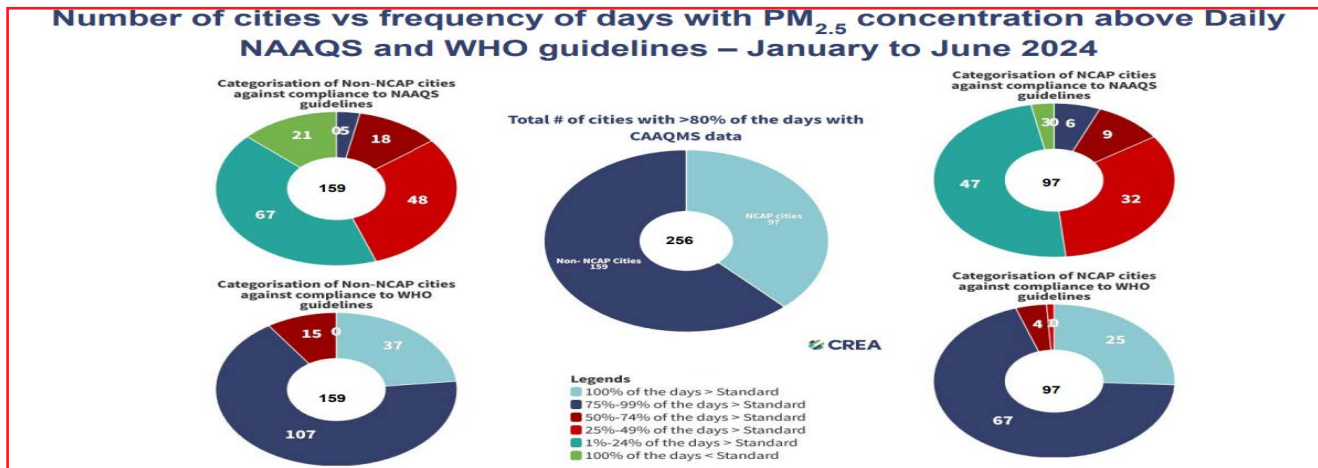
Top 10 most polluted cities in India by PM₂.₅ concentration – January to June 2024

City	Monitored days	Days > NAAQS	Good (0-30)	Satisfactory (31-60)	Moderate (61-90)	Poor (91-120)	Very poor (121-250)	Severe (>250)
Byrnihat	176	165	5	23	11	24	107	6
Faridabad	182	181	0	18	62	58	41	3
Delhi	182	180	0	28	84	25	41	4
Gurgaon	182	181	0	17	68	52	44	1
Bhagalpur	182	167	4	57	53	22	42	4
Sri Ganganagar	179	173	2	29	72	32	43	1
Greater Noida	182	176	4	47	58	31	39	3
Muzaffarnagar	181	180	0	38	67	37	39	0
Ballabgarh	182	179	0	23	69	63	26	1
Bhiwadi	181	177	2	23	74	50	32	0

Days in respective AQI categories based on PM₂.₅ (µg/m³) – January to June 2024
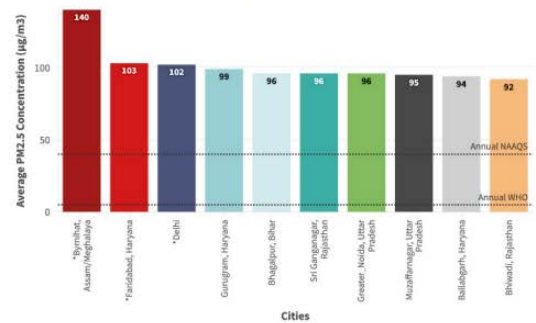
Initiatives Taken for Controlling Air Pollution

- ➢ **National Clean Air Programme (NCAP)**
- ➢ **Bharat Stage Emission Standards**
- ➢ **Solid Waste Management Rules,2016**
- ➢ **System of Air Quality and Weather Forecasting and Research (SAFAR) Portal**
- ➢ **Air Quality Index**
- ➢ **Graded Response Action Plan**
- ➢ **National Air Quality Monitoring Programme (NAMP)**
- ➢ **Commission for Air Quality Management**

Note:

Forest Advisory Committee (FAC)

Why in News?

Recently, the **Forest Advisory Committee (FAC)** of the Ministry of Environment Forest and Climate Change reprimanded the Odisha government for building walls, without approval, in forest land that will be part of the **proposed Shree Jagannath International Airport in Puri.**

What is the Forest Advisory Committee (FAC)?

➤ It is a **statutory body** which was constituted by the **Forest (Conservation) Act 1980.**
  ○ It comes under the **Ministry of Environment, Forests & Climate Change (MoEF&CC).**
➤ The FAC **evaluates industrial projects** which require forest land for their activities.
  ○ The committee **may or may not approve a project** and can give an approval for forest land to be diverted, after imposing certain conditions.
  ○ In the recent case, satellite pictures showed that the **agency tasked with the project had already built a wall without waiting for approval** by the FAC.

What is the Forest Conservation Act, 1980?

➤ **About:** The **Forest Conservation Act of 1980** was enacted to streamline forest-related laws, regulate deforestation, oversee the transportation of forest products, and levy duties on timber and other forest produce.
  ○ Under the provisions of this Act, **prior approval of the Central Government** is required for diversion of forest land for non-forest purposes.
    ● It primarily applied to forest lands recognized by the **Indian Forest Act, 1927**, or State records since 1980.
➤ **Supreme Court's Interpretation:** The *Godavarman judgement, 1996* by the **Supreme Court** mandated the protection of forests regardless of classification or ownership.
  ○ This introduced the concept of **deemed forests or forest-like tracts** referring to areas resembling forests but not officially classified as such in government or revenue records.

➤ **Concern Regarding Varying Definitions of Forests:** States in India interpret 'forests' differently based on surveys and expert reports, leading to diverse definitions.
  ○ For example, Chhattisgarh and Madhya Pradesh base their definitions on size, tree density, and natural growth, while Goa relies on forest species coverage.
  ○ Varying definitions result in estimates of deemed forest ranging from 1% to 28% of India's official forest area.
➤ **Recent Amendment to Forest Conservation Act:**
  ○ The recent **Forest (Conservation) Amendment Act, 2023** aimed to bring clarity and address concerns surrounding deemed forests.
    ● It focused on **defining the scope of forest land under the Act's purview, exempting certain categories of land** from its provisions.
      ■ It **exempts up to 0.10 hectares of forest land for connectivity purposes** along roads and railways, up to 10 hectares for **security-related infrastructure**, and up to 5 hectares in **Left Wing Extremism Affected Districts** for public utility projects.
  ○ However, the **Supreme Court's interim directive maintains the traditional approach to forest governance**, unaffected by the recent amendment enacted by the Centre.
    ● Also, the Supreme Court **ruled that the creation of zoos or safaris by any government or authority must receive final approval from the court.**

Initiatives for Forest Conservation
➤ **Indian Forest Policy, 1952**
➤ **Forest Conservation Act, 1980**
➤ **National Forest Policy, 1988**
➤ **National Afforestation Programme**
➤ **Other Related Acts:**
○ **Wildlife Protection Act of 1972**
○ **Environment Protection Act of 1986**
○ **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006**

■■■

Note:

Art and Culture

Highlights

- Tell Umm Amer and Assam's Charaideo Moidams Recognised by UNESCO
- National Mission for Manuscripts and National Culture Fund
- Humayun Tomb World Heritage Site Museum
- Amravati as a Buddhist Site

Tell Umm Amer and Assam's Charaideo Moidams Recognised by UNESCO

Why in News?

Recently, the **World Heritage Committee** **included Tell Umm Amer, also known as the Monastery of Saint Hilarion**, in the **United Nations Educational, Scientific and Cultural Organization's (UNESCO) World Heritage Sites list,** and the List of World Heritage in Danger.

➢ Additionally, **Assam's Charaideo Moidams** was added to the **UNESCO World Heritage Sites list**, marking **India's 43rd World Heritage Site.**

What are the Key Facts About Tell Umm Amer?

➢ **Historical Background:** Tell Umm Amer, located in the **Gaza Strip,** is an ancient **Christian monastery** dating back to the fourth century CE. Founded by **Hilarion the Great (291-371 CE)**, it is recognised as one of the **earliest and largest monastic communities in the Middle East.**

➢ **Archaeological Importance:** The site contains extensive ruins including five successive churches, bath and sanctuary complexes, geometric mosaics, and an expansive crypt. It is considered a **hub of religious, cultural, and economic activity from its time until the Umayyad period (661–750).**

➢ **Recent Damage**: The ongoing **conflict in Gaza** has caused significant damage to cultural sites, including Tell Umm Amer.

  ○ The World Heritage Committee's decision to include it in the World Heritage List and the List of World Heritage in Danger underscores the urgency of preserving this historical monument amidst the conflict.

➢ **World Heritage Status Affect on Tell Umm Amer:**

  ○ Being listed on the World Heritage List brings international recognition and protection duties. If a site is designated as "in danger," it can receive **increased international technical and financial support for preservation efforts.**

  ○ In December 2023, UNESCO granted Tell Umm Amer provisional enhanced **protection under the 1954 Hague Convention,** providing the **highest level of immunity from intentional damage during armed conflict.**
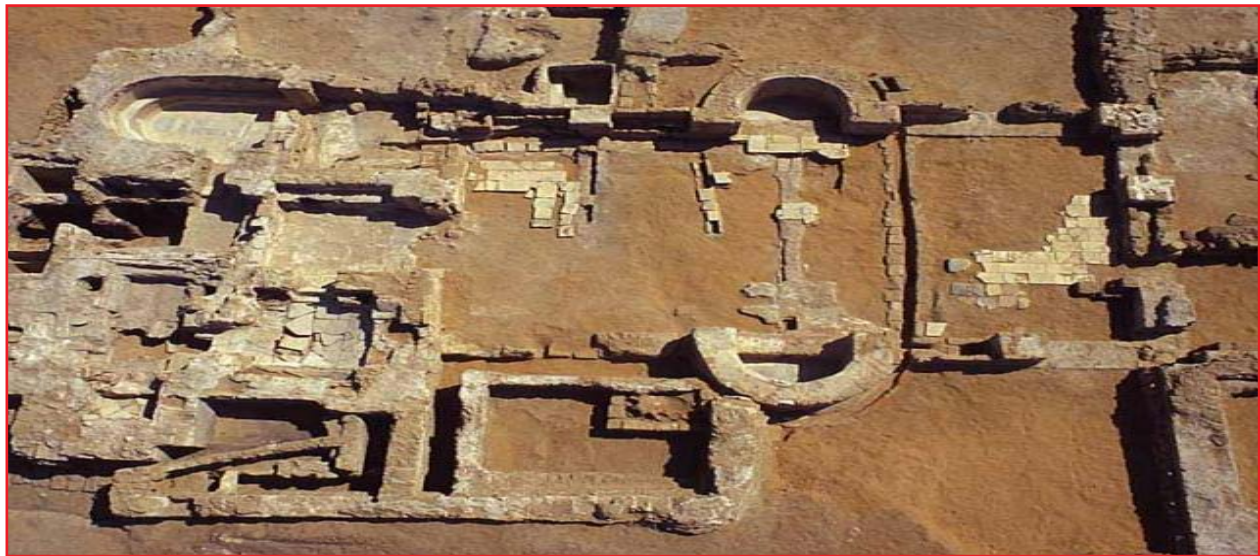
Note:

Note:

➢ The **List of World Heritage in Danger** informs the international community about threats to the characteristics of a property on the World Heritage List and aims to encourage corrective action.

➢ It includes sites facing **dangers such as armed conflict, natural disasters, pollution,** poaching, urbanisation, and tourist development.

  ❍ The inscription on the list can be due to imminent threats or potential negative effects on the property's World Heritage values.

➢ During its **43rd session in Baku in 2019,** the World Heritage Committee emphasised that listing a property as World Heritage in Danger aims to gather **global support to help the State Party address the challenges faced by the property.**

  ❍ This involves **working with the World Heritage Centre** and Advisory Bodies to develop a plan of corrective measures to achieve the desired state of conservation for the property.

What are the Key Facts About Assam's Charaideo Moidams?

➢ The Charaideo Moidams in Assam hold historical significance as the **burial sites of the Ahom dynasty**, established in 1253 AD by **King Sukaphaa.**

  ❍ These **earthen mounds, known as moidams,** were used for burying royalty and aristocracy, reflecting the unique funerary practices of the Ahom people.

➢ The moidams, resembling **ancient Egyptians give Charaideo moidams the nickname "Pyramids of Assam ''** are now popular tourist attractions, but many are in disrepair.

➢ The Ahoms, who ruled Assam for six centuries, **practised burial instead of cremation,** and the grandeur of the moidams often reflected the status of the buried individuals.

➢ Chaolung Sukapha migrated from Burma to the **Brahmaputra valley,** establishing the **first principality in Charaideo.** The Ahoms suppressed the older political system, and adopted Hinduism and the Assamese language while maintaining their traditional beliefs.

  ❍ Sukapha successfully assimilated different communities and tribes, earning the title of the architect of **'Bor Asom' or 'Greater Assam'.**

➢ The Ahom dynasty's legacy continues to be celebrated in Assam, notably through events like the **400th birth anniversary of Ahom general Lachit Borphukan**. **Assam celebrates 'Asom Divas' on 2nd December every year** to commemorate Sukapha and his rule.

National Mission for Manuscripts and National Culture Fund

Why in News?

Recently the Ministry of Culture and Tourism shed light on the achievements made in the **National Mission for Manuscripts** and **National Culture Fund.**

What are the National Mission for Manuscripts?

➢ **About:**

  ❍ The National Mission for Manuscripts was **established in 2003**, by the Ministry of Tourism and Culture, Government of India.

➢ **Objective:**

  ❍ The key objectives of the National Mission for Manuscripts are **documentation, conservation, digitization**, and online dissemination of the manuscript heritage of India.

    ● To achieve this mandate, the mission has **established more than 100 Manuscripts Resource Centres** and Manuscripts Conservation Centres all over India.

  ❍ India **possesses an estimated ten million manuscripts**, probably the largest collection in the world. These cover a variety of themes, textures and aesthetics, scripts, languages, calligraphies, illuminations, and illustrations.

Note:

➢ **Manuscript:**

   ○ A **manuscript is a handwritten composition** on paper, bark, cloth, metal, palm leaf, or any other material dating back **at least seventy-five years** that has **significant scientific, historical, or aesthetic value.**

      • Manuscripts differ from historical records like **epigraphs, firmans**, and revenue records, as they primarily contain knowledge content rather than direct historical information.

      • Manuscripts are **found in hundreds of different languages** and scripts.

> **Note:**
>
> ➢ Th**e Ancient Monuments and Archaeological Sites and Remains Act, 1958** defines an "**Ancient Monument**" any structure, erection or monument, or any tumulus or place of interment, or any cave, rock-sculpture, inscription or monolith which is of **historical, archaeological or artistic interest** and which has been in existence for **not less than 100 years.**

What is the National Culture Fund?

➢ **About:**

   ○ The government set up the **National Culture Fund (NCF)** as a Trust in 1996 under the **Charitable Endowment Act, 1890** to mobilise extra resources through **Public Private Partnerships (PPP)** towards **promoting, protecting, and preserving India's cultural heritage.**

   ○ It **serves as a financing mechanism for enabling donor/sponsor institutions to support the Protection**, Restoration, Conservation, and Development of India's rich tangible and intangible culture and heritage (Monuments/Cultural Traditions) directly as partners with the Government.

➢ **Objectives:**

   ○ For the **training and development of a cadre** of specialists and cultural administrators.

   ○ **Provide additional space in existing museums** & construct new museums to accommodate or create new & special galleries.

   ○ **Documentation of cultural expressions and forms** that have lost their relevance in contemporary scenarios and are either fading out or facing extinction.

➢ **Features of NCF:**

   ○ NCF provides a **dependable and innovative platform for partnerships in the fields of heritage, culture, and the arts.**

   ○ The projects are **overseen by a Project Implementation Committee (PIC)** that has representatives from the Donor, Implementer, and NCF.

      • The **accounts of NCF are audited by the Comptroller and Auditor General of India** annually.

➢ **Members:**

   ○ NCF is managed by a **Council Chaired by Minister of Culture)** and an **Executive Committee (chaired by Secretary).**

Humayun Tomb World Heritage Site Museum

Why in News?

The **Humayun's Tomb** World Heritage Site Museum is set to open for visitors. Nestled between Sunder Nursery and Humayun's Tomb in Nizamuddin, Delhi, this museum promises to offer visitors a unique insight into the life and times of the **second Mughal Emperor, Humayun.**

What are the Key Highlights of Humayun's Tomb Site Museum?

➢ **Underground Design:** The museum is designed like a **baoli (stepwell)** and includes a 100-seat auditorium, temporary galleries, cafés, meeting rooms, and a library.

➢ **Unique Personal Items:** Artefacts such as a pear-shaped water vessel belonging to **Jauhar Aftabchi, a biographer of Humayun,** and a helmet used by **Humayun as a cooking vessel during his travels to Persia.**

   ○ The artefacts displayed in the museum are on loan from the National Museum for 10 years, ensuring a rich and varied display for visitors.

➢ **Mughal Coins and Throne:** Exhibits include coins from the reigns of 18 Mughal-era kings and the throne of Bahadur Shah Zafar, the last Mughal emperor.

   ○ **Highlights include:** Coins from Akbar's era with **'Allah' on one side and 'Ram' on the other.** Expensive coins from Jahangir's era. Rare coins minted by Bahadur Shah Zafar.

➢ **Architecture and Personality**: Focuses on the architecture of Humayun's Mausoleum and the emperor's personality. Exhibits convey stories of Humayun's travels, administration, interest in reading, astrology, the arts, and his patronage of architecture.

➢ **Cultural Figures:** Highlights four cultural figures associated with the Nizamuddin area from the 14th century: **Sufi Saint Hazrat Nizamuddin Auliya, Poet Amir Khusrau Dehalvi, Rahim, a commander-in-chief of Akbar's army and poet, and Dara Shukoh, known for translating the Upanishads into Persian.**

➢ **Conservation Efforts:** Managed by the **Archaeological Survey of India (ASI),** the museum is part of a larger conservation effort encompassing the **300-acre Humayun's Tomb-Sunder Nursery-Nizamuddin Basti area.**

Humayun's Tomb

➢ Built in 1570, Humayun's Tomb is the **first major garden tomb in the Indian subcontinent,** setting a precedent for Mughal architecture, which culminated in the **Taj Mahal.** It was commissioned by his first wife, Empress Bega Begum, in 1569-70 and designed by Persian architects.

  ❍ It includes other 16th-century Mughal tombs like **Nila Gumbad and Isa Khan Niyazi, an Afghan noble.**

➢ The tomb features a **charbagh garden, a high-terraced platform,** and a marble-clad dome. The mausoleum, known as the **'dormitory of the Mughals,' houses over 150 Mughal family members.**

  ❍ The tomb is centred around the **Shrine of the 14th century Sufi Saint, Hazrat Nizamuddin Auliya.** Due to the belief that it is fortunate to be buried near a saint's grave.

➢ It was declared a **UNESCO World Heritage Site in 1993** and has undergone extensive restoration work.

➢ The **ASI and Aga Khan Trust for Culture** manage the site, ensuring its preservation and protection under various legislations.

Note:

Humayun

➢ **Early Reign:** Humayun, the eldest son of **Babur**, faced immediate challenges upon his succession. His governance was marked by **administrative and financial instability**.

➢ **Major Battles: Siege of Chunar (1532)** Humayun achieved victory against the Afghans and besieged Chunar fort. **Battle of Chausa (1539)** Humayun faced defeat by Sher Shah Suri, narrowly escaping the battlefield. **Battle of Kannauj (1540)** also known as **Battle of Bilgram** Sher Shah Suri's complete victory forced Humayun into exile.

  ❍ Internal conflicts, including a rebellion by Humayun's brother Hindal and Kamran's schemes, further weakened his position.

  ❍ Humayun became an **exile** for fifteen years. During this time, he married **Hamida Banu Begum** and had a son named **Akbar.**

  ❍ Humayun sought help from the Shah of Persia, who agreed to support him in exchange for certain conditions. With Persian assistance, **Humayun captured Kandahar and Kabul in 1545.**

➢ **Persian Influences:** Humayun introduced Persian administrative practices, improving revenue systems and promoting Persian arts and culture.

➢ **Architectural Achievements:** He founded **Dinapanah**, built the Jamali mosque, and initiated the construction of Humayun's Tomb, which was completed by his wife, **Hamida Banu Begum.**

➢ **Cultural Impact:** Humayun played a key role in the development of **Mughal painting** by bringing Persian artists like **Mir Sayyid Ali and Abdal Samad** to India.

  ❍ He established the **Nigaar Khana (painting workshop)** and began the project of illustrating the **Hamza Nama,** which his successor Akbar continued.

➢ **Literary Contributions:** His sister, Gul Badan Begum, authored the **"Humayun-Nama,"** documenting his reign and legacy.

Note:

Amravati as a Buddhist Site

Why in News?

Recently, the Finance Minister announced Rs 15,000 crore in **financial support for Andhra Pradesh** to build its capital city, **Amravati**, and boost **other development activities in the state.**

➢ This has **brought back focus on Amravati**, a site of immense **historical and spiritual significance** in Andhra Pradesh that remains relatively unrecognised.

What are the Key Facts About Amravati and Andhra Buddhism?

➢ **Historical Evolution:**
  ○ In the late 1700s, **Raja Vessareddy Nayudu** unknowingly **discovered ancient limestone ruins** in Andhra's Dhanyakatakam village, which he and the locals used for construction, leading to the renaming of the village to Amravati.
  ○ The systematic destruction of the ruins continued until 1816, when Colonel Colin Mackenzie's intensive survey, despite causing further damage, **led to the rediscovery of the grand Amravati Stupa.**
  ○ In 2015, the Andhra Pradesh Chief Minister announced the new capital, Amaravati, inspired by the **historic Buddhist site**, aiming to **develop it into a modern city akin to Singapore.**

➢ **Amravati and Andhra Buddhism:**
  ○ **Buddhism**, which emerged in the **fifth century BCE** in the ancient kingdom of **Magadh (present-day Bihar)**, made its way to Andhra Pradesh mainly **through trade routes in Andhra Pradesh.**
    ● Buddhism was founded by **Siddhartha Gautama**, who attained enlightenment and became known as the Buddha.
  ○ The first significant evidence of Buddhism in Andhra Pradesh dates back to the **3rd century BCE when Emperor Ashoka set up an inscription in the region, providing a major impetus to its spread.**
    ● Monks from Andhra were present at the **first Buddhist council** held in 483 BCE at Rajgir, Bihar.
  ○ Buddhism **thrived in the region for nearly six centuries** until the 3rd century CE, with isolated sites like **Amravati, Nagarjunakonda, Jaggayapeta, Salihundam, and Sankaram** continuing to practice the religion until the 14th century CE.
  ○ Historians note that Buddhism's presence in Andhra coincided with its first urbanisation process, **significantly aided by oceanic trade, which facilitated the religion's spread.**

➢ **Difference Between the Nature of Northern Buddhism and Andhra Buddhism:**
  ○ **Merchant Patronage:** In Andhra, **merchants, craftsmen, and wandering monks played a crucial role** in the spread of Buddhism, contrasting with the royal patronage (king Bimbisara or Ajatashatru) seen in North India.
  ○ **Influence on Political Rulers:** Traders' success and their association with Buddhism influenced Andhra's political rulers, who issued inscriptions supporting the Buddhist sangha, suggesting a **bottom-up spread of Buddhism.**
  ○ **Integration of Local Practices:** Buddhism in Andhra integrated local religious practices, such as **megalithic burials, and Goddess and Naga (snake) worship, into its doctrines**, reflecting a unique adaptation of Buddhism to regional traditions.

➢ **Significance of Amravati in Buddhism:**
  ○ Amravati is renowned for being the **birthplace of Mahayana Buddhism**, one of the major branches of Buddhism that **emphasizes the path of the Bodhisattva.**
  ○ **Acharya Nagarjuna**, a prominent Buddhist philosopher, lived in **Amravati and developed the Madhyamika philosophy**, focusing on the concept of emptiness and the middle way.
  ○ From Amravati, Mahayana Buddhism **spread across South Asia, China, Japan, Korea, and Southeast Asia.**.

➢ **Factors Leading to the Decline of Buddhism in Andhra Pradesh:**
  ○ **Rise of Shaivism:** One of the primary factors contributing to the decline of Buddhism in Andhra Pradesh was the **rise of Shaivism.**
    ● By the **seventh century CE**, Chinese travellers noted the **decline of Buddhist stupas** and the thriving Shiva temples, which received patronage from aristocrats and royals.
    ● The growing influence of Shaivism **offered a more structured and socially integrated religious framework** that appealed to the local populace and rulers, drawing support away from Buddhist institutions.
  ○ **Decline of Urbanisation:** During the third century BCE, the region experienced significant urbanisation and trade, which supported Buddhism's spread due to its emphasis on a casteless society.
    ● However, six centuries later, **economic degradation led to a decline in patronage for Buddhist institutions.**
    ● By the fourth century CE, **Buddhist institutions found themselves without much patronage.**

Note:

○ **Arrival of Islam:** With the arrival of Islam, the Islamic rulers, who were generally more inclined towards supporting Islamic institutions, **withdrew royal patronage** from Buddhist establishments.

What are the Key Features of the Amravati School of Art?

➢ **About:**
○ During the post-Mauryan period, the **Amravati school of art** from the ancient Buddhist site of Amravati in Andhra Pradesh emerged as one of the three most significant styles of ancient Indian art, alongside the **Mathura and Gandhara schools.**

➢ **Historical Context and Influences:**
○ Amravati Stupa:
- The **Amravati Stupa**, a grand Buddhist monument, was the **centrepiece of the Amravati School of Art.** This site became a **hub of artistic and architectural activity**, significantly contributing to the development of Buddhist art in India.
- In the **early 19th century**, government indifference to conserving ancient monuments led to local people and British officials using stupa materials for construction, causing further degradation.
- Excavations by officials like Walter Elliot in 1845 and the shipment of sculptures to Calcutta, London, and Madras also contributed to the site's decline.
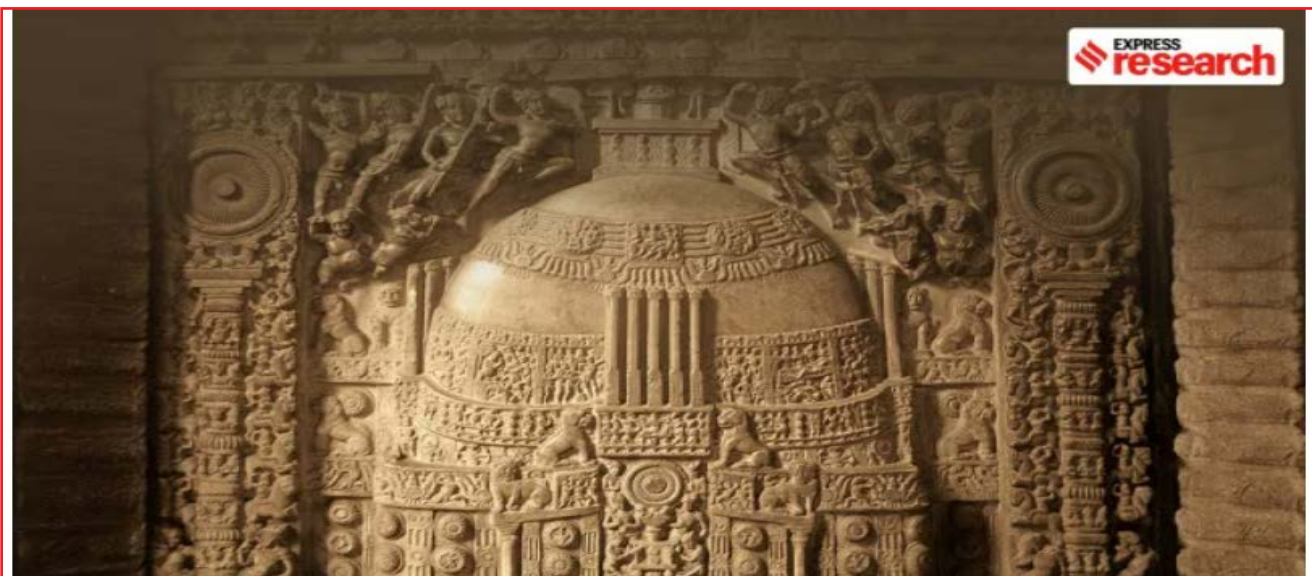
Amaravathi Stupa is the largest Buddhist stupa in South Asia. (Wikimedia Commons)

➢ **Key Characteristics of Amravati School of Art:**
○ **Major Centres:** Amaravati and Nagarjunakonda.
○ **Patronage:** This school was **patronised by Satvahana rulers.**
○ **Key Feature: Tribhanga posture**, i.e. the body with three bends was used excessively by Amaravati school in its sculptures.
○ The sculptures from Amravati are noted for their **high aesthetic quality** and **intricate detailing, primarily crafted from palnad marble**, a special kind of limestone that allows fine and intricate carvings.
○ The art often features **narrative panels depicting scenes from the life of the Buddha**, Jataka tales, and various Buddhist rituals and practices.
○ A particular depiction of the Buddha from Amravati, with the **robe on the left shoulder and the other hand in abhaya** (gesture of fearlessness), became iconic and was replicated in other parts of South and Southeast Asia.
○ Unlike the Mathura and Gandhara schools, which show Graeco-Roman influences, the Amravati school **developed a unique style with little external influence,** emphasizing indigenous artistic traditions.

Note:

> **Global Dispersion of Amravati Art:**
>   ○ Today, **sculptures from the Amravati Stupa are scattered across the world,** with significant collections in the British Museum, the Art Institute of Chicago, Musee Guimet in Paris, and the Metropolitan Museum of Art in New York.
>   ○ Indian museums such as the Government Museum in Chennai and the National Museum in New Delhi also house pieces of Amravati art.
>   ○ **Australia remains the only country to have returned a stolen Amravati-style sculpture.**
> **Difference Between Amravati, Mathura, and Gandhara Schools of Art:**

Gandhara	Mathura	Amravati
1. High influence of helenistic and greek art features.	1. Indegenous in nature	1. Indegenous in nature
2. Grey-sandstone is used. (we also find images made of stucco with lime plaster)	2. Spotted red sandstone	2. White marble
3. Mainly Buddhist images are found	3. Buddhism, Jainism and hindu images are found.	3. Mainly Buddhism
4. Patron- kushana	4. Kushana	4. Shatavahanas
5. Found in north-west india	5. North india. Mainly region of Mathura	5. Deccan region near Krishna-godavari delta.
6. Spiritual Buddha images. Very stylish with wavy hair,	6. Delighted Buddha and not spiritual look	6. Mainly depicts stories of jatakas.
7. Has beard and moustache.	7. No beard and moustache	
8. Lean body.	8. Strong muscular feature	
9. Both seated and standing images are found.	9. Most of them are seated.	
10. Eyes are half closed and ears are large	10. Eyes are open with small Ears.	

Gandhara	Mathura	Amravati
Mainly Buddhist	Influence by all three religions	Mainly Buddhist

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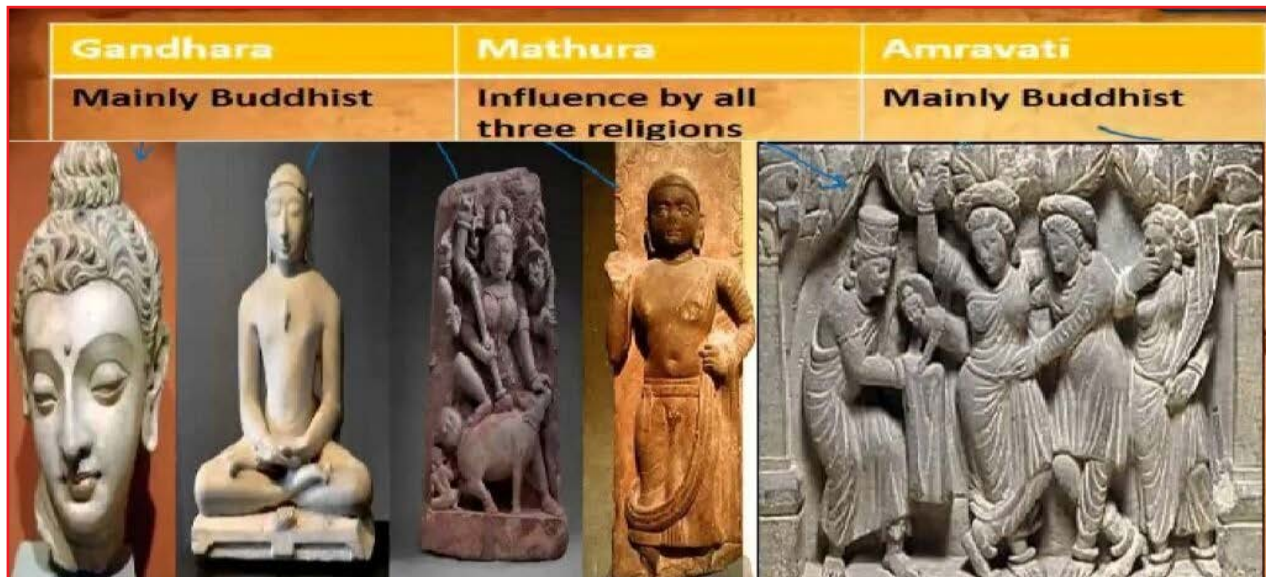
Note:

Geography

Highlights

- *Ocean Circulation and Climate Change*
- *Gulf Stream and Climate Sensitivity*
- *Ladakh's Rock Varnish*
- *India's Deep Drill Mission*

Ocean Circulation and Climate Change

Why in News?

Recently, a study published in Nature Communications has gained attention for its unexpected findings about the **ocean's role in climate change.**

➢ The study reveals that a **weaker ocean circulation might increase atmospheric CO$_2$** levels, contrary to previous assumptions.

What is the Relation Between Climate Change and Ocean Circulation?

➢ **The Role of Overturning Circulation:** Ocean overturning circulation acts as a **global conveyor belt**, moving water and nutrients across the ocean. It is a two-fold process.

  ❍ As **surface waters absorb CO$_2$ and cool,** they become denser and sink into the deep ocean, **transporting carbon away from the atmosphere**.

  ❍ **Deep waters upwell, bring nutrients and carbon** back to the surface, where they **support marine life** and help regulate atmospheric CO$_2$ levels.

OCEAN WARMING

The ocean absorbs most of the excess heat due to global warming caused by greenhouse gas (GHG) emissions, leading to rising ocean temperatures

Increase in Ocean Temperature
1.2°C from 1950 to 2020

Projected to Future Increase
1.7°C to 3.8°C from 2020 to 2100

Causes of Ocean Warming (due to Global Warming)

- **GHG Emissions:** Fossil fuels burning releases CO$_2$ and GHG
- **Deforestation:** Lesser trees → More CO$_2$ & GHG → Global Warming → Warming of Ocean
- **Industrial Activities:** Emit various pollutants that contribute to greenhouse effect
- **Agricultural Practices:** Produces methane and nitrous oxide – potent greenhouse gases
- **Heat Absorption by Oceans:** Oceans absorb ~90% of excess heat generated by GHGs

Impact of Ocean Warming

- **Sea Level Rise:** Warmer water expands, causing sea levels to rise
- **Coral Bleaching:** Corals expels the algae (*zooxanthellae*) living in their tissues and turn completely white
- **Ocean Acidification:** Ocean absorbs ~1/4th of total CO$_2$ thus making it more acidic (non-metallic oxides - acidic in nature)
- **Impacts on Marine Life:** Causes many marine species to shift towards the poles and disrupts food webs
- **Impacts on Climate Patterns:** Influences atmospheric circulation patterns, such as El Niño and La Niña & extreme weather events

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Note:

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- ➤ **Traditional Views on Ocean Circulation and Climate Change:** As climate change progresses, scientists predict a weakening of ocean overturning circulation due to various factors.
  - ○ **Melting Ice Sheets:** Particularly around **Antarctica**, melting ice sheets add freshwater to the ocean, disrupting circulation patterns.
  - ○ **Temperature Changes:** **Global warming** affects ocean temperature gradients, further impacting circulation.
  - ○ The traditional view is that weaker circulation would mean **less carbon is stored in the deep ocean,** but the ocean's carbon sink effect would **stay balanced due to less carbon coming back up.**
- ➤ **New Insights from Research:** New research reveals a **complex feedback mechanism involving ocean circulation**, iron availability, microorganisms, and ligands, showing that weaker ocean circulation could increase atmospheric CO_2 levels contrary to previous beliefs.
  - ○ **Ligands are organic molecules** that bind with iron to keep it soluble and accessible for **phytoplankton** growth, but their **availability can limit the effectiveness** of iron fertilization efforts globally.
- ➤ **Implications for Climate Change Mitigation:** The study highlights the need to **reconsider the ocean's role in climate change mitigation**, as weaker ocean circulation could reduce **carbon sink** effectiveness, leading to higher atmospheric CO2 and exacerbating global warming.

What is Meridional Overturning Circulation (MOC)?

- ➤ **Definition:** The **Meridional Overturning Circulation (MOC)** is a **crucial component of global ocean circulation**, moving water, heat, salt, carbon, and **nutrients primarily in the north-south direction** within and between ocean basins. It plays a **vital role in regulating the Earth's climate.**
- ➤ **Mechanism:**
  - ○ **Northward Flow:** In the Atlantic Ocean, warm and salty surface water is transported from the South Atlantic **towards the Nordic Seas** (near Greenland, England, and Northern Canada). Here, it **cools, becomes denser,** and sinks to **form deep water currents** that flow southwards towards Antarctica.
  - ○ **Antarctic Contribution:** Near Antarctica, **even denser waters are formed**. These waters flow north along the seafloor into the North Atlantic, where they **rise and mix with other waters** before flowing back to the south.
- ➤ **Significance:**
  - ○ The MOC is responsible for about two-thirds of the oceanic **northward heat transport,** making it essential for climate regulation.
  - ○ Changes in the MOC influence regional and global heat distribution, **affecting climate and weather patterns.**
- ➤ **Cycle Duration:** The entire circulation cycle of the MOC, also known as the **oceanic conveyor belt, is extremely slow**. It takes approximately **1,000 years** for a parcel (any given cubic meter) of water to complete its journey along the belt.
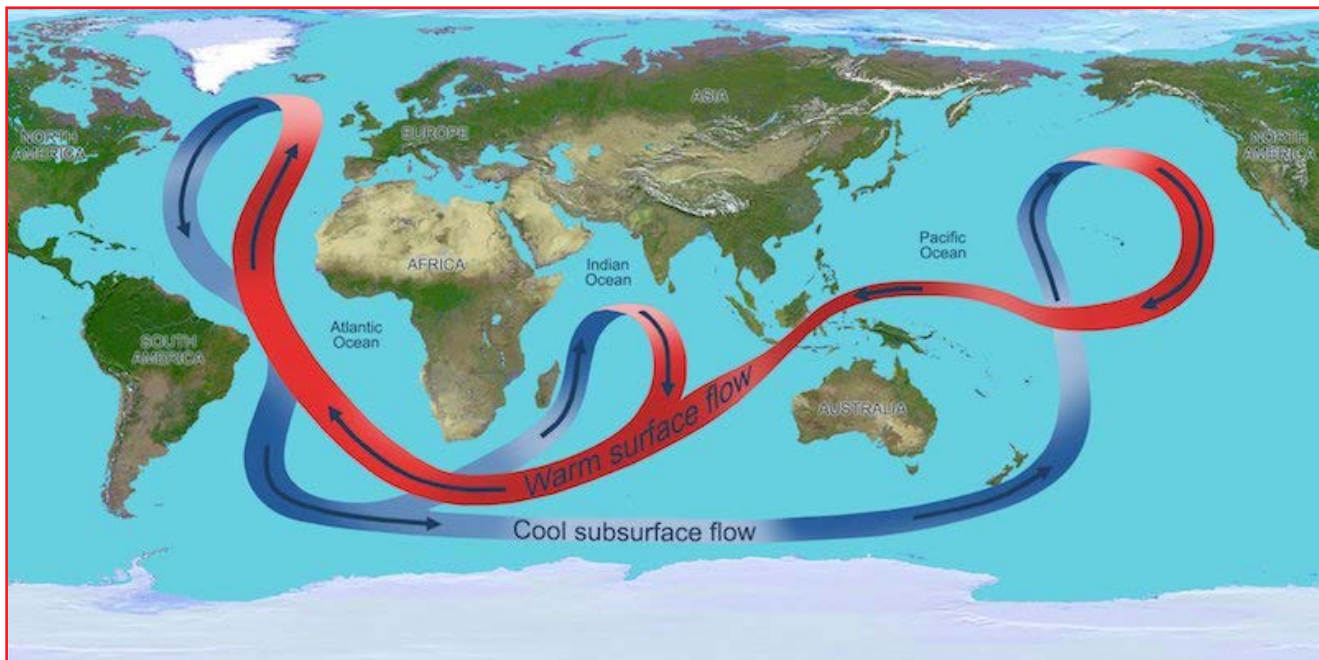
Note:

Gulf Stream and Climate Sensitivity

Why in News?

A recent study, published in Nature, has revealed that the **Gulf Stream** was significantly stronger during the last **ice age (about 20,000 years ago)** due to more powerful winds across the **subtropical North Atlantic.**

➢ This finding suggests that the **Gulf Stream's** strength is sensitive to changes in wind patterns, which could impact future climate if these winds weaken due to **climate change**.

> **Note:**
>
> ➢ The Gulf Stream is a **powerful ocean current that brings warm water from the Gulf of Mexico up the eastern coast of North America**.
>
> ➢ It then crosses the Atlantic Ocean, influencing the climate of Western Europe by making it warmer than it would otherwise be.

What are the Key Highlights of the Study?

➢ **Research Methodology:** Analysis of **fossil foraminifera** from sediment cores off **North Carolina and Florida** was used to gauge the prehistoric Gulf Stream's strength.

❍ Findings showed the **Gulf Stream** was twice as deep and fast during the last ice age.

➢ **Impact on Climate:** Despite the strength of the Gulf Stream, the global climate was much colder than at present.

❍ A weakened Gulf Stream in the future could limit tropical heat reaching Europe, potentially cooling the continent and raising sea levels in North America.

➢ **Role of Atlantic Meridional Overturning Circulation (AMOC):** The Gulf Stream is part of the **AMOC**, which involves both deep water formation and wind patterns.

● Climate change-induced disruptions, such as melting glacial water from **Greenland**, could weaken the AMOC.

● A weakened AMOC could significantly cool Europe by 10 to 15 degrees Celsius, disrupt agriculture, and alter weather patterns.

❍ AMOC Loops and Climate Impact:

● The **AMOC** should be viewed as **interconnected loops** (subtropical and subpolar) rather than a simple **conveyor belt**.

■ Different parts of the AMOC may respond uniquely to climate change, affecting climate impacts.

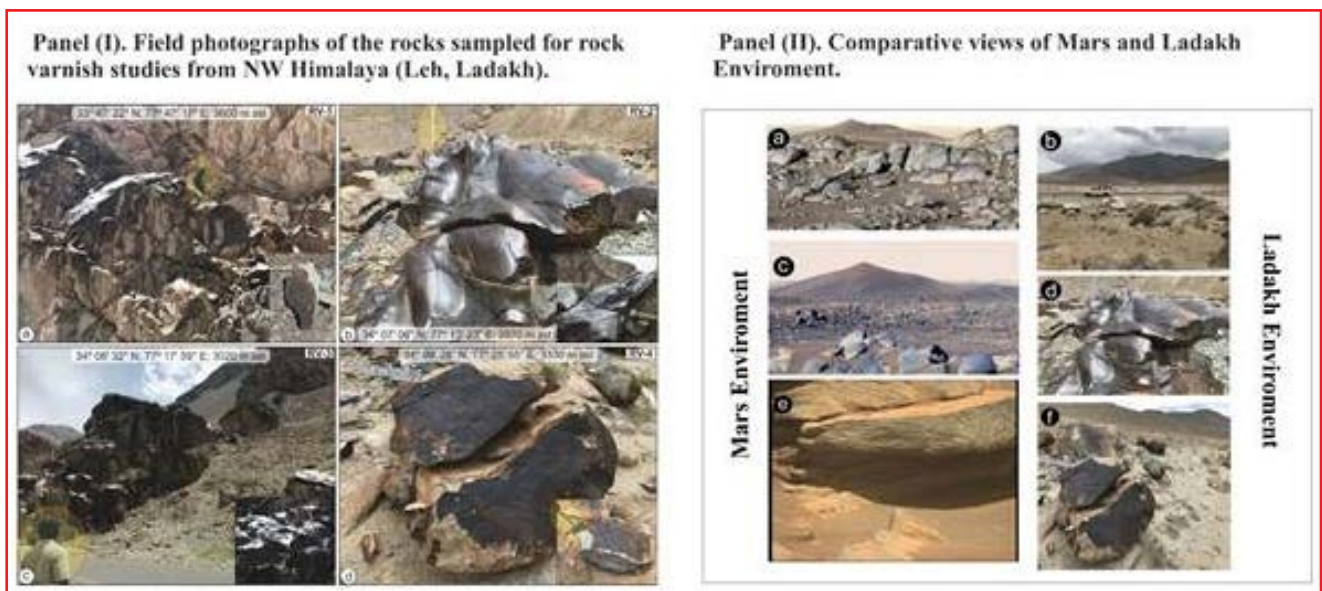| Atlantic Meridional Overturning Circulation (AMOC) |
|---|
| ➢ **About:** AMOC is a major system of ocean currents that forms part of the global ocean conveyor belt or **ThermoHaline Circulation (THC)**, distributing heat and nutrients across the world's oceans. |
| ➢ **Working of AMOC:** AMOC transports warm surface waters from the tropics to the Northern Hemisphere, where the water cools and sinks. It then returns as a bottom current through the South Atlantic, eventually being spread to all ocean basins by the **Antarctic Circumpolar Current (ACC)**, the only current circulating the globe. |
| ➢ **Implications of Decline of AMOC:** A weakened AMOC, including the Gulf Stream, could cause Europe to become very cold, reduce rainfall, and potentially influence **El Nino** and shift monsoons in South America and Africa. |
| ➢ **Causes of Decline:** Predictions suggest **global warming** may weaken major ocean systems. Melting Greenland ice and the "**Last Ice Area**" contribute freshwater that lowers water salinity and density, impeding the AMOC flow. Increased precipitation and river runoff in the Indian Ocean may also impact AMOC. |
| ➢ **Importance:** AMOC is crucial for redistributing heat and regulating global weather patterns. |

Note:
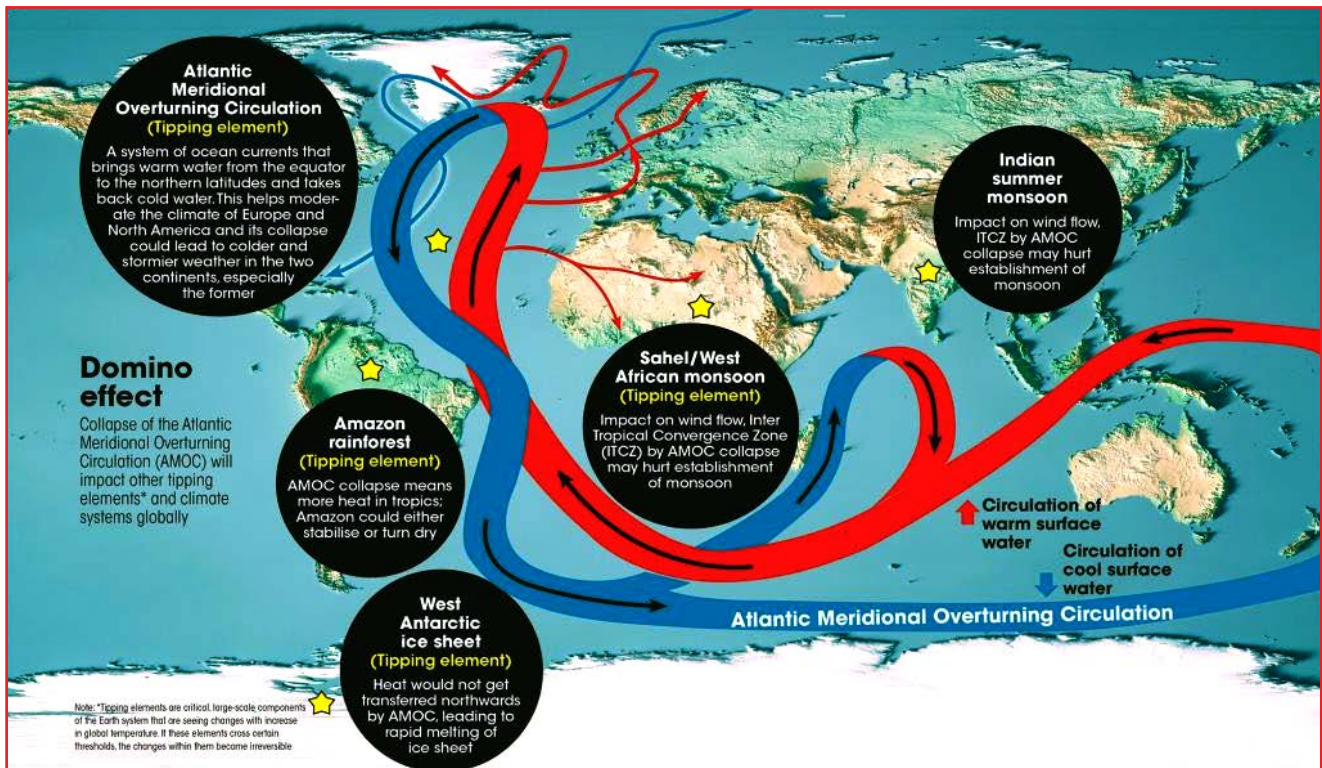
Read more: Ocean currents

Ladakh's Rock Varnish

Why in News?

Recently, **Magnetofossils**, fossilised magnetic particles from magnetotactic bacteria, have been **discovered in rock varnish layers in Ladakh**.

➤ Rock varnish is a **dark brown to black coating** that covers stable, subaerially exposed rock surfaces in arid and semiarid regions.

Panel (I). Field photographs of the rocks sampled for rock varnish studies from NW Himalaya (Leh, Ladakh).

Panel (II). Comparative views of Mars and Ladakh Enviroment.

Note:

What are the Key Highlights of the Study?

➢ **Findings:**
- ❍ The analysis of the rock varnish samples from Ladakh revealed higher concentrations of **oxidized manganese (Mn4+)** and **carboxylic acid** functionality, indicating organic signatures.
- ❍ These findings suggest that the rock varnish in Ladakh, a **potential Martian analogue site**, contains enriched **concentrations of magnetic minerals likely derived from biotic sources.**
  - ● Magnetic minerals are those **that preserve a record of the Earth's magnetic field from when they formed** and can be found in rocks, sediments, and soils.

➢ **Significance:**
- ❍ The study offer**s valuable insights for astrobiology** by demonstrating how life can thrive in extreme environments, **such as Ladakh, the "cold desert of India."**
- ❍ The findings are crucial for planning future space missions by **Indian Space Research Organisation (ISRO)** and other space agencies, including **Mars exploration**, where **identifying habitable environments is a primary goal.**
  - ● Identifying biotic signatures in rock varnish **helps scientists target potential biosignatures on Mars and other planets,** supporting the search for extraterrestrial life
    - ■ A biosignature is **any characteristic, element, molecule, substance, or feature** that can be **used as evidence for past or present life.**

Magentofossils

➢ **About:**
  ❍ **Magnetofossils** refer to fossilised remains of **magnetotactic bacteria** that contain magnetic minerals.
    ● **Magnetotactic bacteria** leave **fossilised magnetic particles** in geological records.
➢ **Magnetotactic Bacteria:**
  ❍ Magnetotactic bacteria **are mostly prokaryotic organisms** that arrange themselves along the **earth's magnetic field.** It was discovered by **Salvatore Bellini in 1963.**
  ❍ These organisms follow **the magnetic field to reach places that had optimal oxygen concentration.** This process is facilitated by the presence of iron-rich crystals within their cells.
    ● **Magnetotactic bacteria** create **tiny crystals of magnetite or greigite** within their cells to navigate **changing oxygen levels** and **sediment saturation** in water bodies.
    ● Crystals within magnetotactic bacteria are arranged in a **chain configuration** through **magnetotaxis.**
  ❍ Rare **giant magneto fossils are less common** than conventional magnetic fossils, these are likely **produced by eukaryotes** rather than bacteria.

India's Deep Drill Mission

Why in News?

Recently, the Ministry of Earth Science has started the task of **scientific deep drilling** of the earth's crust to a depth of 6 km with the help of a specialised institute named **Borehole Geophysics Research Laboratory (BGRL)** in Karad, Maharashtra.

➢ It has already completed the drilling to a depth of 3 km.

Why is Koyna Uniquely Suited for India's Deep Drilling Mission?

➢ **Triggered Seismicity:** Unlike most earthquakes that occur at tectonic plate boundaries, Koyna witnessed a **series of tremors following the construction** of the **Koyna Dam** in 1962. This phenomenon, where human activity (filling the reservoir) triggered earthquakes, is called **Reservoir-Induced Seismicity (RIS)**.
  ❍ Scientists aim **to directly study the earth's composition and stresses at the source** of these triggered earthquakes through deep drilling.
➢ **Active Fault Zone:** The Koyna-Warna region sits on a **geological fault line**, making it **inherently prone to earthquakes.**
  ❍ However, the triggered events here differ from those along plate boundaries.
➢ **Isolated Activity:** There are no other significant sources of seismic activity within a 50 km radius of the Koyna Dam. This isolation makes Koyna an ideal location for focused research.

Note:

What is Scientific Deep Drilling?

➤ **About:**

○ Scientific deep drilling involves **drilling deep into the Earth's crust** to **study its composition, structure, and processes**.

○ This research can provide **insights** into geological formations, natural resources, and Earth's history.

○ Deep drilling projects often aim to **advance our understanding of tectonics, earthquake mechanisms,** and **geothermal energy** potential.

➤ **Techniques and Methods:**

○ **Rotary Drilling**: This method uses a rotating drill bit to cut through rock formations. The drill bit is attached to a drill string, which is rotated by a rig. Drilling mud is circulated to cool the bit and carry rock cuttings to the surface.

○ **Percussion Drilling (Air Hammering):** It uses high-pressure air to power a hammer that rapidly impacts a drill bit, efficiently breaking rock and flushing out cuttings. **It's fast, cost-effective, and versatile for hard rock applications** like mineral exploration, water wells, and geothermal energy, though it can be noisy and is best suited for shallower depths.

● The Koyna drilling technique combines mud **rotary drilling** and percussion drilling (air hammering).

○ **Hydraulic Fracturing (Fracking)**: Sometimes used to create fractures in rock formations, enhancing the flow of fluids for sampling or stimulating production in resource extraction.

○ **Geophysical Surveys**: Employ seismic, magnetic, and gravitational methods to map subsurface structures and identify drilling targets before and during drilling operations.

What are the Other Ways to Study the Interior of the Earth?

➤ Th**e interior of the Earth is studied through direct methods** like drilling and sampling rock from deep boreholes, **and indirect methods** such as seismic wave analysis, gravity measurements, and studying Earth's magnetic field.

○ **Seismic Waves:** The study of seismic waves generated by **earthquakes** provides valuable information about the Earth's interior structure.

● Seismic waves travel through the Earth's interior and their behaviour, such as **refraction and reflection**, helps scientists infer the composition and properties of the different layers.

○ **Gravitational and Magnetic Field Measurements:** Variations in the Earth's gravitational and magnetic fields can **indicate changes in the density and composition of the interior.** These measurements help identify the boundaries between the Earth's core, mantle, and crust.

○ **Heat Flow Measurements:** The heat flowing out of the Earth's interior provides clues about the **temperature and thermal properties of the different layers.** This information is crucial for understanding the Earth's internal processes and dynamics.

○ **Meteorite Composition:** The study of meteorites, which are **believed to be remnants of the early solar system,** can provide insights into the composition and formation of the Earth's interior.

Other Deep Drilling Projects in the World

➤ **Project Mohole of US:** In the 1960s, the US attempted to drill the world's deepest hole to retrieve samples from the boundary between Earth's **crust** and **mantle**, known as the **Moho Discontinuity**.

○ It was disbanded in 1966, but it demonstrated the potential for deep-ocean drilling to yield new geological insight about our planet.

➤ **Kola Superdeep Borehole:** It is the **world's deepest man-made hole in Russia** started in the 1970s, reaching a depth of **12,262 metres**.

○ It revealed unexpected findings such as the absence of the **"Conrad discontinuity,"** the presence of **liquid water at unexpected depths,** and microscopic fossils dating back 2 billion years.

○ It was discontinued in 1992, and the hole was sealed in 2005.

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> **China's Deep Hole Project:** China is drilling a **10,000-meter deep hole** in the **Xinjiang region** to explore new frontiers above and below the Earth's surface.
>
> ❍ It aims to penetrate more than 10 continental strata and reach the **cretaceous system,** dating back 145 million years.
>
> **Deep Sea Drilling Project (DSDP):** It began in **1966,** which involved **drilling and coring in various oceans,** leading to significant scientific discoveries, including the **identification of salt domes and their potential for oil exploration.** It was ended in 1972.
>
> **The Integrated Ocean Drilling Project (IODP)**: It is an international initiative using ocean research platforms to **study Earth's history and processes** via **seafloor samples**.
>
> ❍ Its goals include **understanding Earth's long-term processes,** exploring the **deep biosphere**, studying **climate history,** and investigating **Earth's crust and mantle**.
>
> ❍ IODP employs research vessels from Japan, the US, and other partners for global expeditions, advancing planetary knowledge.

What are the Key Findings from the Deep Drilling Mission in Koyna?

> **Region's Critical Stress:** The Koyna region is highly stressed, making it susceptible to small stress perturbations that could trigger frequent, small-magnitude earthquakes.
>
> **Water Presence to 3 km:** Water found down to 3 km is meteoric or rain-fed, indicating deep percolation and circulation.
>
> **Insights into Reservoir-triggered Earthquakes:** The mission revealed 1.2 km of 65 million-year-old Deccan trap lava flows overlying 2,500-2,700 million-year-old granitic basement rocks.
>
> **Rock Information:** Core samples from 3 km depth provided new information on the **physical and mechanical properties of rocks**, the chemical and isotopic composition of formation fluids and gases, temperature and stress regimes, and fracture orientations.
>
> **Data Validation:** High-resolution images of the borehole wall using **acoustic and micro-resistivity techniques** allow global scientists to validate data from other cores.
>
> **Hydraulic Fracturing and Fault Detection:** The team conducted hydraulic fracturing experiments to measure the in-situ stress regime of the rocks. By integrating various datasets and advanced analysis, they detected and studied buried fault zones.

What is the Significance of Deep Drilling Mission?

> **Enhanced Earthquake Understanding and Geohazard Management:** It can be achieved by **installing sensors in deep boreholes** to **monitor fault lines,** leading to better **predictive models and risk mitigation**.
>
> ❍ Additionally, deep drilling provides **precise data on the Earth's crust,** essential for managing geohazards and **exploring geo-resources** like minerals and hydrocarbons.
>
> **Verification of Geological Models**: Drilling allows for direct observation and sampling, confirming or refuting geological models and enhancing our **understanding of tectonic processes** and crustal dynamics.
>
> **Technological Innovation and Self-Reliance**: Investing in deep drilling drives advancements in seismology, drilling techniques, sensor development, and data analysis, promoting technological self-reliance in India.
>
> **Global Scientific Contribution**: Findings from deep drilling projects in India **contribute to global geoscience knowledge**, fostering **international collaboration** and enhancing overall understanding of Earth's systems.

What are the Challenges with Deep Drilling Missions?

> **Rig Capacity:** The drilling rig's hook load capacity becomes a critical limitation at greater depths, requiring a significantly more powerful rig for 6 km compared to the 100-tonne rig used for the 3 km pilot.
>
> **Drilling Complexity:** Drilling through fractured and seismically active rock formations becomes **increasingly complex at greater depths**, with higher risks of equipment getting stuck and complications in troubleshooting due to limited access.
>
> **Core Handling:** Extracting and lifting the long, heavy rock cores from over 3 km depth poses significant technical challenges.
>
> **Borehole Stability:** Deeper boreholes are **more prone to encountering fault lines** and **fracture zones**, which can compromise borehole stability and require specialised equipment for steering the drill.
>
> **Human Resources:** The extended **duration of deep drilling operations**, lasting 6-8 months for 3 km and 12-14 months for 6 km, places a significant burden on the highly skilled technical personnel required to work on-site 24/7 in harsh conditions.

Note:

INTERIOR OF THE EARTH

1 THE CRUST

- Thin, outermost layer
- Oceanic crust – thinner
  - Mean thickness -5 km
  - Made up of Silica and Magnesium (SiMa)
- Continental crust – thicker
  - Mean thickness - 30 km
  - Made up of Silica and Aluminum (SiAl)
  - Thicker in the areas of major mountain systems.
    - Around 70 km thick in the Himalayan region.
- Temperature increases with depth (rises by up to 30° C for every km)

Lithosphere

- Rigid outer layer, thickness: 100 km
- Consists of the crust and the upper mantle
- Divided into tectonic plates responsible for large-scale changes in the earth's geological structure (folding, faulting)

2 THE MANTLE

- Extends from Moho's discontinuity to a depth of 2,900 km
- Upper portion is called asthenosphere
  - Zone of weak rocks; in semi molten or jelly like state
  - Extends upto 400 kms
  - Main source of magma that comes out of volcanic eruptions

CRUST
MANTLE
OUTER CORE
INNER CORE

3 THE CORE

- Lies between 2900-6370 km below the earth's surface
- Made up of heavy materials, primarily nickel (Ni) and iron (Fe) - NiFe
- Outer core –
  - Between 2900-5100 kms
  - Liquid because of not enough pressure to solidify
- Inner core –
  - Between 5100-6370 kms
  - Solid – it can transmit secondary waves (earthquake) which outer core can't
- Denser than Mantle

Boundaries/discontinuities between Earth's layers

1. Conorod Discontinuity– between upper and lower crust
2. Mohorovicic Discontinuity (Moho) – separates the crust from the mantle, its average depth being about 35 km.
3. Repiti Discontinuity – between the upper and lower mantle
4. Gutenberg Discontinuity – lies between the mantle and the outer core.
5. Lehman Discontinuity- between inner and outer core

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Note:

Miscellaneous

Highlights

● *Kargil Vijay Diwas* ● *National Flag Day*

Kargil Vijay Diwas

Why in News?

Kargil Vijay Diwas is celebrated every year on July 26 to pay tribute to the bravery of Indian soldiers who made the ultimate sacrifice for the country during the **Kargil War (1999)**.

➢ This event marks the conclusion of the Kargil War between India and Pakistan that started in May 1999.

What is Kargil Vijay Diwas?

➢ **About:** Kargil Vijay Diwas, or Kargil Victory Day, is a significant day observed annually on **July 26** in India.

   ❍ The day commemorates **India's triumph** in the 1999 conflict with Pakistan and honours the bravery and sacrifices of Indian soldiers during the war.

   ❍ The Kargil war of 1999 was the first military confrontation in a **nuclearized SouthAsia**, and arguably the **first real war** between **two Nuclear States**.

THE BATTLEFIELDS

① Drass was the main brigade of battle

② Muskoh Valley. An inhospitable terrain that was the scene of some of the bloodiest battles

③ Tiger Hill and Tololing, two of the critical peaks reclaimed from intruders

④ Kharbu and Kaksar, two exposed points on the Drass-Kargil road that were most shelled
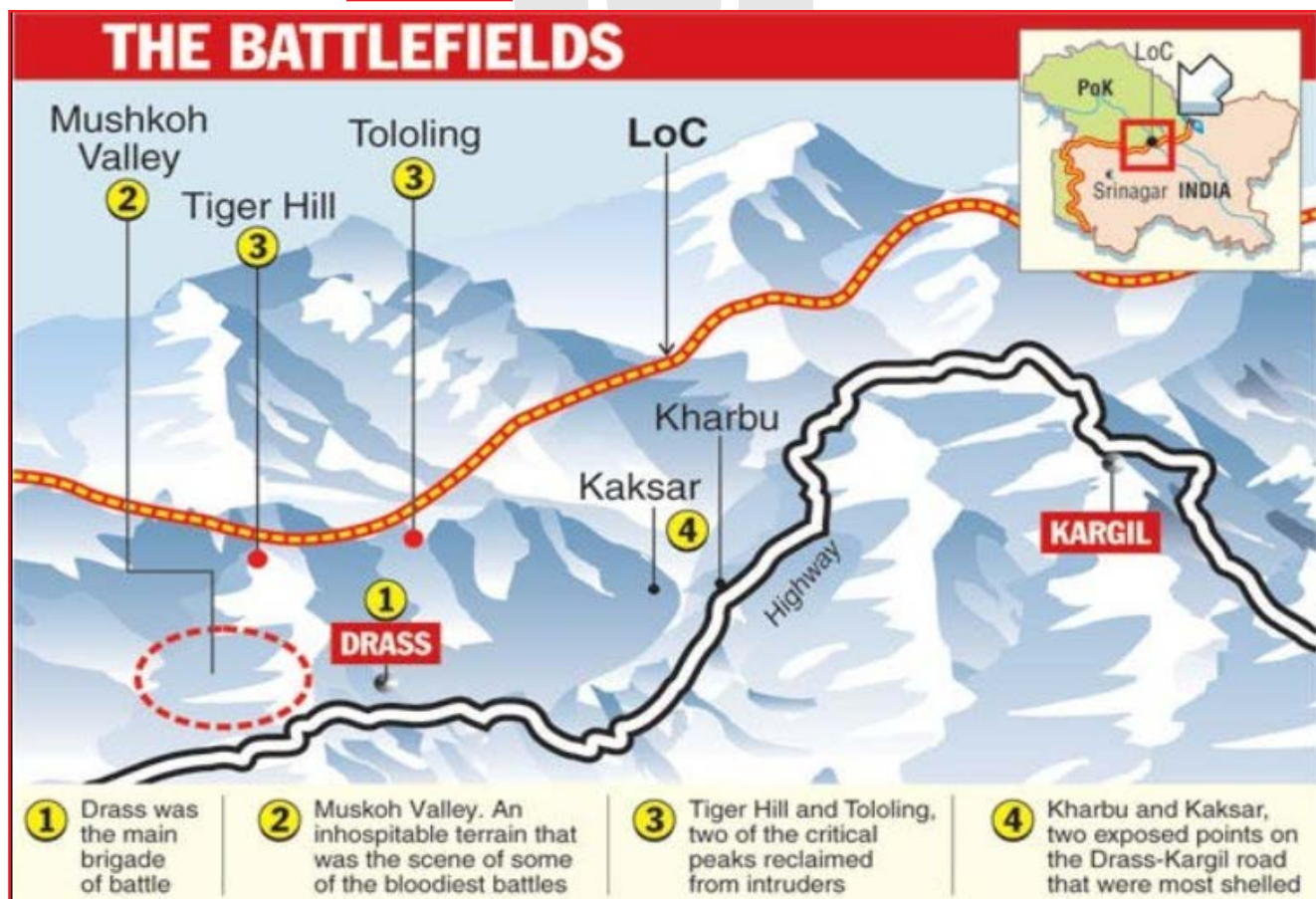
Note:

➤ **Background:**

○ India and Pakistan have a history of conflicts, including a significant one in 1971 that led to the creation of **Bangladesh.**

○ Post-1971, both nations faced ongoing tensions, particularly vying for control over the **Siachen Glacier** through military outposts on nearby mountain ridges.

○ In 1998, both countries conducted **nuclear tests**, escalating tensions. The **Lahore Declaration** in February 1999 aimed to resolve the **Kashmir conflict** peacefully and bilaterally.

○ During the winter of 1998-1999, Pakistani armed forces **covertly** trained and deployed troops across the **Line of Control (LOC)** to seize fortified positions overlooking **NH 1A** in the **Drass** and **Batalik Sectors** of **Kargil, Ladakh**.

○ Indian troops initially mistook the **infiltrators for terrorists or 'jihadis,'** but it soon became clear that the attack was a well-organised **military operation**.

○ It was fought in the summer of 1999 along a 170km mountain frontier, stretching from **Mashkoh Valley** to **Turtuk** in the Kargil sector,

○ In response, **India** launched **Operation Vijay**, deploying over 200,000 troops to the region to counter the incursion.

➤ **Significance of Kargil War Diwas:**

○ Since 1999, July 26 has been observed as Kargil Vijay Diwas to **remember and honour** the **supreme sacrifices** made by Indian soldiers during the war**.**

○ The **Kargil War memorial in Dras** was built in 2000 by the Indian Army to commemorate the **success of Operation Vijay in 1999.**

- It was later renovated in 2014. It is also known as the **"Dras War Memorial" due to its location in the town of Dras** in the Kargil district of Jammu and Kashmir.

○ The **National War Memorial**, inaugurated in 2019. It is dedicated to soldiers who sacrificed their lives in various conflicts and missions, including the **Sino-Indian war in 1962, Indo-Pak wars in 1947, 1965, and 1971, Indian Peace Keeping Force Operations in Sri Lanka 1987-90, and the Kargil Conflict in 1999.**

➤ **Impact of Kargil War:**

○ **Global Recognition of the Line of Control (LoC):** The international community largely **recognized** the **LoC** as the **de facto border** between India and Pakistan, reinforcing India's stance on the territorial integrity of Jammu and Kashmir.

○ **Strengthened Strategic Partnerships:** Kargil also marked the turning point in **Indo- US relations**. India was regarded as a **responsible nuclear actor** in the international arena leading to the next step in **Strategic Partnership**, culminating in the **Indo-US Nuclear Deal.**

○ **Diplomatic Gains:** The war placed significant **diplomatic pressure on Pakistan**, culminating in a high-profile visit by Pakistan's Prime Minister Nawaz Sharif to the U.S. on July 4, 1999, where he faced **strong criticism** from the US President. This international condemnation of Pakistan's actions helped **isolate** it **diplomatically**.

○ **Highlighting Nuclear Diplomacy:** The conflict brought **global attention** to the volatile relationship between India and Pakistan, especially concerning **nuclear risks**. The war underscored the potential for **conflict escalation** in a **nuclear-armed region**.

○ **Impact on Global Perception:** The war highlighted India's military capabilities and its ability to effectively manage and respond to regional conflicts, enhancing its **global stature** as a **rising power** with robust defence capabilities.

Operations Associated with the Kargil War

➤ **Operation Vijay:** Operation Vijay was the code name for India's military response to the Pakistani incursion in the Kargil region.

○ The operation aimed to clear the infiltrators from the Indian side of the **Line of Control (LOC)** and restore the status quo.

➤ **Operation Safed Sagar:** The Indian Air Force conducted **"Operation Safed Sagar"** to support ground operations. **High-altitude operations** involved aircraft like MiG-21s, MiG-23s, MiG-27s, Mirage 2000, and Jaguars.

➤ **Operation Talwar:** The Indian Navy's **"Operation Talwar"** ensured **maritime** security and **deterrence**. The Navy's readiness sent a strong message to Pakistan about potential responses to further aggression.

Note:

What Reforms were Undertaken After the Kargil War?

➢ **Security Sector Reforms**: The Kargil War prompted a review of India's National Security Structure, leading to increased transparency and the establishment of the **Kargil Review Committee (KRC)** led by **K Subrahmanyam**. The KRC report highlighted deficiencies in intelligence, border, and defence management, leading to significant security sector reforms and institutional changes.

➢ **Creation of the Chief of Defence Staff (CDS):** It was created to promote **"jointness"** among the **Army, Navy, and Air Force**.

- ❍ The **CDS** acts as the **single-point military advisor** to the government and oversees the **integration** of the three services.

➢ **Establishment of Tri-Service Commands: Andaman and Nicobar Command** was **created** as a test-bed for **future theatre commands**, integrating resources from the Army, Navy, and Air Force.

➢ **Intelligence Reforms: National Technical Research Organisation (NTRO)** was established to enhance technical intelligence capabilities.

- ❍ **Defence Intelligence Agency (DIA)** was formed to **coordinate intelligence** across all three services.

- ❍ **Technical Coordination Group** was created to oversee **high-tech intelligence** acquisitions.

- ❍ **National Security Advisor (NSA)** was designated as the **coordinator** of all intelligence agencies, supervising the NTRO and ensuring better intelligence integration.

➢ **Border Management Enhancements:** Improved **surveillance** and **patrolling** along the borders to prevent incursions. Deployment of better technology for border security. E.g., installation of **thermal imaging cameras, motion sensors** and radar systems.

➢ **Operational Reforms:** Weapon systems, artillery, and communication equipment were **modernised**. Increased focus on **specialised training** for **high-altitude warfare** and joint operations. E.g., **Dhanush Artillery Gun**, **Akash surface-to-air missile** etc.

➢ **Improved Coordination and Communication:** Emphasis was put on **joint exercises** and operations among the Army, Navy, and Air Force to ensure better coordination. Enhanced mechanisms were established for **real-time** sharing of **intelligence** between different agencies and military branches.

➢ **Counter-Terrorism Measures: Intelligence Bureau (IB)** became the principal **counter-terrorism agency**. Cunter-terrorism capabilities and coordination among various security agencies were **strengthened**.

➢ **Indigenous Satellite Navigation System:** The space-based **navigation system** maintained by the **US government** would have provided vital information, but the US **denied it to India**. A need for an **indigenous satellite navigation** system was felt earlier, but the Kargil experience made the nation realise its **inevitability**. E.g., Development of **Indian Regional Navigation Satellite System (IRNSS).**

➢ **Doctrinal Changes**: The war led to the evolution of Indian military doctrines, including the **Cold Start Doctrine**. Kargil highlighted the need for a holistic doctrine to address multi-dimensional proxy wars and shaped future military strategies.

National Flag Day

Why in News?

India's **National Flag Day** commemorates the adoption of the Indian national flag on **22nd July 1947**, by the Constituent Assembly, a few days before the country attained Independence from the British on **15th August 1947.**
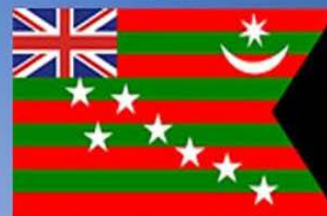
Note:

HISTORY OF INDIAN NATIONAL FLAG

1906 — Unofficial flag of India in 1906

1907 — The Berlin committee flag, first raised by Bhikaiji Cama in 1907

1917 — The flag used during the Home Rule movement in 1917

1921 — The flag unofficially adopted in 1921

1931 — The flag adopted in 1931. This flag was also the battle ensign of the Indian National Army

1947 — The present Tricolour flag of India

What is National Flag Day?

➢ **About:**
  ○ On **22ⁿᵈ July 1947**, the **Constituent Assembly of India**, chaired by **Dr. Rajendra Prasad,** **adopted the National Flag.**
  ○ **The National Flag symbolises national pride, unity, and the struggle for freedom**, and is a tribute to the sacrifices of freedom fighters.

➢ **Resolution and Significance:**
  ○ **Pandit Jawaharlal Nehru** moved the Resolution, stating, "Resolved that the National Flag of India shall be **horizontal tricolour of deep Saffron (Kesari), white and dark green in equal proportion.**
    ● In the centre of the white band, there shall be a **Wheel in navy blue to represent the Charkha**. The design of the Wheel shall be that of the Wheel (Chakra) which appears on the abacus of the **Sarnath Lion Capital of Asoka.**
    ● The diameter of the Wheel shall approximate to the width of the white band. **The ratio of the width to the length of the Flag shall ordinarily be 2:3.**
  ○ The **assembly unanimously adopted the motion**, marking the end of British rule and affirming India's commitment to freedom and future prosperity.

What are the Major Laws Governing the National Flag?

➢ **About:**
  ○ The hoisting/use/display of the Indian National Flag is governed by the **Prevention of Insults to National Honour Act, 1971** and the **Flag Code of India, 2002.**

Note:

➢ **Flag Code of India, 2002:**

  ○ Provisions:

- Whenever the National Flag is displayed, it should **occupy the position of honour** and should be distinctly placed.

- A **damaged or dishevelled Flag** shall not be displayed and shall be **destroyed as a whole privately.**

  - The two sanctioned methods to dispose of the Tricolour are **either burying or burning.** Dignity should always be maintained while disposing of the national flag.

- The Flag should **not be flown from a single masthead** simultaneously with any other flag or flags.

- The Flag **should not be flown on any vehicle** except of the dignitaries mentioned in **Section IX of Part III of the Flag Code,** such as President, Vice-President, Prime-Minister, Governors etc.

- **No other flag or bunting should be placed higher** than or above or side by side with the National Flag.

- A member of the public, a private organisation or an educational institution may **hoist/display the National Flag on all days and occasions**, ceremonial or otherwise, consistent with the dignity and honour of the National Flag.

  ○ Recent Amendments:

- The Flag Code of India, 2002 was amended in 2021 **allowing polyester or machine made Flag and again in** 2022 allowing flag to be flown day and night.

- **The National Flag shall be rectangular in shape.** The Flag can be of any size but the ratio of the length to the height (width) of the Flag shall be 3:2.

➢ **The Prevention of Insults To National Honour Act, 1971:**

  ○ Anyone who, **in a public place or visible to the public, disrespects or brings into contempt the Indian National Flag** or the Constitution of India through burning, mutilating, defacing, disfiguring, destroying, trampling, or any other act (including spoken or written words), **will be punished with up to three years of imprisonment, a fine, or both.**

Note:

Rapid Fire Current Affairs

Highlights

- Sardar Udham Singh
- Seaweed Based Biostimulants
- CRPF Foundation Day
- Mekedatu Project
- Employment Data Collection Mechanism
- International Tiger Day 2024
- Ek Ped Maa Ke Naam Campaign
- India Assumes Chairmanship of Asian Disaster Preparedness Centre
- World Hepatitis Day
- Kalam's 9th Death Anniversary
- Multilateral Exercise Khaan Quest 2024
- Manu Bhaker Wins Olympic Bronze
- Revamped Model Skill Loan Scheme
- Leander Paes in Tennis Hall of Fame
- The Indian Newspaper Society (INS) Towers
- New Pension Scheme 'Vatsalya'
- Subvention Scheme
- Typhoon Gaemi
- Olympic Order Awarded to Abhinav Bindra
- Rashtrapati Bhavan Halls Renamed to Reflect Indian Cultural Values
- ECOSOC Forum on Sustainable Development
- SHREYAS Scheme
- Successful Phase-II Ballistic Missile Defence System Test
- 168th Birth Anniversary of Bal Gangadhar Tilak
- China to Raise Retirement Age
- Neutrinos
- NASA Sent Hollywood Song to Venus
- National Mission on Cultural Mapping (NMCM)
- Nipah Virus
- Lal Dora-Free Haryana
- National Time Release Study Report 2024
- Chandra Shekhar Azad Birth Anniversary
- GeM Learning Management System
- Sindhu-Sarasvati Civilisation and Ujjayini Meridian
- Primary Amoebic Meningoencephalitis
- Fungi- Mushroom
- Captain Supreetha CT First Woman Officer from AAD Deployed at Siachen
- Minami-Torishima Island
- SC gets Two New Judges, First From Manipur
- Dyson Spheres
- Chandipura Virus Infection
- India Completes UN Human Rights Review
- Mutual Agreement on Organic Products
- ECI to Verify Microcontrollers of EVMs
- India-Malaysia Agricultural Ties
- Gevra and Kusmunda Among World's Largest Coal Mines
- Carlos Alcaraz won his 4th Grand Slam
- Shivaji Maharaj's Wagh Nakh Returns to Maharashtra
- Operation Nanhe Faristey
- E-Office Implementation in Government Bodies
- Indian Aid to Palestinian Refugees
- 4th Periodic Review of the ICCPR
- Drone Test at World's Highest Pass
- Public Sector Lenders Raise MCLR
- States Oppose PM-SHRI
- World Day for International Justice
- Project PARI
- Euro 2024
- Enhancing Waterways Potential in Nagaland
- Pradhan Mantri Colleges of Excellence
- World's Rarest Whale
- 132nd session of IMO
- United States Secret Service
- GRSE Accelerated Innovation Nurturing Scheme (GAINS 2024)
- Consumer Price Index for Industrial Workers
- Samvidhaan Hatya Diwas
- Specialised Adoption Agencies (SAAs)

Note:

Sardar Udham Singh

Sardar Udham Singh, who was hanged on 31st July 1940, in London, remains a symbol of India's unwavering resolve to seek justice for the **Jallianwala Bagh massacre**.

➢ Born on 26th December 1899, in Sunam, Punjab, Singh exposure to Sikhism and revolutionary activities, including the **Komagata Maru incident** and the **Ghadar Party's** uprising, **shaped his anti-colonial stance.**

➢ Singh was deeply affected by the **Jallianwala Bagh massacre**, 1919, where British troops killed hundreds of unarmed Indians.

➢ Singh vowed to avenge the **massacre by killing Michael O'Dwyer,** the then **Lieutenant Governor of Punjab**, who had **ordered the massacre.**

➢ In 1924, Udham Singh joined the Ghadar Party to overthrow colonial rule. In 1927, he was arrested for illegal possession of firearms and sentenced to five years in prison.

❍ In 1940, Singh successfully assassinated Michael O'Dwyer during a meeting at **Caxton Hall in London.** The act was a dramatic statement against British rule.

➢ Singh was tried and sentenced to death and was **hanged in Pentonville Prison, London.**

❍ A district in Uttarakhand, Udham Singh Nagar, was named after him in 1995 as a tribute.

Sardar Udham Singh
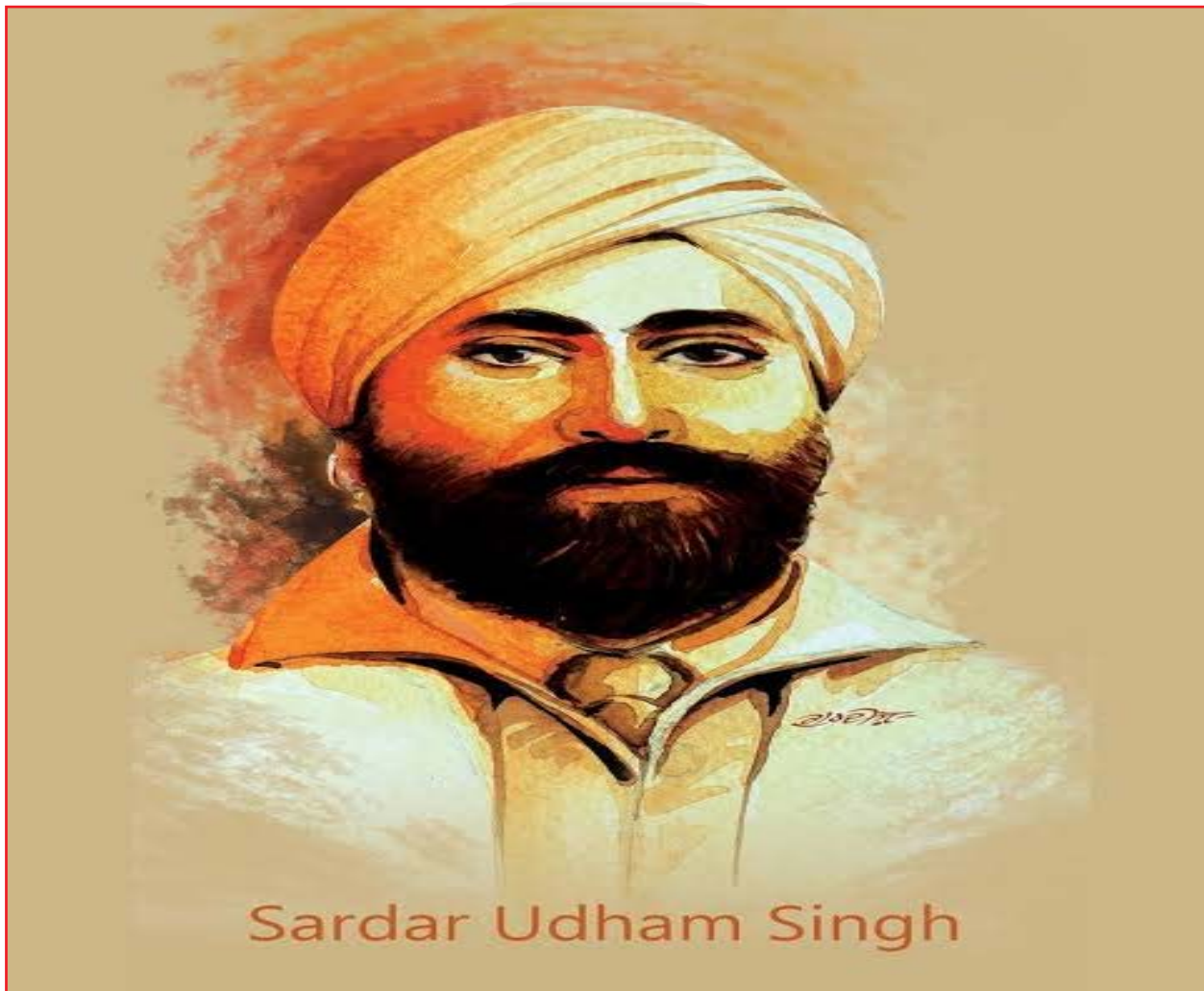
Read more: Jallianwala Bagh Massacre

Note:

Seaweed Based Biostimulants

Recently, the Government of India has incorporated **seaweed-based biostimulants** under the **Fertilizer (Control) Order, 1985** to **ensure a supply of good quality biostimulants** to farmers.

➢ **Biostimulants:** Biostimulants **promote natural processes in plants** or their roots, improving nutrient absorption, efficiency, stress tolerance, and overall crop quality and yield.

  ❍ They align **well with organic farming** as they also emphasise on **ecological balance, soil health, and reduced reliance** on synthetic chemicals.

➢ The government is promoting seaweed cultivation in the country through the **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.

➢ The government is also promoting **organic farming** through schemes like **Paramparagat Krishi Vikas Yojana (PKVY)** and **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)**.

  ❍ **PKVY is being implemented in all the States other-than North Eastern States**, across the country whereas **MOVCDNER** scheme is being implemented **exclusively in the NE States.**

  ❍ Both the schemes stress on **end-to-end support to farmers** engaged in organic farming i.e. from production to processing, certification and marketing and post-harvest management Training and Capacity Building are integral part of the scheme.
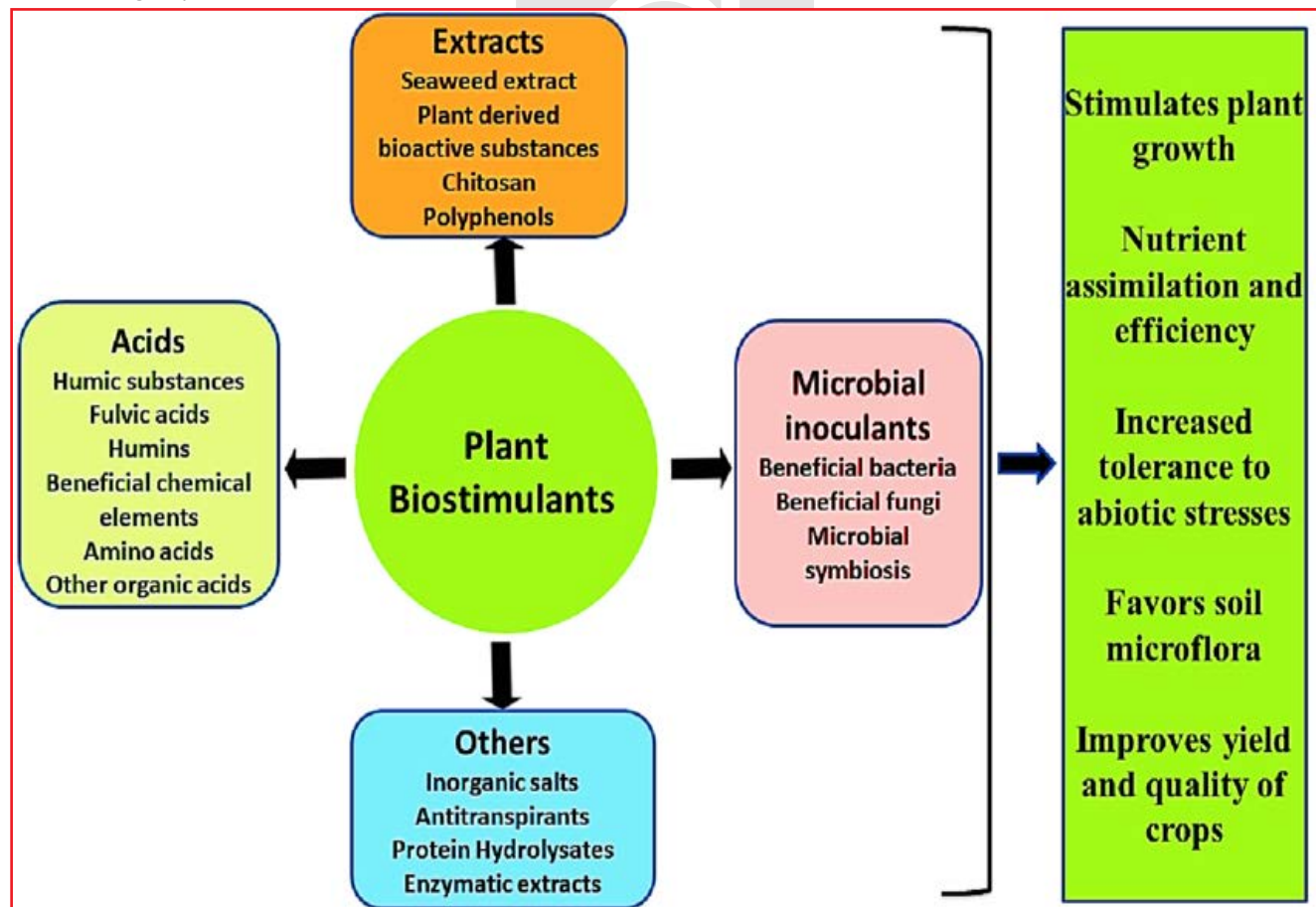
Read More: Organic Farming in India

Note:

CRPF Foundation Day

27th July is observed as the **foundation day of the Central Reserve Police Force (CRPF)**.

➢ **Inception and Evolution:**

○ The CRPF was initially **established as the Crown Representatives Police in 1939** in response to political turmoil and unrest within the princely states.

○ The force was **renamed the Central Reserve Police Force in 1949**.

○ **Sardar Vallabh Bhai Patel, the then Home Minister**, envisioned a multifaceted role for the CRPF, aligning its functions with the evolving needs of a newly independent nation.

➢ **Key Roles and Responsibilities:**

Central Reserve Police Force — **Key Responsibilities**

1. Crowd Control
2. Counter-Insurgency
3. Left-wing Extremism Management
4. VIP Security
5. Infrastructure Protection
6. Election Security
7. Environmental Protection
8. Disaster Manageament
9. UN Peacekeeping Missions

➢ Specialised Units:

○ The CRPF has several specialised units, including the **Rapid Action Force (RAF)**, **Commando Battalion for Resolute Action (CoBRA)**, **VIP Security Wing, and Mahila Battalions**.

➢ **Achievements and Contributions:**

○ The force has thwarted attacks on important national landmarks, **controlled militancy in Punjab and insurgency in Tripura**, and made significant contributions to **eradicating Naxalism.**

➢ **Honouring the Bravehearts:**

○ The CRPF has paid a heavy price, with 2,255 of its **soldiers making** the supreme **sacrifice** and being honoured with decorations, including the **George Cross, Ashok Chakra, Kirti Chakra, Shaurya Chakra**, etc.

Note:

CENTRAL ARMED POLICE FORCES (CAPF)

The CAPF includes the seven security forces in India functioning under the Ministry of Home Affairs.

Assam Rifles (AR)

- **Origin:** 1835, as militia called '**Cachar Levy**'
  - **Erstwhile objective:** To protect British Tea estates
- **Current Objectives:**
  - Conducting anti-terrorist operations in NER
  - Ensuring security at India-China and India-Myanmar borders
- **Imp Role in:**
  - Sino-India War 1962
  - Indian Peace Keeping Force (IPKF) to Sri Lanka (1987)

Due to long association with tribal belts, Assam Rifles are also called 'Friends of the North East'

Border Security Force (BSF)

- **Origin:** 1965
- **Objectives:**
  - Securing land borders with Pakistan and Bangladesh
  - Also performing Anti-Infiltration in Kashmir Valley
  - Counter Insurgency in NER
  - Anti-Naxal Operations in Odisha and Chhattisgarh
- **Wings:** Air wing, marine wing, an artillery regiment, and commando units

BSF is India's First Line of Defence and the world's largest border guarding force

Central Reserve Police Force (CRPF)

- **Pre-Independence Origin:** 1939 (Crown Representative's Police)
- **Post Independence:** 1949 - under CRPF Act, became Central Reserve Police Force
- **Objective:** Crowd control, riot control, counter militancy/insurgency operations, etc.

CRPF is the principle central police force for internal security

Indo-Tibetan Border Police (ITBP)

- **Origin:** 1962
- **Objectives:**
  - Deployed on border from Karakoram Pass (Ladakh) to Jachep La (Arunachal Pradesh) (~3488 km of Indo-China Border)
  - Manning Border Outposts on altitudes 9000 ft - 18700 ft in Western, Middle and Eastern sectors of Indo-China Border

ITBP is India's specialised mountain force & the first responder to natural disasters

National Security Guard (NSG)

- **Origin:** 1984 (came into being in 1986), following **Operation Blue Star**
- **Objectives:** Counter-terrorism unit/Federal Contingency Force
- **Task-oriented Force - Two complementary elements:**
  - Special Action Group (SAG)
  - Special Ranger Groups (SRG)

Sashastra Seema Bal (SSB)

- **Origin:** 1963
- **Objectives:**
  - Guarding Indo-Nepal and Indo-Bhutan borders
  - Enhance border security, curb trans-border crimes, prevent unauthorised entry/exit, halt smuggling, etc.

Central Industrial Security Force (CISF)

- **Origin:** Central Industrial Security Force Act, 1968
- **Objectives:** Ensuring security of major critical infrastructure installations

CISF is the sole CAPF unit with a specialised fire wing

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Read more: Central Armed Police Forces Reforms

Mekedatu Project

Karnataka Chief Minister (CM) has highlighted the **Mekedatu balancing reservoir project** as a key solution to address water-sharing issues with Tamil Nadu during monsoon distress years, asserting that the project would benefit both states, particularly in times of water scarcity.

➤ The Mekedatu multi-purpose project aims to build a balancing reservoir near Kanakapura to provide **drinking water to Bengaluru and generate 400 MW of power.**
  - ○ Mekedatu is a deep gorge at the confluence of the **Cauvery and Arkavathi rivers.**

➤ The **Supreme Court,** has settled the sharing of Cauvery water, with Karnataka **required to release 177.25 thousand million cubic (tmc) feet,** but only during a normal year, not in a year of deficit rainfall. Tamil Nadu has a right to 177.25 tmc ft, but **only during a normal monsoon.**

Note:

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❍ Karnataka Chief Minister(CM) emphasises that the Mekedatu reservoir will help meet Bengaluru's drinking water needs and enable Karnataka to release water to **Tamil Nadu during a distress year, as 65 tmc ft** of water can be impounded, which would otherwise end up in the sea.

➢ However, Tamil Nadu, the lower riparian state, opposes the project as it argues that the **Mekadatu dam would significantly reduce the water flow downstream,** negatively impacting the state's agricultural activities and water supply, and the **Cauvery tribunal and Supreme Court order** require the **lower riparian state's no-objection for any project on the Cauvery river.**

MEKEDATU PROJECT
KARNATAKA

- Mekedatu is Rs 9,000-cr project proposed at Ontigondlu in Karnataka.
- Project site is at confluence of Cauvery & its tributary Arkavathi.
- Reservoir aimed at ensuring drinking water to Bengaluru & adjacent areas.
- Project also envisioned to generate 400 MW of power.

Cauvery river near Mekedatu

MEKEDATU VIEW POINT

PROPOSED RESERVOIR PROJECT

ANDHRA PRADESH
KARNATAKA
CAUVERY RIVER
TAMIL NADU
KERALA
MAP NOT TO SCALE

ThePrint

Read more: Mekedatu Project

Employment Data Collection Mechanism

The Union government is set to create an **Employment Data Collection Mechanism (EDCM)** in collaboration with all Ministries to address concerns over the **lack of comprehensive data on employment trends,** following concerns highlighted in the **Economic Survey for 2023-24.**

➢ The EDCM aims to improve employment data and address gaps in employment, **unemployment, wage loss, and job loss data**.

➢ The government is making reforms in sectors like labour, logistics, infrastructure, and manufacturing to boost employment. Initiatives such as **PM Gati Shakti, Production Linked Incentive schemes**, **Bharatmala**, and **Sagarmala**, and the **Employment-linked Incentive package** are aimed at generating employment.

    ❍ The country's working-age population is **expected to grow by 9.7 million per year from 2021-31 and 4.2 million per year from 2031-41.**

    ❍ The **Union Budget 2024-2025** allocates Rs 2 lakh crore for employment and skilling schemes, including three **"employment-linked incentive"** schemes under the Prime Minister's package.

      ● The schemes focus on enrolling in the **Employees' Provident Fund Organisation (EPFO)** and **provide incentives for new employees** and their employers. These schemes are expected to benefit a total of **290 lakh youth entering employment.**

➢ The Central and State governments have various programmes and projects to create direct and indirect employment, but so far, they have **not been effectively utilised to estimate employment generation**.

   Read more: Employment Trends in India

Note:

drishti

International Tiger Day 2024

International Tiger Day is celebrated every year on **29th July**, to raise awareness about the magnificent yet endangered animal.

➢ The day is a reminder of the **collective effort of 13 tiger range countries** to double the wild tigers' population by 2022 through the **TX2 global goal.**

  ❍ The TX2 goal is a global commitment to double the world's wild tigers by 2022.
  ❍ The goal has been set by the **World Wildlife Fund (WWF)** through the Global Tiger Initiative, **Global Tiger Forum** and other critical platforms.

➢ The day was first **established in 2010 at the Saint Petersburg Tiger Summit.**

  ❍ The main aim is to **urge the international community to intensify efforts for wildlife protection** through expanding **protected areas, promoting sustainable livelihoods**, and maintaining sufficient forest area in tiger roaming nations.

TIGER

Royal Bengal Tiger (Panthera Tigris) is the National animal of India.

Subspecies of Tiger
* The continental (Panthera tigris tigris)
* The Sunda (Panthera tigris sondaica)

Habitat
Tropical rainforests, evergreen forests, temperate forests, mangrove swamps, grasslands, and savannas

Countries Where Tiger Population Is Found
▪ Found only in **13 Tiger Range countries**- India, Nepal, Bhutan, Bangladesh, Myanmar, Russia, China, Thailand, Malaysia, Indonesia, Cambodia, Laos, and Vietnam
   ◆ As per the latest report by IUCN, tiger has gone extinct in Cambodia, Laos, and Vietnam

Protection Status
▪ **IUCN Red List:** Endangered
▪ **CITES:** Appendix I
▪ **WPA 1972:** Schedule I

Threats
▪ Habitat loss
▪ Poaching and illegal trade
▪ Human-Wildlife conflict

Conservation Efforts
▪ **International Big Cats Alliance (IBCA):** For conservation of seven big cats namely Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar and Puma (launched by India)
▪ **Tx2 campaign:** Launched by WWF; stands for 'Tiger times 2' signaling the goal to double the tiger population by 2022
▪ **National Tiger Conservation authority (NTCA):** Constituted under the WPA, 1972
▪ **Project Tiger:** Launched in 1973
▪ **Tiger Census:** Every 4 years

Tigers In India
▪ India has the **largest** population
   ◆ As of 2022, India has 3167 tigers
   ◆ Largest population has been found in Central Indian Highlands & Eastern Ghats Landscape
▪ **Tiger Reserves:** India now has 53 tiger reserves
   ◆ **Ranipur in UP** is the latest
   ◆ **Nagarjun Sagar** (Andhra Pradesh) **is the largest** while Orang (Assam) **is the smallest** (Core area)

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Read more: Awards for Tiger Conservation

Note:

Ek Ped Maa Ke Naam Campaign

The **Ministry of Defence** will undertake a massive **15 lakh trees plantation drive** across the country on the occasion of **78th Independence Day ceremony** on **15th August 2024.**

➢ The plantation drive is part of the **'Ek Ped Maa Ke Naam' campaign**, to be conducted through the three Services, **Defence Research and Development Organisation (DRDO)**, Defence PSUs, **Controller General Defence Accounts (CGDA)**, **National Cadet Corps (NCC)**, **Sainik Schools**, and Ordnance factories.

➢ The Prime Minister launched the 'Ek Ped Maa Ke Naam' campaign on **World Environment Day 2024**, urging all to plant a tree as a tribute to mothers.

   Read more: World Environment Day 2024

India Assumes Chairmanship of Asian Disaster Preparedness Centre

India took over as Chair of the **Asian Disaster Preparedness Centre (ADPC)** for 2024-25, playing a pivotal role in global and regional **Disaster Risk Reduction (DRR).**

➢ ADPC is an **autonomous international organisation** focused on disaster risk reduction and climate resilience in **Asia and the Pacific region.**

   ○ It was founded by **India and eight neighboring countries: Bangladesh, Cambodia, China, Nepal, Pakistan, Philippines, Sri Lanka, and Thailand.**

   ○ ADPC operates as an autonomous international organisation governed by the Board of Trustees, with **headquarters in Bangkok, Thailand** and sub-centers in operational countries.

➢ India has spearheaded international efforts in DRR, notably through the establishment of the **Coalition for Disaster Resilient Infrastructure (CDRI) and** India is committed to the **Sendai Framework for Disaster Risk Reduction (SFDRR),** which it signed during the **Third UN World Conference on Disaster Risk Reduction** in 2015.

➢ The **Disaster Management Act of 2005** establishes the legal and institutional framework for disaster management in India at national, state, and district levels.

   ○ The **National Disaster Management Authority (NDMA)** is the apex body responsible for policy formulation, while the State Disaster Management Authority (SDMA) and District Disaster Management Authority (DDMA) oversee state and district-level policies and plans.

➢ **Key Institutions: National Institute of Disaster Management (NIDM)** focuses on capacity development, training, research, functions under **NDMA.**

   ○ **National Disaster Response Force (NDRF)** the **world's largest rapid reaction force dedicated to disaster response.** It is a specialised response force for natural and man-made disasters, including Chemical, Biological, Radiological, and Nuclear emergencies. It operates under NDMA's direction.

   Read more: Making India Disaster Resilient

World Hepatitis Day

World Hepatitis Day, observed on 28th July, raises awareness of **viral hepatitis,** an **inflammation of the liver** that causes severe liver disease and cancer.

➢ The date of 28th July was chosen because it is the **birthday of Nobel-prize winning scientist Dr Baruch Blumberg,** who discovered **hepatitis B virus (HBV)** and developed a diagnostic test and vaccine for the virus.

➢ **Theme 2024: "It's time for action."**

➢ Hepatitis symptoms include **fever, fatigue, loss of appetite, nausea, vomiting,** abdominal pain, dark urine, clay-coloured bowel movements, joint pain, and jaundice.

➢ Hepatitis has 5 main strains - *A, B, C, D, and E*, each with distinct transmission methods and health effects. **Hepatitis B and C are the most common,** causing 1.3 million deaths and 2.2 million new infections annually. With a person dying every 30 seconds from a hepatitis-related illness.

   ○ Additional causes **include drug and alcohol misuse,** fatty liver hepatitis, and autoimmune response targeting the liver.

Note:

Types of Hepatitis

	TRANSMISSION	PREVENTION	TREATMENT
Hepatitis A	Eating contaminated food or drinking contaminated water	• Practicing good hygiene • Vaccine	No treatment
Hepatitis B	Through contact with the blood or bodily fluids of an infected person	• Practicing good hygiene • Vaccine • Blood screening	• Alpha interferon • Peginterferon
Hepatitis C	Blood-to-blood contact	• Practicing good hygiene • Avoid sharing needles, toothbrushes, razors or nail scissors	Direct-acting antiviral drugs
Hepatitis D	Contact with infected blood (only occurs in people already infected with hepatitis B)	• Hepatitis B vaccine • Avoid sharing needles, toothbrushes, razors or nail scissors	Interferon
Hepatitis E	Eating contaminated food or drinking contaminated water	• Practicing good hygiene • Avoid drinking water that has come from a potentially unsafe source	No treatment

➢ **Initiatives to Tackle Hepatitis:**
  ❍ **India:** National Viral Hepatitis Control Program (eliminate viral hepatitis as a public health threat in the country by 2030), **India's Universal Immunization Programme (UIP) (offers free vaccination including Hepatitis B).**
  ❍ **Global:** World Health Organization (WHO) **Elimination of hepatitis by 2030** (reduce new hepatitis infections by 90% and deaths by 65% between 2016 and 2030)**.**
    Read more: Global Hepatitis Report 2024

Kalam's 9ᵗʰ Death Anniversary

27ᵗʰ July is observed as the **death anniversary** of **former President Dr APJ Abdul Kalam**. He is an inspiration for Indians due to his unparalleled dedication as a **scientist, teacher, and the 11ᵗʰ President of India** (2002-07).

About:

➢ **Born on 15ᵗʰ October 1931** at **Rameswaram in Tamil Nadu.**

➢ He **graduated in Science from St Joseph's College, Trichy in 1954** and **specialised in Aeronautical Engineering from Madras Institute of Technology (MIT) in 1957.**

Note:

➢ He is one of the most distinguished scientists in India with the unique honour of receiving **honorary doctorates from 48 Universities and institutions in India and abroad.**

➢ He planned programmes to produce a number of successful missiles, which helped earn him the nickname **"Missile Man of India".**

Dr. APJ Abdul Kalam
(Missile Man of India)

Drishti IAS

Birth
15th October 1931 Rameswaram
(Tamil Nadu)
Celebrated as **National Innovation Day**
and **World Students' Day**

India's 11th President
(2002-2007)

Death
27th July 2015 Shillong
(Meghalaya)

Major Contribution

- Pioneer in **Fiberglass Technology**
- Chief Executive of **Integrated Guided Missile Development Programme (IGMDP)**
- Led **Pokhran-II** nuclear testing
- Responsible for the evolution of ISRO's launch vehicle programme, particularly the **PSLV** configuration

- Put forward a countrywide plan called **Technology Vision 2020**
- Involved in the country's **Light Combat Aircraft** project.
- Sought to bring rural prosperity through **PURA (Providing Urban Amenities to Rural Areas)** Scheme

Awards Received

| Padma Vibhushan (1990) | King Charles II Medal (2007) |

| Veer Savarkar Award (1998) | Padma Bhushan (1981) |

Bharat Ratna (1997)

Hoover Medal (2008)

Literary Works

- "Wings of Fire", "India 2020 - A Vision for the New Millennium", "My journey"

- "Ignited Minds - Unleashing the power within India", "Indomitable Spirit", "Guiding Souls", "Envisioning an Empowered Nation", "Inspiring Thoughts" etc.

"Determination is the power that sees us through all our frustrations and obstacles. It helps in building our willpower which is the very basis of success."

Read More: Contribution of Dr A. P. J. Abdul Kalam

Note:

drishti

Multilateral Exercise Khaan Quest 2024

Recently, the **Indian contingent** participated in the **21ˢᵗ edition** of **Khaan Quest**, a **multinational peacekeeping exercise**, being held from **27ᵗʰ July 2024 to 9ᵗʰ August 2024** in the **Five Hills Training Area in the Mongolian capital of Ulaanbaatar**.

➤ The exercise aims to **develop interoperability and share best practices in tactics, techniques, and procedures for joint operations** among the participating countries.

➤ The exercise is designed to prepare the **Indian Armed Forces** for **peacekeeping missions** in a multinational environment, enhancing interoperability and military readiness under **Chapter VII of the United Nations Charter.**

➤ The Indian contingent consists of 40 personnel from a Battalion of the **Madras Regiment**, along with additional members.

➤ Approximately **430 participants from 23 countries** are part of the exercise, including **Australia, Canada, China, Japan, Turkiye, the United States, and the United Kingdom**.

➤ Khaan Quest started as a bilateral event between the **U.S. and Mongolian armed forces in 2003** and became a multinational peacekeeping exercise from **2006 onwards**.

Read more: Ex Khaan Quest 2022.

Manu Bhaker Wins Olympic Bronze

Recently, **Manu Bhaker** won **a bronze medal** in the **women's 10m air pistol event** at the **Paris 2024 Olympics**. The Olympic Victory:

➤ This is the **first medal for India at the Paris 2024 Olympics** and the **first Olympic medal in shooting** for India since the London 2012 Games.

➤ Manu, who hails from **Jhajjar, Haryana**, is the **first Indian female shooter** to win an Olympic medal.

Note:

➢ She also became the **first female shooter to reach an Olympic final in an individual event** in the last 20 years.

➢ Manu Bhaker is the **fifth Indian shooter to win an Olympic medal**, following **Rajyavardhan Singh Rathore (2004 Athens), Abhinav Bindra (2008 Beijing), Vijay Kumar (2012 London), and Gagan Narang (2012 London).**

Other Achievements of Manu:

➢ At the **National Shooting Championships 2017**, she won 9 gold medals and set a record in the 10m Air Pistol final.

➢ In 2018, she became a teenage sensation with a **gold medal at the Commonwealth Games** and won the **gold medal** in the Women's 10m Air Pistol at the ISSF World Cup in Guadalajara, Mexico.

➢ Manu has also won medals at **Asian Games (2022),** **World Championship, Baku (2023), Asian Shooting Championship, Changwon (2023), World Cup, Bhopal (2023)**, **World Championship, Cairo (2022), World University Games, Chengdu (2021)** sports events.

Read more: Olympic Order Awarded to Abhinav Bindra

Revamped Model Skill Loan Scheme

The government has launched a revamped **'model skill loan scheme'** aimed at enhancing accessibility to **skill development** courses with a significantly increased maximum loan limit.

➢ The new scheme raises the maximum loan limit from Rs 1.5 lakh to Rs 7.5 lakh. Initially launched in 2015, the **old scheme saw low uptake due to insufficient loan limits.**

➢ Announced in the **Union Budget 2024-2025**, the revised scheme aims to benefit 25,000 students annually. It now includes **non-banking financial companies (NBFCs)**, **NBFC-MFIs (micro-finance institutions),** and **small finance banks** as eligible lending institutions.

➢ **Broadened Course Access:** The revised scheme will now allow access to more skill courses, against only **national skill qualification framework (NSQF)-aligned courses** under the old scheme. Also, non-NSQF courses that are onboarded on the **Skill India Digital Hub platform** will come under the scheme.

➢ **Previous Performance:** As of March 2024, loans amounting to Rs 115.75 crore were extended to 10,077 borrowers, highlighting **low fund utilisation due to high course fees.**

Read more: **Skill Development in India**

Note:

Leander Paes in Tennis Hall of Fame

Recently, **Indian tennis legends Leander Paes and Vijay Amritraj** were inducted into the sport's Hall of Fame.

➢ **Leander Paes** was inducted into the Player Category of the International Tennis Hall of Fame.
   ❍ He has won **18 Grand Slam** titles in doubles and mixed double**s** and was a **former doubles world No. 1.**
   ❍ He was awarded the **Padma Shri in 2001** and **Padma Bhushan in 2014.**

➢ **Vijay Amritraj**, a former Indian player, is **recognised in the Contributor Category.**
   ❍ He played his first **Grand Prix event** in 1970. He was honoured with the **Padma Shri award** in 1983.
   ❍ He was a part of the **Indian Davis Cup team** that **reached the finals in 1974 and 1987**. He was also appointed a **United Nations ambassador for peace in 2001.**

➢ The **International Tennis Hall of Fame (ITHF)** is a prestigious **institution and museum dedicated to the sport of tennis.** It is located in Newport, **Rhode Island, United States.**
   ❍ It serves as the **official hall of fame for tennis and** celebrates the history, achievements, and contributions of outstanding individuals and organisations to the sport of tennis.

   Read more: Grand Slam

The Indian Newspaper Society (INS) Towers

Recently, the **Prime Minister of India** inaugurated the **Indian Newspaper Society (INS) Towers** on his visit to the Indian Newspaper Society (INS) Secretariat in Mumbai. It would serve as the nerve centre for the newspaper industry**.**

➢ The Society's origins date back to **1927**, with the establishment of a group initially known as **The India, Burma & Ceylon Newspapers' London Committee.**

➢ It was renamed as **Indian & Eastern Newspaper Society (IENS)** in **1935**, and headquartered in **London**.

➢ It served as the official representative body for newspapers, magazines, reviews, and journals published across **India, Burma, Ceylon, and other Asian countries**.

   Read more: Press Council of India

New Pension Scheme 'Vatsalya'

The **Union Budget 2024-25**, introduced the **National Pension Scheme (NPS) Vatsalya**, a groundbreaking **pension scheme aimed at minors.**

➢ This scheme allows parents or guardians to initiate a **NPS account** for their children, thereby laying the **groundwork for responsible financial management** from an early age.
   ❍ It is a **contributory pension scheme**, and will have contributions by parents and guardians.

➢ Upon reaching adulthood (18 years), the NPS Vatsalya accounts **seamlessly convert into regular NPS accounts**, promoting consistent saving habits.

➢ The NPS is a voluntary pension system for all citizens, including both residents and **Non-Resident Indians (NRIs)** between the ages of 18 and 70 years.
   ❍ It is a **market-linked contribution scheme** that allows Indian citizens to **systematically save for their retirement** and also derive tax benefits out of it.

   Read more: National Pension System, Union Budget 2024-25

Subvention Scheme

Recently, the **Supreme Court** has provided relief to homebuyers in the **National Capital Region (NCR)** under the **Subvention scheme.**

➢ The **Supreme Court** has instructed banks not to take coercive action against individuals who have not received possession of their flats.

➢ **Subvention Scheme**:
   ❍ In real estate, subvention schemes involve a **tripartite agreement between the buyer, banker, and developer.**
   ❍ The **buyer pays 5-20% upfront,** while the bank loans the rest to the developer.
   ❍ The developer pays the loan interest until the buyer takes possession, after which the buyer's EMI starts.
   ❍ This scheme boosts sales for developers and delays EMI payments for buyers.
   ❍ However, in the present case many builders have defaulted on these payments.

Note:

- **Subsidy:**
  - ○ Subsidy is **direct financial assistance** provided **by the government or another entity** to **reduce the cost of a product or service** for the consumer.
  - ○ This leads to a **decrease in the price of the product or service** for the consumer. For example, government subsidies on food grains, fertilizers, or fuel.
  - **Read More:** **Interest Subvention Scheme**

Typhoon Gaemi

Recently, **Typhoon Gaemi** has brought **torrential rains that have caused widespread destruction** and fatalities **across Eastern China, Taiwan and the Philippines.**

- ➤ Typhoon Gaemi made landfall in Taiwan the strongest in eight years, **causing severe flooding** in the island's **second-largest city, Taichung.**
  - ○ In the **Philippines**, it exacerbated **seasonal rains**, triggering floods and **landslides** and caused **severe flooding in Zhejiang province** and led to the highest warning for rainstorms in Wenzhou city in China.
- ➤ Typhoons are a **kind of storm**. The storms, depending on where they occur, may be called **hurricanes, typhoons or cyclones.**
  - ○ The scientific name for all these kinds of storms is **tropical cyclones.**
  - ○ Tropical cyclones are **intense circular storms that originate over the warm tropical oceans** with speed more than 119 km/hr and heavy rains.
  - ○ Tropical cyclones **rotate counterclockwise** in the Northern Hemisphere.

Type	Location
Typhoon	China Sea and Pacific Ocean
Hurricane	West Indian islands, Caribbean Sea, Atlantic Ocean
Tornado	Guinea lands of West Africa, southern USA
Willy-willies	North-western Australia
Tropical Cyclone	Indian Ocean Region

Read more: Cyclone

Olympic Order Awarded to Abhinav Bindra

Recently, the Prime Minister congratulated **athlete Abhinav Bindra** on **being awarded the Olympic Order** for his outstanding services to the Olympic Movement.

- ➤ The Olympic Order is the highest award from the International Olympic Committee, **given to individuals for outstanding contributions to the Olympic movement**, recognizing exceptional dedication to promoting the values and ideals of the Olympics.
  - ○ Established in 1975, it replaced the **Olympic Diploma of Merit**.
  - ○ The Olympic Order has three grades: gold, silver, and bronze. The gold order is reserved for heads of state and exceptional circumstances.
  - ○ Other notable recipients of the Olympic Order include **Indira Gandhi and Nelson Mandela.**
- ➤ The award was presented during the **142nd International Olympic Committee(IOC)** Session in Paris.
  - ○ The IOC is the **guardian of the Olympic Games**, established in **June 1894**. It is a **not-for-profit independent international organisation.**
  - ○ It is based in **Lausanne, Switzerland**, the Olympic Capital.
- ➤ Abhinav Bindra is **India's first individual Olympic gold medallist,** who **won the men's 10-meter air rifle event** at the **2008 Beijing Games.**

Read More: India's Ambitious Bid to Host the 2036 Olympic Games

Rashtrapati Bhavan Halls Renamed to Reflect Indian Cultural Values

In a bid to align with Indian cultural values and reduce traces of colonial influence, **Rashtrapati Bhavan** has officially renamed two of its prominent halls.

- ➤ **Durbar Hall is now Ganatantra Mandap,** reflecting the Republic concept, replacing the colonial term **'Durbar' (courts and assemblies of Indian rulers and the British).**
- ➤ **Ashok Hall has been renamed Ashok Mandap,** honouring **Emperor Ashoka** and Indian cultural significance. This change aims to remove anglicized influences and align with the ethos associated with the word 'Ashok.'
  - ○ The Rashtrapati Bhavan statement mentioned that Ashok Hall was originally a ballroom. The word 'Ashok' signifies being free from sufferings or sorrow, and also refers to Emperor Ashok, a symbol of unity and peaceful co-existence.
  - ○ The word also refers to the **Ashok tree**, which holds deep significance in Indian religious traditions, arts, and culture.

Note:

- The Rashtrapati Bhavan in New Delhi is the **largest residence of any Head of State** in the world. It was originally built as the **'Viceroy House'** for the British Viceroy of India and later renamed Rashtrapati Bhavan when India became a Republic in 1950.
  - It was designed by **British architect Sir Edwin Landseer Lutyens**, who combined **Indian, Mughal, and European architectural styles.**
- In 2023, the world-renowned **Mughal Gardens** at the Rashtrapati Bhavan were also renamed as **Amrit Udyan.**
  - Earlier in 2022, the **PM inaugurated the 'Kartavya Path'** symbolising a shift from erstwhile Rajpath being an icon of power to Kartavya Path being an example of public ownership and empowerment.

Read More: Kartavya Path

ECOSOC Forum on Sustainable Development

Recently, at the **High-Level Political Forum on Sustainable Development** at the **United Nations** headquarters in New York, indigenous tribal communities from **Rajasthan** showcased their traditional practices as effective solutions to global challenges.

- The forum was held under the auspices of the **UN Economic and Social Council (ECOSOC)** with the theme**, 'Reinforcing the 2030 agenda and eradicating poverty in times of multiple crises: The effective delivery of sustainable, resilient and innovative solutions'.**
  - Established by the **UN Charter** in **1945**, **ECOSOC** is the principal body for coordination, policy review, policy dialogue and recommendations on economic, social and environmental issues, as well as implementation of internationally agreed development goals.
  - It is the UN's central platform for **reflection, debate and innovative thinking on sustainable development**.
  - It has **54 members**, elected by the **UN General Assembly** for overlapping three-year terms.
- **Vaagdhara**, a voluntary group based in **Rajasthan**, emphasised the resilience and sustainability of indigenous practices in agriculture and resource management.

Note:

➢ The forum recognised initiatives by the tribal communities such as **seed preservation, water conservation, and sustainable agriculture**, which have mitigated **economic and environmental challenges**, including the impacts of the **Covid-19** pandemic.

    ○ **Bhil,** Damor, Damaria, Dhanka, Tadvi, Tetaria, Valvi, Seharia, Sehria, Sahariya, Koli and Turi are some of the scheduled tribes found in **Rajasthan**.

    Read More: UN Economic and Social Council (ECOSOC), Sustainable Development

SHREYAS Scheme

The **Scholarships for Higher Education for Young Achievers Scheme (SHREYAS)** has been a significant initiative by the Indian government to support higher education for marginalised communities.

➢ Recent updates reveal substantial investments and the broad reach of the scheme, reflecting its critical role in promoting educational advancement for **Scheduled Castes (SCs), Other Backward Classes (OBCs)** and **Economically Backward Classes (EBCs).**

➢ The SHREYAS Scheme comprises two distinct programs designed to support higher education for different groups: SHREYAS for SCs and SHREYAS for OBCs and EBCs.

    ○ **Total Expenditure:** Rs. 2708.64 crore spent for 97,928 SC beneficiaries from 2014-15 to 2023-24.

      ● Rs. 585.02 crore spent for 38,011 OBC and EBC beneficiaries over the same period.

    ○ **SHREYAS for SCs**: Scholarships provided to SC students for studies in 266 premier institutions like IITs, IIITs, IIMs, and AIIMS.

      ● **National Overseas Scholarship** under this annual scholarship for 125 SC students to study in the top 500 **QS Ranking institutions abroad.**

      ● 2000 fellowships are offered annually for PhD studies in India, in addition to the regular UGC Fellowships.

    ○ **SHREYAS for OBCs and EBCs:** Free Coaching was provided for 3500 economically disadvantaged SC and OBC candidates each year, aiding in competitive exams and higher education admissions.

➢ **Other education schemes in India include National Programme on Technology Enhanced Learning, Beti Bachao Beti Padhao, PM SHRI Schools** and **National Means cum Merit Scholarship (NMMS).**

    Read more: SHREYAS Scheme

Successful Phase-II Ballistic Missile Defence System Test

The **Defence Research and Development Organisation (DRDO)** has successfully tested its **Phase-II Ballistic Missile Defence (BMD) system,** showcasing India's advanced capabilities in defending against **long-range ballistic missile threats.**

➢ The Phase-II system can intercept ballistic missiles with a **range of up to 5,000 km**, enhancing India's strategic defence.

    ○ Phase-I BMD, capable of intercepting missiles with **ranges up to 2,000 km,** has already been deployed.

➢ The Phase-II missile is a two-stage, solid-propelled, ground-launched system designed for endo to low exo-atmospheric interception.

    ○ The test demonstrated a network-centric warfare weapon system, including long-range sensors, low-latency communication, and advanced interceptor missiles.

➢ The **Indian Ballistic Missile Defence (BMD) Programme**, initiated in 2000 after the **Kargil War,** aims to protect India from missile threats, particularly from Pakistan and China.

    ○ It employs a multi-layered approach with interceptor missiles like **Prithvi Air Defence** and **Advanced Air Defence.** Recent efforts focus on enhancing capabilities through global cooperation and acquiring systems like the **Russian S-400 Triumf.**

    ○ The DRDO is developing an indigenous multi-tier network to counter missiles with ranges of up to 2000 km and 5000 km in Phases 1 and 2, respectively.

      ● The network includes surveillance radars for the detection and tracking of incoming missiles.

➢ **Ballistic missiles** of India are **Agni, K-4** (SLBM), **Prahaar, Dhanush, Prithvi** and **Trishul.**

Read more: Shaurya Missile

168th Birth Anniversary of Bal Gangadhar Tilak

On **23rd July,** India commemorated the birth anniversary of **Bal Gangadhar Tilak** honouring his legacy as a **freedom fighter and educationist.**

Note:

➢ **Personal Life And Ideology:**
  ○ **Bal Gangadhar Tilak was** born in **July 1856 in Ratnagiri, Maharashtra,** and revered as the **father of Indian unrest.**
  ○ He was one of the earliest and the most vocal proponents of complete independence or **swarajya (self-rule)**.
  ○ Along with **Lala Lajpat Rai and Bipin Chandra Pal,** he was part of the **Lal-Bal-Pal trio** of leaders with **extremist ideology**.

➢ **The Surat Split of 1907:**
  ○ The **Surat Split of 1907** in the **Indian National Congress (INC)** marked a division into **Extremist and Moderate factions**. Extremists, primarily from the Bombay Presidency, supported Tilak or Lajpat Rai for the presidency.
    ● But the split took place when Rasbehari Ghose was elected.

➢ **Contribution In Education:**
  ○ Along with his associate **Gopal Ganesh Agarkar** and others, he co-founded the **Deccan Education Society in 1884**.
  ○ Through this society, Tilak played a pivotal role in establishing **Fergusson College in Pune in 1885.**

bal gangadhar tilak
(23 July 1856 - 1 August 1920)

One of the earliest, most vocal proponents of complete independence (Swarajya)

Brief Profile
◎ Also known as Lokmanya Tilak
◎ Mahatma Gandhi called him "The Maker of Modern India"
◎ Educationist: A prolific writer and journalist
◎ Co-founded: Deccan Education Society (1884) and Fergusson College (1885)

Social and Political Contributions
◎ Ideology: A devout Hindu; used Hindu scriptures to rouse people
◎ Role in INC: Joined in 1890; Significant role in Surat Split (1907) - wanted by extremists to preside over Surat Session
◎ Slogan: "Swaraj is my birthright, and I shall have it!"
◎ Lal-Bal- Pal Trio: Led the extremist group with Lala Lajpat Rai and Bipin Chandra Pal

Contribution to Freedom Movement
◎ Propagated swadeshi movement
◎ Led the Indian Home Rule Movement with Annie Besant
◎ Founded All India Home Rule League in April 1916

Lucknow Pact (1916) - signed between INC headed by Tilak and All-India Muslim League headed by Jinnah for Hindu-Muslim unity in nationalist struggle

Literary Works
◎ Newspapers: "Kesari" (Marathi) and "The Maratha" (English)
◎ Books: Gita Rahasya (his *Magnum Opus*) and Arctic Home of the Vedas

दृष्टि The Vision | Drishti IAS

Read More: Bal Gangadhar Tilak

Note:

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China to Raise Retirement Age

China is planning to **gradually raise its statutory retirement age**, which is currently among the lowest globally as it is **facing pension budget deficits**.

➤ In China, the **current retirement age** for men is 60 years, women (white-collar) is 55 years and women (factory workers) is 50 years.

➤ **Demographic Changes:**

○ The **life expectancy** in China has **risen** significantly, from about 44 years in 1960 to **78 years in 2021**, with projections to **exceed 80 years by 2050**.

○ The **population aged 60 and older** is expected to rise from 280 million to **over 400 million by 2035.**

○ The ratio of workers supporting each retiree is decreasing, projected to drop from **5-to-1** to **4-to-1 by 2030**, and further to **2-to-1 by 2050**.

➤ In India, the Central Government's pension expenditure is estimated to be around **2.40 lakh crore** in the **Budget 2024-25**, representing **0.7%** of the projected **GDP**.

○ Additionally, India's **National Pension System** is a low cost, tax-efficient retirement savings account under which the individual and his employer co-contribute to his retirement account for the social security/welfare of the individual.

○ Similarly, the **Atal Pension Yojana** was launched in 2015, to create a universal social security system for the poor, the under-privileged and the workers in the unorganised sector.

Read More: National Pension System and Atal Pension Yojana

Neutrinos

Neutrinos play an important role in **particle physics** and **astrophysics**. It is a **fundamental elementary particle**, and atmospheric neutrinos can be studied when **solar radiation** hits the Earth's atmosphere.

Neutrinos:

➤ Neutrinos are **subatomic particles** that have **no electric charge,** have a small mass, and **are left-handed (the direction of its spin is opposite to the direction of its motion).**

○ They are the **second-most abundant particles in the universe after photons** and the most abundant among particles that make up matter.

➤ Neutrinos **interact with matter very rarely,** making them difficult to study.

➤ Neutrinos can change from one type (**electron-neutrino, muon-neutrino, tau-neutrino**) to another as they travel and interact with other particles, a phenomenon called **neutrino oscillation.**

➤ Neutrinos can **carry information across large distances** due to their low interaction rate with matter.

○ They could **potentially be used to transmit information, replacing electromagnetic waves in communication channels.**

➤ Physicists have built large and sensitive detectors to study neutrinos and maximise the number of interactions between neutrinos and the detector's matter.

➤ **India's Neutrino Observatory project** is proposed to be set up at **Pottipuram village in Theni (Tamil Nadu) in a 1,200-metre-deep cave.**

Read more: Indian Neutrino Observatory

NASA Sent Hollywood Song to Venus

Recently, NASA has transmitted Hollywood singer Missy Elliott's song "The Rain" to **Venus** via the **Deep Space Network (DSN)**.

➤ The transmission was made using the **(Deep Space Station) antenna** located at the **Goldstone Deep Space Communications Complex** in **California.**

NASA's Future Mission to Study Venus:

➤ The **DAVINCI mission**, which stands for **Deep Atmosphere Venus Investigation of Noble gases, Chemistry, and Imaging**, is set to be launched by the year **2029.**

➤ The **VERITAS**, also known as **Venus Emissivity, Radio Science, InSAR, Topography, and Spectroscopy**, is expected to launch by **2031**.

India's Mission to Venus- Shukrayaan-1:

➤ Under the **Venus Orbiter Mission, ISRO** plans to launch Shukrayaan-1, a spacecraft destined to orbit Venus to study the atmosphere of Venus.
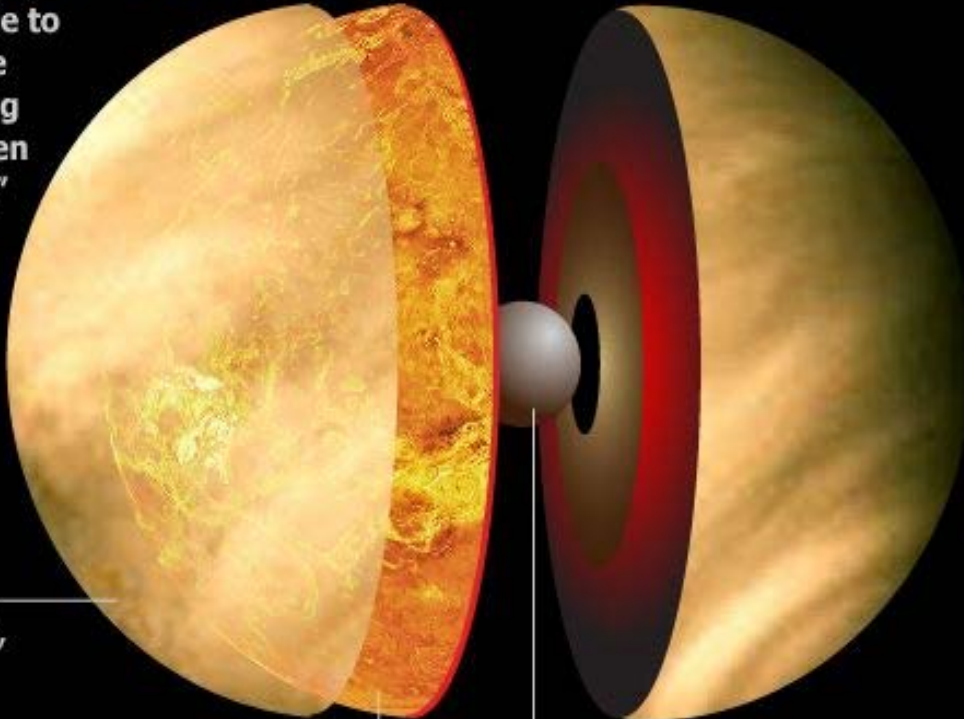
Note:

Venus:

➢ Venus is often called **Earth's twin** and is **slightly smaller than Earth.**

➢ It is the **second planet from the Sun** and the **sixth largest** planet.

➢ It is the **hottest planet** in our solar system.

➢ Venus **spins from east to west**, which is backward compared to most planets, and it has a day longer than its year.

Read More: Volcanism on Venus.

Note:

National Mission on Cultural Mapping (NMCM)

Recently, the Ministry of Culture has launched the **National Mission on Cultural Mapping (NMCM)** to provide a **comprehensive overview of the cultural heritage** of villages across India.

➢ It aims to **raise awareness of cultural heritage's role** in development and identity while **mapping the cultural aspects of 6.5 lakh village**s and creating a **National Register of Artists and Art Practices**, along with a **web portal and mobile app** for the **National Cultural Workplace (NCWP).**

➢ It will encompass **all inhabited villages in India** according to the **2011 Census,** with a **specific focus on all villages in Bihar** for the mapping process.

➢ **The database** will be available at the **Mera Gaon Meri Dharohar Web Portal** which can be utilised by other ministries and organisations to protect and promote local cultures, traditions, and art forms.

Mera Gaon Meri Dharohar (MGMD):

➢ It is a **National Mission on Cultural Mapping (NMCM)** conducted by the Ministry of Culture in coordination with the **Indira Gandhi National Centre for the Arts (IGNCA).**

➢ It compiles detailed information about Indian villages, covering aspects of life, history, and ethos.

➢ **Information is categorised into 7 areas:** Arts and Crafts, Ecology, Scholastic Traditions, Epics, Local and National History, Architectural Heritage, and other unique characteristics.

    Read more: Mera Gaon, Meri Dharohar Programme

Nipah Virus

Recently, a 14-year-old boy from Kerala died after testing positive for the **Nipah virus**.

➢ **Nipah virus (NiV)** is a **zoonotic** virus **(transmitted from animals to humans)** and can also be transmitted through **contaminated food or directly between people.**

➢ **Nature:** The organism that causes Nipah Virus encephalitis is an RNA or **Ribonucleic acid virus** of the **family Paramyxoviridae**, genus Henipavirus, and is closely related to **Hendra virus.**

➢ **Hosts and Transmission**: NiV initially appeared in **domestic pigs**, **dogs, cats, goats, horses, and sheep**.

  ○ It spreads through **fruit bats (genus *Pteropus*).** The virus is found in bat urine, faeces, saliva, and birthing fluids.

➢ **Fatality:** The case fatality rate ranges from **40% to 75%.**

➢ **Symptoms**: Causes encephalitic syndrome in humans, presenting with fever, headache, drowsiness, disorientation, mental confusion, coma, and potentially death.

➢ **Diagnosis:** Diagnosis can be established through **real-time polymerase chain reaction (RT-PCR)** from bodily fluids and antibody detection via **enzyme-linked immunosorbent assay (ELISA)**.

➢ **Prevention**: **No vaccines available** for humans or animals.

➢ **WHO Response:** It has identified Nipah as a **priority disease**.

    Read More: Nipah virus Infection (NiV)

Lal Dora-Free Haryana

All **villages of Haryana** have been made **Lal Dora-free**. The state government launched a **scheme to make villages "Lal Dora-free"** on **Good Governance Day** on 25th December 2019.

➢ It is a reformative step towards the **establishment of clear ownership of property** in rural inhabited areas by **mapping land parcels using drone technology** and providing a '**Record of Rights' to village household owners** with the **issuance of legal ownership cards.**

  ○ **Field verification of rural and residential areas** was **conducted in every village,** and the mapping of every property falling under 'Lal Dora' was closely inspected.

➢ In some states, the inhabited areas of villages, known as **"lal dora"** land in Punjab and Haryana and **"abadi"** in some, **were mostly excluded from such surveys.**

  ○ Many Indian village **communities lacked documented land rights**, relying instead on **actual possession to claim ownership** of land in residential areas.

  ○ Rural property owners **cannot use their properties as financial assets to obtain loans** from banks without a legal document.

    Read more: SVAMITVA Scheme

Note:

National Time Release Study Report 2024

Recently, the **Central Board of Indirect Taxes and Customs (CBIC)** released the **National Time Release Study (NTRS) 2024 report**, which measures the **cargo release time** at 9 ports in India.

➢ The **NTRS 2024** report aims to assess the progress made towards the **National Trade Facilitation Action Plan (NTFAP)** targets, identify the impact of various trade facilitation initiatives, and identify the challenges to a more expeditious reduction in release time.

   ○ The NTFAP aims to transform the cross-**border clearance ecosystem** through **efficient, transparent, risk-based, coordinated, digital, seamless and technology-driven procedures** that state-of-the-art sea ports, airports and land borders support.

➢ NTRS 2024 is the fourth annual **national-level study utilising standardised methodology** to analyse **customs clearance times for imports and exports** from 1st January to 7th February 2024.

➢ The study highlights the efficiency of the **CBIC Pre-payment Customs Compliance Verification initiative**, which speeds up final clearance upon duty payment, often within 3 minutes.

   ○ In the **CBIC Pre-payment Customs Compliance Verification (PCCV)** initiative, all the Customs formalities are completed and final clearance is pending only for payment of duties by the importer.

   Read more: CBIC Releases National Time Release Study (NTRS) 2023 Report

Chandra Shekhar Azad Birth Anniversary

Recently, the Prime Minister paid tributes to **Chandra Shekhar Azad** on his **birth anniversary, 23rd July 2024.** He was a popular **Indian leader and revolutionary**, who fought valiantly for Indian independence.

➢ He was born on **23rd July 1906** in the **Alirajpur district of Madhya Pradesh.**

➢ As a 15-year-old student, joined the **Non-Cooperation Movement** in **December 1921.**

➢ After the suspension of the non-cooperation movement in 1922 by Gandhi, Azad joined **Hindustan Republican Association (HRA).**

   ○ HRA was a revolutionary organization, established in 1924 in Kanpur by **Sachindra Nath Sanyal, Ram Prasad Bismil, and Jogesh Chandra Chatterjee,** to organise an armed revolution to overthrow the colonial government.

   ○ **Members** were **Bhagat Singh**, **Chandra Shekhar Azad,** Sukhdev, Roshan Singh, Ashfaqulla Khan, and Rajendra Lahiri.

➢ HRA was later **reorganised as the Hindustan Socialist Republican Army (HSRA).**

   ○ It was **established in 1928 at Feroz Shah Kotla** in New Delhi by Chandra Shekhar Azad, Ashfaqulla Khan, Bhagat Singh, Sukhdev Thapar and Jogesh Chandra Chatterjee.

➢ Chandra Shekar Azad was also involved in the conspiracy to blow up Lord Irwin's train in 1929.

➢ He was martyred **at Azad Park in Allahabad** on **27th February 1931.**

   Read More: Azad's Revolutionary Activities and Guerrilla Warfare Tactics

GeM Learning Management System

Recently, **Government e Marketplace's (GeM) e-learning Training Courses** have been made available in 12 Official Languages.

➢ Introduced in 2024, the **Government e-marketplace (GeM) Learning Management System (LMS)** represents an innovative initiative by the government.

➢ The **GeM-LMS** is an important knowledge repository designed with a user-centric approach, offering a comprehensive platform for users and trainers, supporting various intermediate processes such as **registration, training, and certification**.

Note:

➢ GeM has expanded its **interactive and user-friendly LMS** to include six more official languages, making this learning platform accessible in a total of **twelve official languages of India.**

Government e-Marketplace (GeM):

➢ GeM is a **100% Government-owned and National Public Procurement Portal** that facilitates **online procurement of common-use Goods & Services** required by various Government Departments / Organisations / PSUs.

➢ The initiative was launched by the **Ministry of Commerce and Industry** in **2016**.

➢ It provides the tools of **e-bidding, reverse e-auction and demand aggregation** to facilitate the government users, achieve the best value for their money and aims to **enhance transparency, efficiency and speed** in public procurement.

Read more: **Government e-Marketplace**

Sindhu-Sarasvati Civilisation and Ujjayini Meridian

The **new NCERT incorporates several changes** from the previous textbooks. The textbook **aims to align** with the **National Curriculum Framework for School Education 2023** and the **National Education Policy 2020**, emphasising the integration of traditional Indian knowledge and a thematic approach to social science education.

Changes in NCERT Textbooks:

➢ The textbook refers to the **Harappan civilization** as the **'Indus-Sarasvati' or 'Sindhu-Sarasvati' civilisation**, highlighting the prominence of the Sarasvati river.

   ○ It mentions that the Sarasvati River, now known as the **Ghaggar-Hakra River**, was a **major part of the Harappan civilization** and that **its desiccation contributed to the decline of the civilization.**

➢ Long before the adoption of the **Greenwich Meridian**, India had its prime meridian, known as the **"Madhya rekha" (or "middle line")**, which **passed through the city of Ujjain.**

   ○ The textbook introduces the concept of the **'Ujjayini meridian'**, an **ancient prime meridian of India,** which was used for astronomical calculations.

➢ **Other Changes in Structure and Content:**

   ○ The new textbook is a **single volume covering five themes**, unlike the previous separate textbooks for History, Political Science, and Geography.

      ● It aims to present a more integrated and interdisciplinary approach to social science education.

   ○ The **chapter on diversity has shifted its focus**, with **less emphasis on caste-based discrimination and inequality** compared to the previous textbook.

Read More: **National Education Policy 2020**, **National Curriculum Framework for School Education 2023**

Primary Amoebic Meningoencephalitis

Kerala has issued technical guidelines for the diagnosis, management, and **prevention of Primary amoebic meningoencephalitis (PAM)** following recent cases of this rare but fatal infection.

➢ The Kerala Health Department has introduced SOPs for handling **acute meningitis cases,** potentially the first set of guidelines in India for this rare infection. The amoebic parasite ***Naegleria fowleri*** was identified in most cases, with ***Vermamoeba vermiformis*** implicated in one case.

➢ **Disease Characteristics:** PAM is caused by ***Naegleria fowleri,*** free-living amoebae in warm, stagnant freshwater and has a high mortality rate (>97%).

   ○ Known as the **"brain-eating amoeba,"** it infects the brain through the nasal passages, leading to severe brain tissue destruction.

   ○ Children are particularly vulnerable, though PAM does not spread from person to person or through swallowing contaminated water.

➢ **Symptoms and Diagnosis**: Symptoms include headache, fever, nausea, and vomiting. PAM diagnosis is challenging and often mistaken for ***bacterial meningitis.***

Note:

○ Bacterial meningitis is an infection of the meninges, which is the protective covering for the **brain and spinal cord resulting in inflammation**. It is a serious and life-threatening condition.

➤ **Treatment:** Early diagnosis and timely initiation of an antimicrobial cocktail are crucial. The optimal drug regimen is still uncertain, and treatment involves a multidisciplinary team.

➤ **Prevention Measures:** Avoid exposure to stagnant freshwater, use nose plugs, and ensure proper chlorination and maintenance of swimming pools to prevent PAM.

➤ *Vermamoeba vermiformis* is a free-living amoeba found in natural and man-made environments, including freshwater sources.

○ It can host various pathogens and is linked to opportunistic diseases such as **encephalitis and epithelial disorders.**

Read more: Naegleria fowleri: The "Brain-Eating Amoeba"

Fungi- Mushroom

Recently, a study showed that the ingestion of **psilocybin**, the hallucinogenic compound present in **magic mushrooms**, results in a temporary reset of extensive **neuron networks in the brain responsible for regulating an individual's perception of time and self.**

➤ Mushrooms are **fungi** that typically have **a stem, a cap, and gills**.

➤ They are classified as **fungi** because they **lack chlorophyll** and cannot produce their food through photosynthesis.

○ The **fungi** constitute a **unique kingdom of heterotrophic organisms**.

○ They are a diverse group of **eukaryotic microorganisms** or **macroscopic organisms** that belong to their biological kingdom, distinct from plants, animals, and bacteria.

○ Except for **unicellular yeasts**, **fungi are filamentous.**

○ Fungi have beneficial applications such as **yeast** in baking and brewing, antibiotic production like penicillin, and culinary uses.

○ Fungi prefer to **grow in warm and humid places.**

○ **Reproduction in fungi** can take place by **vegetative means** (**fragmentation, fission and budding), asexual reproduction (by spores)** and s**exual reproduction.**

○ Fungi play a **crucial role** in preserving the equilibrium of our ecosystem through several key functions like **Decomposition, Symbiosis,** and **Soil enrichment.**

**Read more: Ganoderma Lucidum: Magical Mushroom**

Captain Supreetha CT First Woman Officer from AAD Deployed at Siachen

Captain Supreetha C.T., hailing from Mysuru, has made history by becoming the **second Indian Army woman officer and the first from the Corps of Army Air Defence to be operationally deployed at Siachen.**

➤ The Siachen Glacier, which is also known as the **world's highest battlefield** located in the **Eastern Karakoram range in the Himalayas**. India launched **Operation Meghdoot** in 1984 to capture the Siachen Glacier in Kashmir from Pakistan, successfully gaining control of the strategically important glacier.

➤ It is the **second-longest glacier in the world's non-polar areas** and lies south of the drainage divide separating the Eurasian Plate from the Indian subcontinent. The **Nubra River originates from the Siachen Glacier.**

○ **Fedchenko Glacier, located in Yazgulem Range, Tajikistan** is the Longest glacier in the World's Non-Polar areas.

➤ Siachen poses challenges due to its strategic importance, harsh climate and demanding terrain.

➤ Before Captain Supreetha, **Shiva Chouhan was the first female officer to be deployed in Siachen.**

Note:

Map showing Siachen Glacier Region and Shaksgam Valley
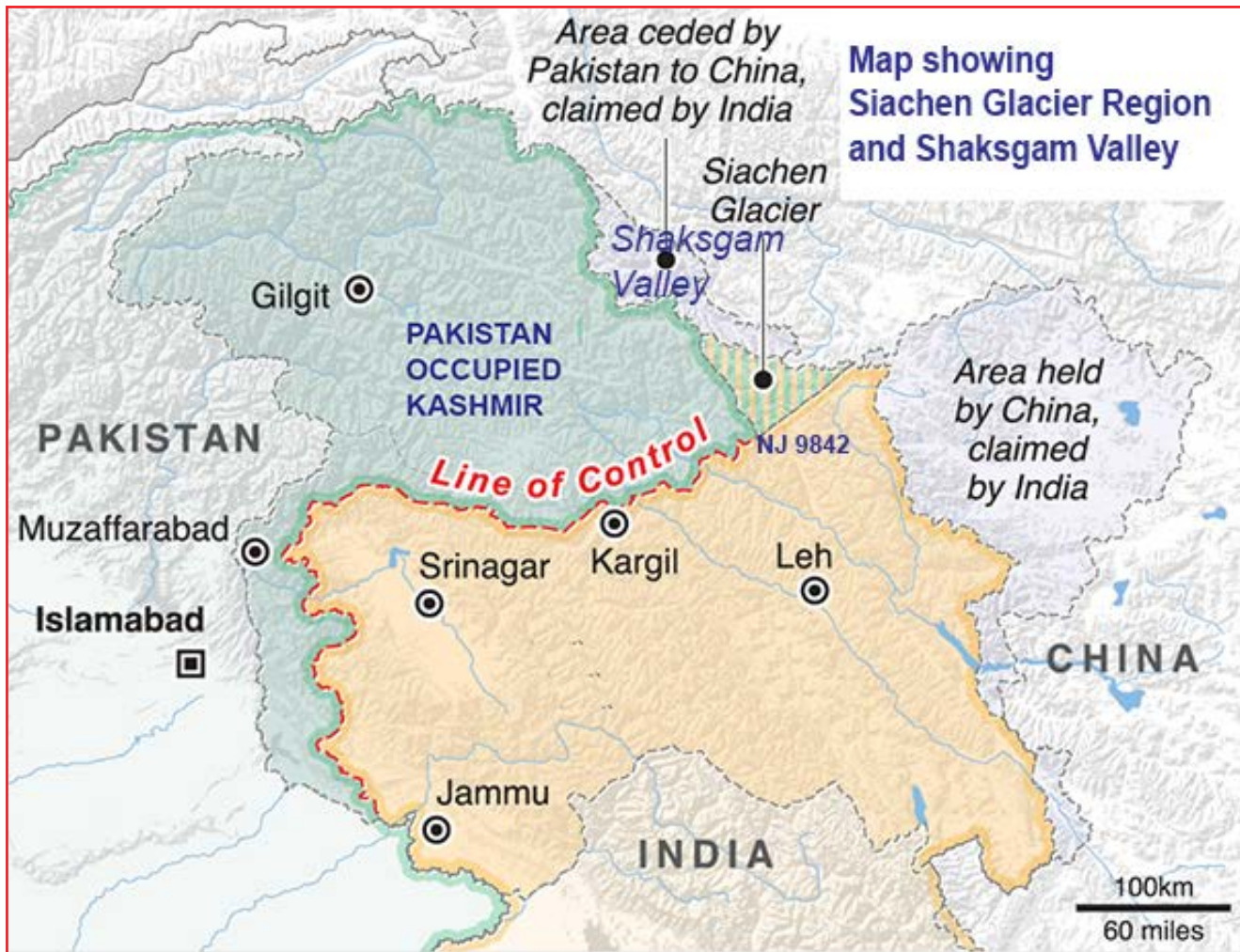
Read more: International Women's Day: Women in Armed Forces

Minami-Torishima Island

Recently, researchers have uncovered a **significant deposit of minerals** on the seabed near the remote island of **Minami-Torishima** in **Japan**.
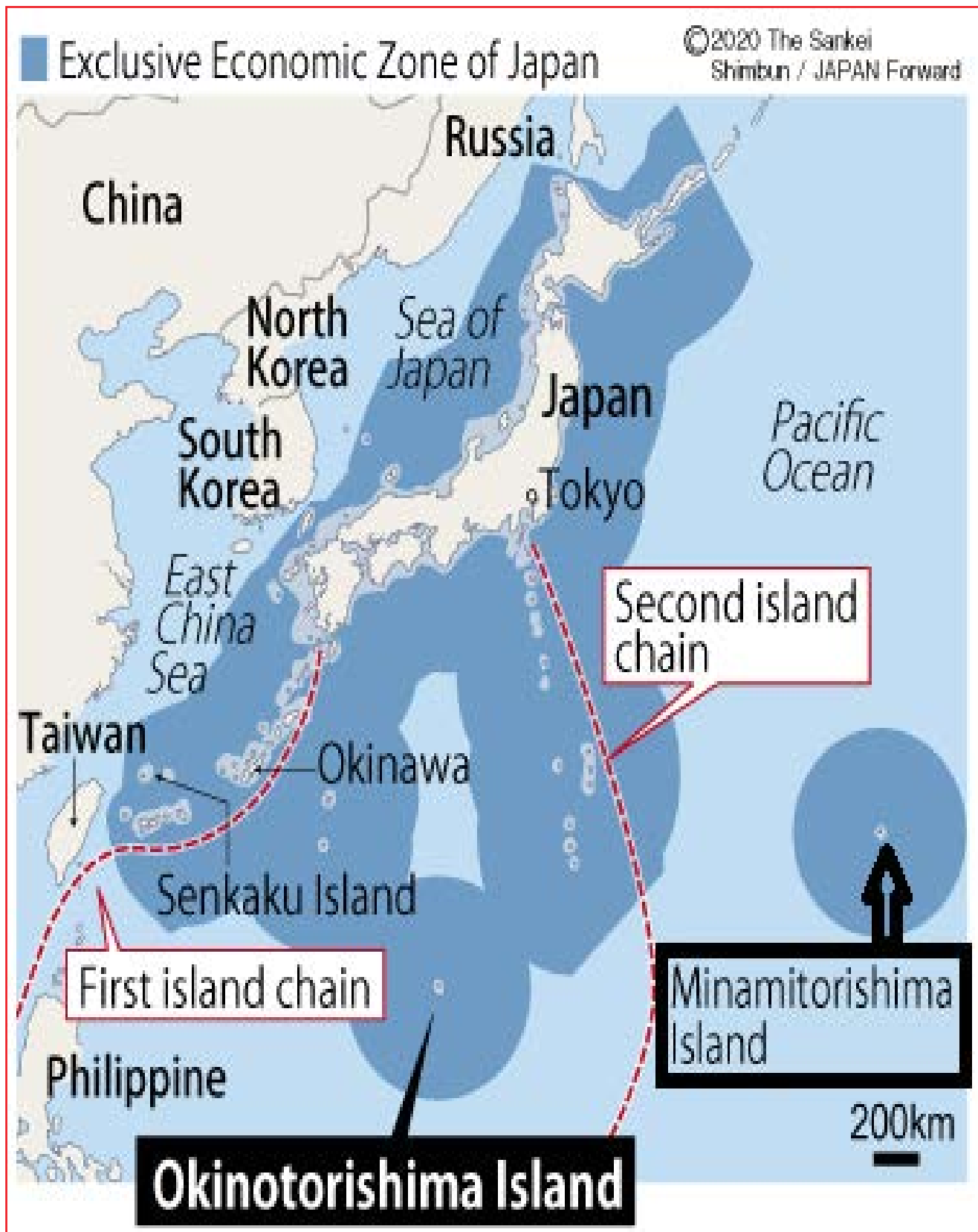
➢ This discovery includes **manganese nodules** containing enough **cobalt** and **nickel**.

➢ The researchers estimated that the seabed near **Minami-Torishima island** holds approximately 610,000 metric tons of **cobalt** and 740,000 metric tons of **nickel.**

  ❍ Both **cobalt and nickel** are essential components in **EV batteries**.

➢ **Cobalt** is important for EVs as it prevents the cathode from overheating while extending the life of batteries while **Manganese** contributes 61% of the cathode needs of the batteries.

Minami-Torishima Island:

➢ Discovered in **1543, Minami-Torishima** is a **coral atoll** in the **central Pacific Ocean** 1,125 km southeast of **Japan**.

➢ It's also about 1,200 km away from the **Chichijima Island** of the **Ogasawara Island group**.

➢ The triangular-shaped island of **Minami-Torishima** is the summit of a giant seamount rising from the seafloor and is located on the **Marcus-Necker Ridge.**

➢ Located at the easternmost edge of Japan, the **island is the first in Japan to see the sunrise.**

Note:

Exclusive Economic Zone of Japan

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Russia

China

North Korea

South Korea

Sea of Japan

Japan

Tokyo

Pacific Ocean

East China Sea

Taiwan

Okinawa

Second island chain

Senkaku Island

First island chain

Minamitorishima Island

Philippine

200km

Okinotorishima Island

Read more: **Hokkaido, Japan's Garden of Gods**

Note:

SC gets Two New Judges, First From Manipur

Recently, Justice N Kotiswar Singh and Justice R Mahadevan were appointed judges of the **Supreme Court of India**.

➢ Justice Singh is the **first judge from Manipur** to be appointed to the SC.

➢ With these appointments, the SC is now at its **full sanctioned strength of 34 judges**, including the Chief Justice.

  ❍ Parliament has the power to make laws, organise jurisdiction, and modify the power, and number of judges of the Supreme Court by an Act.

Judges of the Supreme Court:

➢ The SC consists of the **Chief Justice of India (CJI)** and a **maximum of 33 other judges.**

➢ The **SC Collegium** consisting of the **Chief Justice and 4 senior-most judges** is responsible for judicial appointments.

➢ Under **Article 124(2)**, Judges are appointed by the **President**, based on the advice of the **Prime Minister** and consultation with the CJI and other senior judges.

➢ There is **no minimum age limit** for a judge's appointment, and a SC judge serves until they reach the **age of 65.**

➢ The salaries, allowances, privileges, leave, and pension of SC judges are determined by **Parliament** and charged upon the **Consolidated Fund of India**.

Read more: Appointment of Judges in Supreme Court

Dyson Spheres

Dyson spheres are **hypothetical megastructures** built around a star to harness its entire energy output.

➢ Named after **physicist Freeman Dyson**, these structures would collect all of a star's radiant energy.

➢ Detecting a Dyson sphere could indicate a **technologically advanced alien civilization** that prefers not to communicate.

➢ **Earth receives 1,361 watts per square meter** from the sun, a tiny fraction of the sun's total **energy output of 380 billion quadrillion watts per second.**

  ❍ A Dyson sphere would capture all this energy that otherwise radiates into space.

➢ The **Kardashev Scale** is a **theoretical framework to measure a civilization's level of technological advancement** based on its energy consumption.

  ❍ **Humanity is currently at Kardashev Type 0.7449**, not fully utilising the energy available on Earth.

| Kardashev Type	Energy Consumption (Watts/second)	Description
Type I	10^{16}	Harnesses all energy available on its planet
Type II	10^{26}	Harnesses all energy from its star
Type III	10^{36}	Harnesses energy on a galactic scale

➢ While **theoretically possible, constructing a Dyson sphere presents immense challenges** in terms of resources, engineering, and time.

➢ Various projects, such as **Project Hephaistos, have sought Dyson swarms using data from infrared surveys**. While several objects have been identified, most have been ruled out as natural objects.

Note:

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KARDASHEV SCALE: MEASURING A SUPERCIVILIZATION

Astrophysicist Nikolai Kardashev proposed in 1962 that very old and advanced civilizations would likely be of three types:
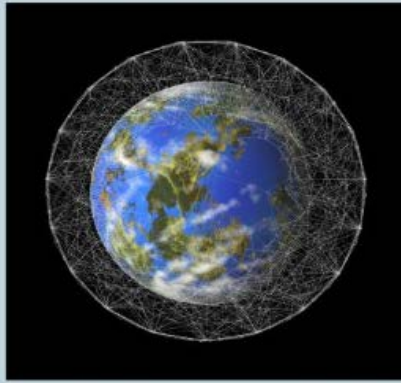
TYPE I CIVILIZATION harnesses all the resources of a planet. Carl Sagan estimated that Earth rates about 0.7 on the scale.

TYPE II CIVILIZATION harnesses all the radiation of a star. Humans might reach Type II in a few thousand years.

TYPE III CIVILIZATION harnesses all the resources of a galaxy. Humans might reach Type III in a few hundred thousand to a million years.

SOLAR SAILING: THE KEY TO FORMING A DYSON SPHERE

A solid shell around a star would be gravitationally unstable, and would probably require more material than all of the planets of a solar system could provide. Instead, practical Dyson spheres would be made from millions of individual solar-collecting satellites.
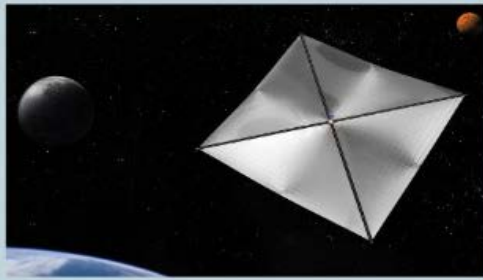
Solar sails (left) could remain in place by balancing against the pressure of light from the sun. The satellite would not be in orbit, it would actually hover in space. Such a satellite is called a "statite."

Rings of statites would form a cloud around the star, collecting its energy and beaming it back to the home planet.

Read more: Planetary Instability in Twin Star Systems

Chandipura Virus Infection

Recently, many children have died of suspected **Chandipura virus (CHPV) infection** in Gujarat.

➢ **CHPV Infection:**
  ❍ The CHPV is an **arbovirus** that belongs to the ***Vesiculovirus genus*** in the ***Rhabdoviridae family***.
  ❍ CHPV is transmitted by various species of sandflies, such as ***Phlebotomine* sandflies, *Phlebotomus papatasi*** and mosquitoes such as ***Aedes aegypti* (vector for dengue).**
    ● It primarily affects children **under 15 years** old.
➢ **Complications and Symptoms :**
  ❍ The virus resides in the **salivary glands** of these insects and is transmitted through their bites. CHPV can infect the **central nervous system**, potentially leading to **encephalitis**, an inflammation of the brain's active tissues.

Note:

○ **Symptoms** resemble flu, including fever, body aches, and headache. It can cause altered mental state, seizures, encephalitis, respiratory distress, bleeding tendencies, and anaemia in advanced stages.

➢ **Treatment:**

○ Currently, there is **no specific antiviral treatment or vaccine** for CHPV, so care is supportive and symptomatic.

➢ **Epidemiology:**

○ CHPV was **first identified in Chandipura village of Maharashtra in 1965** during a dengue outbreak.

○ The infection remains **endemic in central India**, especially in **rural and tribal areas** with higher sandfly populations.

○ Outbreaks are **more frequent during the monsoon season** due to increased breeding of sandflies.

FAST & FURIOUS

Graphic: Sandeep Salunke

➤ The virus was first isolated and identified in 1965 at Chandipura village in Nagpur

58% is the fatality rate of Chandipura viral infection

➤ It is transmitted to humans by sandflies that breed in small, dark crevices and cracks of houses

➤ The virus was not considered to have an epidemic potential until an outbreak of acute encephalitis among children in Andhra Pradesh in 2003

➤ The disease rapidly progresses from influenza-like symptoms to coma, resulting in death in extreme cases

➤ Viral encephalitis is a public health concern worldwide

❝ Unlike dengue, exposure to Chandipura and Japanese encephalitis virus creates herd immunity in the community. Therefore, only a few catch illness while the rest of the exposed population gets immunity against the virus. That is why the cases are sporadic
— **Mukund Deshpande** | ENTOMOLOGIST

Read More: Nipah Virus

Note:

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India Completes UN Human Rights Review

Recently, India has successfully concluded its fourth periodic review by the **UN Human Rights Committee (UNHRC)** under the **International Covenant on Civil and Political Rights (ICCPR)** in Geneva.

➤ The review **highlighted India's dedication to engaging with international human rights standards** and its readiness to tackle concerns while maintaining its efforts to **protect and promote the human rights** of its citizens.

➤ The Indian delegation, led by top legal and government officials, discussed anti-corruption, non-discrimination, women's and minority rights, counter-terrorism, privacy, and new criminal laws with the Committee.

UN Human Rights Committee (UNHRC):

➤ It is the **body** of 18 **independent experts, elected for a 4-year term** that monitors implementation of the ICCPR by its States parties.

➤ It operates on a part-time schedule, convening 3 times a year in Geneva, Switzerland, or New York, US to make decisions during its sessions.

International Covenant on Civil and Political Rights (ICCPR)

➤ It is an **international treaty** that protects civil and political rights, including life, freedom of speech, religion, and assembly.

➤ India joined in **1979** and has had three reviews, the last in 1997.

➤ The Human Rights Committee reviews each party every 4 years.

Read More: Universal Declaration of Human Rights

Mutual Agreement on Organic Products

Recently, India and Taiwan implemented the **Mutual Recognition Agreement (MRA) for organic products.**

➤ This agreement is a landmark achievement for both countries as it is the **first bilateral agreement** for organic products.

○ The implementing Agencies for the MRA are the **Agricultural and Processed Food Products Export Development Authority (APEDA)**, Ministry of Commerce and Industry, India and the Agriculture and Food Agency, Ministry of Agriculture (AFA), Taiwan.

➤ Mutual recognition will **simplify organic product exports** by avoiding dual certifications, reducing compliance costs, **simplifying requirements, and enhancing trade opportunities** in the organic sector.

➤ The MRA will facilitate the export of key Indian organic products like **rice, processed food, green/black and herbal tea, and medicinal plant products** to Taiwan.

Schemes for Organic Products in India

➤ **Indian Organic Logo.**

➤ **Participatory Guarantee System for India.**

➤ **National Programme for Organic Production (NPOP)**

Read More: India and Taiwan

ECI to Verify Microcontrollers of EVMs

Recently, the **Election Commission of India (ECI)** has released **Standard Operating Procedure (SOP)** for verifying the **burnt memory (or microcontrollers)** of **Electronic Voting Machines (EVMs)** and **Voter Verifiable Paper Audit Trail (VVPAT)** systems.

➤ Following the **Supreme Court's** order in ***Association of Democratic Reforms v. Election Commission of India Case, 2024***, the EC allowed **verification of up to 5% of EVM and VVPAT microcontrollers** in Assembly and Lok Sabha constituencies upon **written request** from the second and third-place candidates.

➤ A mock poll of up to 1,400 votes per machine will be conducted, and if results match the VVPAT slips, it indicates that **there is no tampering with the burnt memory** and they are considered verified.

○ However, the procedure for handling mismatches remains undecided.

➤ The technical SOP was prepared by two **public sector units (PSUs)** that manufacture EVMs: **Bharat Electronics Limited (BEL)** and **Electronics Corporation of India Limited (ECIL).**

Electronic Voting Machine (EVM):

➤ It consists of 2 parts, a **Control Unit (CU)** and a **Ballot Unit (BU).**

○ The Ballot Unit (BU) allows voters to cast their votes and shows candidates and symbols, while the Control Unit (CU) manages the BU and processes data.

➤ The EVMs were first used in **1982** in the bye-election to the Paravur Assembly Constituency of Kerala.

Note:

ELECTORAL REFORMS IN INDIA

ELECTORAL REFORMS ARE CHANGES MADE TO IMPROVE THE ELECTION PROCESS AND ENSURE FAIRNESS.

Electoral Reforms Before 1996

- **Model Code of Conduct (1969):** Guidelines to regulate political parties and candidates prior to elections
- **61st Constitutional Amendment Act (1988):** Lowering of the voting age from 21 to 18 years
- **Electronic Voting Machines (EVMs) (1989):** Switched from individual colored ballot boxes to ballot papers, and later to EVMs
- **Booth Capturing (1989):** Provision for adjournment of poll or countermanding of elections in such cases
- **Elector's Photo Identity card (EPIC) (1993):** Electoral roll is the basis to issue EPIC to registered electors
- **ECI- A Multi-member Body (1993):** Election commissioners were appointed in addition to CEC

Electoral Reforms of 1996

- **Time-limit for By-elections:** Elections must occur within 6 months of any vacancy in a legislative house
- **Listing of Names of Candidates:** Contesting candidates categorized into 3 groups for listing
  - Recognised & registered-unrecognised political parties
  - Other (independent)
- **Disqualification for Insulting the National Honour Act, 1971:** Leads to election disqualification for 6 years upon:
  - Insulting the National Flag, Constitution of India or preventing the singing of National Anthem

Electoral Reforms After 1996

- **Vote Through Proxy (2003):** Service voters in Armed Forces & forces under Army Act can vote by proxy
- **Allocation of Time on Electronic Media (2003):** Equitable sharing of time on electronic media during elections to address the public
- **Introduction of Braille Signage Features in EVMs (2004):** To facilitate the visually impaired voters to cast their votes without an attendant

Electoral Reforms Since 2010

- **Voting Rights to Indian Citizens Living Abroad (2010)**
- **Online Enrollment in Electoral Roll (2013)**
- **Introduction of NOTA option (2014)**
- **VVPAT Voter Verified Paper Audit Trail (2013):** Introduction of VVPAT with EVMs to conduct free and fair elections
- **Photos of Candidates on EVMs and Ballot Papers (2015):** To prevent confusion in constituencies with namesake candidates
- **Introduction of Electoral bonds (2017 Budget):** An alternative to cash donations for political parties
  - Declared as unconstitutional by SC (2024)
- **Launch of Electronic EPIC (2021)**
- **Home Voting for People with Disabilities & Those Above 85 years of Age (2024)**

IMPORTANT COMMITTEES/ COMMISSION

Committees/ Commission	Year	Purpose
Tarkunde Committee	1974	By Jaya Prakash Narayan (JP) during the "Total Revolution" movement.
Dinesh Goswami Committee	1990	Electoral Reforms
Vohra Committee	1993	On the Nexus between Crime and Politics
Indrajit Gupta Committee	1998	State Funding of Elections
Second Administrative Reforms Commission of India	2007	Report on Ethics in Governance (Headed by Veerappa Moily)
Tankha Committee (Core Committee)	2010	To look into the whole gamut of the election laws & electoral reforms.

Drishti IAS

Read More: SC Upholds EVM and VVPAT System

Note:

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India-Malaysia Agricultural Ties

Recently, **India and Malaysia** have decided to deepen their bilateral cooperation in agriculture, with a particular **emphasis on oil palm cultivation** and the integration of digital technology.

➢ **Areas of Cooperation:** Discussed collaboration to advance the **National Mission on Edible Oil - Oil Palm (NMEO-OP).** Addressed market access issues for agricultural and allied products.

  ○ NMEO-OP, launched in 2021 to increase oil palm cultivation and crude palm oil production to 11.20 lakh tonnes by 2025-26. It is operational in 15 states, targeting an area of 21.75 lakh hectares.

  ○ The **Oil Palm Mission** aims to promote oil palm in new areas by providing support to farmers including planting material, buyback assurance, and protection from **global price volatility through viability gap payment.**

➢ India imports 57% of its edible oil, impacting the **Foreign Exchange reserves** by USD 20.56 billion. **India imports palm oil every year, accounting for around 56% of the total edible oil imports.**

  ○ At present against a total potential area of around 28 lakh hectares, only **3.70 lakh hectares are under oil palm cultivation.**

  ○ **Andhra Pradesh, Telangana and Kerala** are major Oil palm growing States and account 98% of total production.

  Read more: National Mission on Edible Oil-Oil Palm

Gevra and Kusmunda Among World's Largest Coal Mines

Recently, Chhattisgarh-based **Coal India Limited (CIL)** subsidiary **South Eastern Coalfields Limited's (SECL) Gevra** and **Kusmunda coal mines** have secured the **2nd and 4th spot** in the list of the world's 10 largest coal mines released by WorldAtlas.com.

➢ Located in the Korba district, Chhattisgarh these two mines produce more 100 million tons of coal annually accounting for about **10% of India's total coal production.**

➢ Gevra is one of the megaprojects of SECL and became the **largest coal mine in the country in 2023** with annual production for FY 22-23 reaching 52.5 million tons and 59 million tons in FY 23-24. Kusmunda mine produced over 50 million tons in FY 23-24**.**

➢ These mines use advanced mining machines like the **"Surface Miner" for eco-friendly coal extraction** without blasting.

  ○ For overburden removal (the process of removing layers of soil, stone etc. to expose the coal seam), the mines use some of the **world's largest HEMMs (Heavy Earth Moving Machinery)** along with Vertical Rippers for environment-friendly and blast-free OB removal.

➢ CIL a **Maharatna company**, was established in November 1975 and has since become the **largest coal producer in the world.** It operates under the **Coal Mines (Nationalisation) Act, of 1973,** which gives it a monopoly over coal mining and distribution in the country.
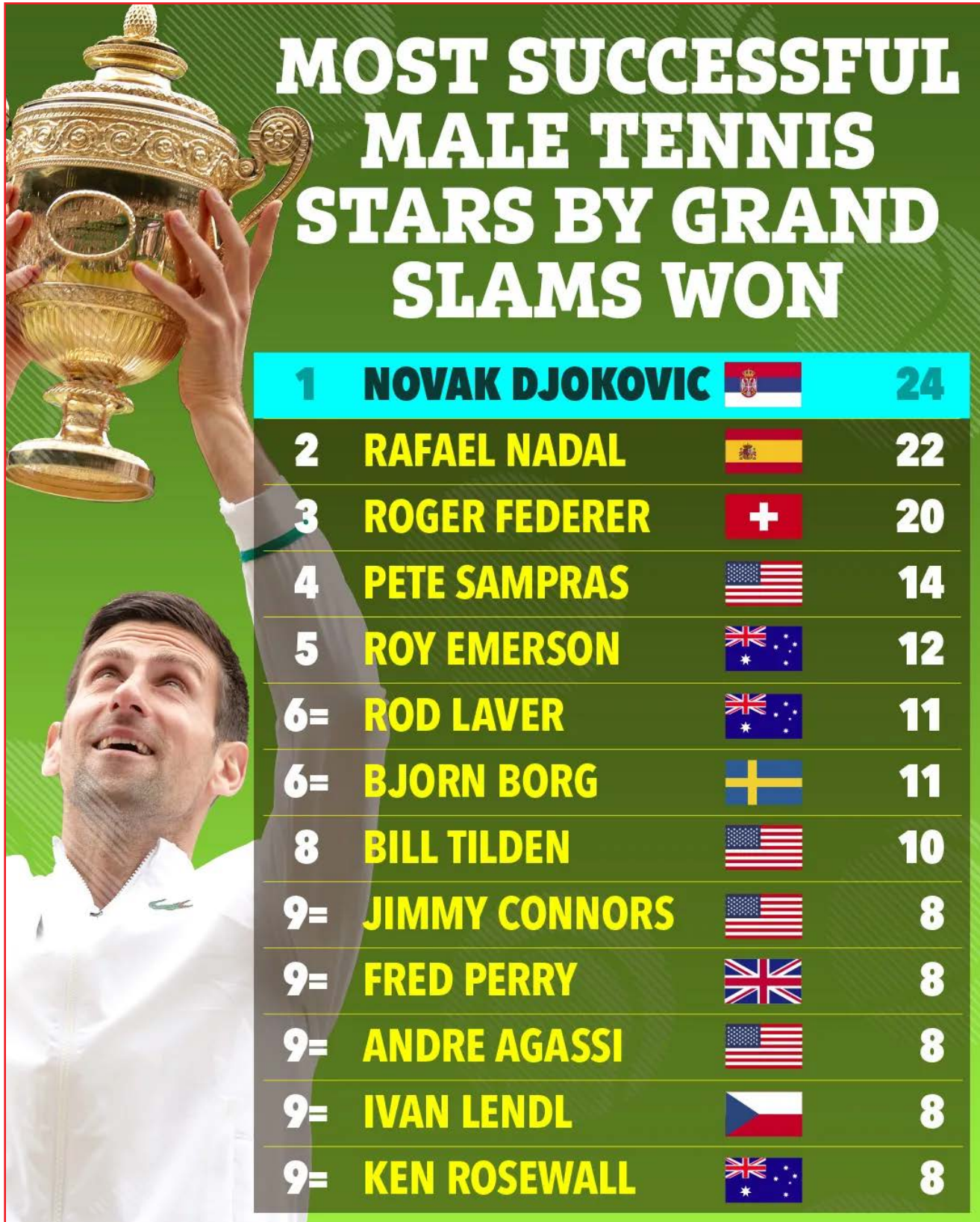
  Read more: Coal India and CCI

Carlos Alcaraz won his 4th Grand Slam

Recently, Spain's **Carlos Alcaraz** has beaten Serbia's **Novak Djokovic** in the men's single tennis **Wimbledon** final match, winning his 4th Grand Slam title.

➢ Alcaraz became the **youngest player** to win **4 Grand Slam titles**, achieving this before the **age of 22**.

➢ The new generation of tennis players, led by **Alcaraz** and **Jannik Sinner** (from Italy), has won 4 of the last 5 Grand Slams, signalling a shift in the balance of power in men's tennis.

➢ The **"Big Three"** of Federer, Nadal, and Djokovic, who have dominated the sport for the past two decades, are now facing a formidable challenge from the emerging talents.

Grand Slam:

➢ It refers to **winning all 4 major tennis championships in the same calendar season** - **Australia, France, Britain (Wimbledon)**, and the **US**.

➢ This feat has been achieved 6 times by 5 different players.

➢ **Don Budge** is the **first player** to achieve the **Grand Slam in tennis in 1938** by winning all 4 major championships in a single year.

MOST SUCCESSFUL MALE TENNIS STARS BY GRAND SLAMS WON

#	Name		Grand Slams
1	NOVAK DJOKOVIC	🇷🇸	24
2	RAFAEL NADAL	🇪🇸	22
3	ROGER FEDERER	🇨🇭	20
4	PETE SAMPRAS	🇺🇸	14
5	ROY EMERSON	🇦🇺	12
6=	ROD LAVER	🇦🇺	11
6=	BJORN BORG	🇸🇪	11
8	BILL TILDEN	🇺🇸	10
9=	JIMMY CONNORS	🇺🇸	8
9=	FRED PERRY	🇬🇧	8
9=	ANDRE AGASSI	🇺🇸	8
9=	IVAN LENDL	🇨🇿	8
9=	KEN ROSEWALL	🇦🇺	8

Read more: Australian Open

Note:

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Shivaji Maharaj's Wagh Nakh Returns to Maharashtra

Recently, the **wagh nakh,** a wartime weapon used by **Chhatrapati Shivaji Maharaj,** has been transported to Mumbai from London's Victoria and Albert (V&A) Museum.

➢ The tiger claws have been loaned to Maharashtra by the **Victoria and Albert Museum for three years** and will be exhibited in museums across the state, as per a Government Resolution.

➢ The 'Wagh Nakh' or tiger claws is a **mediaeval dagger used in the Indian subcontinent,** with **curved blades affixed to a glove or bar** for personal defence or stealth attacks. It is capable of slicing through skin and flesh with ease.

○ The wagh nakh was used by **Shivaji Maharaj to kill Afzal Khan,** **the general in the Bijapur Adil Shahi empire.**

➢ Shivaji was born on 19th February 1630 in Pune District, Maharashtra. He fought important battles like the **Battle of Pratapgad, Battle of Pavan Khind, Sacking of Surat, Battle of Purandar, Battle of Sinhagad,** and Battle of Sangamner.

○ He took on titles like **Chhatrapati, Shakakarta, Kshatriya Kulavantas, and Haindava Dharmodhhaarak.**

○ Shivaji established a centralised administration with a **council of eight ministers (Ashtapradhan)** and divided his kingdom into four provinces.

○ He abolished the **Jagirdari System** and implemented **the Ryotwari System for revenue administration.** He died in Raigad in 1680.

Read More: Chhatrapati Shivaji Maharaj's Wagh Nakh

Operation Nanhe Faristey

Over the past seven years (2018- May 2024), the **Railway Protection Force (RPF)** has been at the forefront of an **operation named 'Nanhe Faristey'** a mission dedicated to **rescuing children in need of care and protection** across various Indian Railway Zones.

➢ During this period, the **RPF has rescued more than 84,000 children** who were at risk in stations and trains, preventing them from falling into harm's way.

○ **Track Child Portal** contains comprehensive details about aggrieved children. Indian Railway has established child help desks at over 135 railway stations.

○ When a child is rescued by the RPF, they are handed over to the District Child Welfare Committee which hands over the child to parents.

➢ The RPF is an armed force under the control of the **Union Ministry of Railways,** tasked with **protecting railway property, passenger areas, and passengers.**

○ Originally part of the **Watch and Ward set-up of Private Railway Companies** in 1881, it was reorganised into a statutory body under the **RPF Act, 1957.**

○ The post-independence era brought significant changes; the **Railway Property (Unlawful Possession) Act was passed in 1966** to improve security, and in 1985, the RPF Act was amended, making RPF an Armed Force and emerged as a Central Police Organization.

Read More: Operations of Railway Protection Force

E-Office Implementation in Government Bodies

The Indian government has announced that the **e-office platform** will be implemented across all attached, subordinate offices and autonomous bodies as part of the **100-day agenda of the Department of Administrative Reforms and Public Grievances (DARPG).**

➢ The e-office initiative aims to **digitise file handling and receipts across various government bodies.** This move follows the successful adoption of the e-office in the central secretariat between 2019 and 2024, where **94% of files and 95% of receipts were handled electronically.**

➢ Building on this success, the government has identified 133 entities for this initiative, following inter-ministerial consultations. Guidelines for the adoption were by DARPG, and the **National Informatics Centre (NIC).**

Note:

○ Each ministry and department will appoint nodal officers, establish data centres, and coordinate with NIC for a seamless, time-bound onboarding of the e-office system, reinforcing the government's commitment to digital transformation and administrative efficiency.

Read more: E-Governance in India

Indian Aid to Palestinian Refugees

Recently, India has released the first tranche of **USD 2.5 million** to the **United Nations Relief and Works Agency (UNRWA)** for Palestinian Refugees in the Near East as part of its **annual contribution of USD 5 million** for the year 2024-25.

➢ UNRWA has been carrying out **direct relief and work programmes** for registered Palestinian refugees **since 1950** and is making efforts to continue functioning amidst the **Israel-Hamas war** in Gaza.

➢ India has provided financial support of **USD 35 million till 2023-24** for UNRWA's core programmes and services, including education, healthcare, relief, and social services for Palestinian refugees.

United Nations Relief and Works Agency (UNRWA):

➢ It was established in **1949** by the **UN General Assembly** after the **1948 Arab-Israeli war.**

➢ Its mandate is to provide **aid and protection to Palestinian refugees** who were displaced following the 1948 Arab-Israeli conflict, as well as their descendants.

➢ It operates in Gaza, the West Bank, Lebanon, Syria, and Jordan.

➢ It is funded almost entirely by voluntary contributions from UN member states.

➢ India's support to UNRWA includes financial assistance as well as providing medicines based on the agency's specific request.

Read more: Israel-Hamas Conflict and its Global Impact

4ᵗʰ Periodic Review of the ICCPR

India successfully concluded its **4ᵗʰ periodic review by the Human Rights Committee** under the **International Covenant on Civil and Political Rights (ICCPR)** in Geneva.

➢ The ICCPR is an important international human rights treaty that, along with other key documents, forms the **International Bill of Human Rights**. It obligates countries to protect and preserve basic human rights such as the right to life, freedom of speech, and gender equality.

○ Adopted by the UN General Assembly in 1966, ICCPR came into force in 1976 and has been ratified by 173 countries including **India in 1979**, undergone three previous reviews, with the latest in 2024.

○ The 4ᵗʰ periodic review covered diverse issues including anti-corruption measures, non-discrimination, women's and minority rights, counter-terrorism, judicial framework , and privacy laws.

➢ Other main UN International Human Rights Conventions and Protocols that India is a part of include**:**

○ **ICERD (International Convention on the Elimination of All Forms of Racial Discrimination)**

○ **CEDAW (Convention on the Elimination of All Forms of Discrimination against Women)**

○ **CRC (Convention on the Rights of the Child).**

**Read more: Protesting is a Fundamental Right: UN**

Drone Test at World's Highest Pass

Recently, a Bengaluru firm, **NewSpace Research and Technologies** tested a **100-kg Max Takeoff Weight (MTOW) Unmanned Aerial Vehicle (UAV)** at 19,024 feet altitude at **Ladakh's Umling La pass**, the highest motorable pass in the world.

➢ According to the firm, this is a **new world record for high altitude operations** achieved by a 100-kg MTOW class drone.

○ It will greatly **improve support logistics, disaster and rescue operations, and medical relief** in the **mountainous regions of J&K, Uttarakhand, and the North Eastern states.**

Note:

DRONE TECHNOLOGY
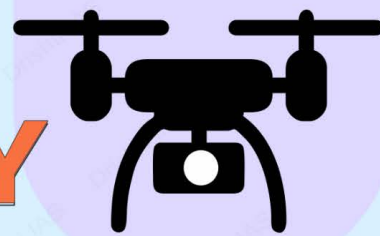
Drone is a pilotless flying machine, using aerodynamics for lift, can operate autonomously or remotely, and may carry lethal or nonlethal cargo.

COMPONENTS
- Unmanned aircraft (UA)
- Control system (ground control station - GCS)
- Control link (specialized datalink)
- Other related support equipment

CLASSIFICATION

(as per Drone Rules, 2021)
- Nano: <250 gm
- Micro: 250 gm to 2 kg
- Mini: 2 kg to 25 kg
- Small: 25 kg to 150 kg
- Large: >150 kg

APPLICATIONS
- **Mapping & Surveying** (asset Inspection, roof inspections)
- **Agriculture** (bird control, crop spraying & monitoring etc)
- Multispectral/thermal/NIR cameras, **Aerial Photo/videography** and Live streaming events
- **Emergency Response** (search and rescue, marine rescue, fire fighting)
- **Disaster** (zone mapping, disaster relief etc)
- **Mining**
- **Monitoring Poachers**
- **Meteorology**, Aviation, Payload carrying

DRONES IN DEFENCE

Purpose
- Surveillance and Reconnaissance
- Search and Rescue
- Maritime Surveillance
- Combat Drones
- Offensive (heterogeneous SWARM drones)
- Counter-Terrorism Operations

India's Counter-Drone System
- **Indrajaal** (India's inaugural autonomous drone-defense dome)
- Procurement of combat-capable **Heron drones from Israel**
- Acquisition of **MQ-9B Armed Drones from the US**

RELATED REGULATIONS
- Aircraft (Security) Rules, 2023
- Drones Rules, 2021 and Drone (Amendment) Rules, 2022

INDIA'S INITIATIVES
- Digital Sky Platform
- No-Permission-No-Takeoff (NPNT) framework
- PLI Scheme for Drones
- Drone Shakti Scheme

ISSUES
- Increased risk of armed attacks
- Data security
- **Cheaper cost** enables a larger population to procure drones
- Use of drones in warfare **(remote warfare)**
- **Procurement by non-state actors** can pose serious threats
- Ease in **delivering mass destruction weapons**

दृष्टि The Vision **Drishti IAS**

> **Umling La pass:**
> - Umling La in Ladakh is the **world's highest motorable road** at 19,024 ft, constructed by the **Border Road Organization** as part of **"Project Himank".**
> - The **52-km road connects Chishumle to Demchok villages,** which are near the **Line of Actual Control (LAC)** and a **friction point between India and China.**

Note:

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MAJOR PASSES IN INDIA

Mintaka Pass
Parpik Pass
Khunjerab Pass
Aghil Pass
Qara Tagh Pass
Khardung La
Zoji La
Burzil Pass
Pir-Panjal Pass
Banihal Pass
Bara-Lacha La
Debsa Pass
Rohtang Pass
Shipki La
Lanak La
Pensi La
Chang La
Umling La
Imis La
Muling La
Mangsha Dhura
Mana Pass
Niti Pass
Lipu Lekh
Traill's Pass
Yonggyap Pass
Bomdi-La
Nathu La
Jelep La
Naku La
Dihang Pass
Dipher Pass
Kumjawng Pass
Chankan Pass
Lekhapani Pass
Hpungan Pass
Goram Ghat
Haldighati Pass
Asirgrah
Kasara Ghat Pass
Malshej Ghat
Bhor Ghat
Nane Ghat Pass
Kumbharli Ghat Pass
Chorla Ghat Pass
Pal Ghat

FACTS

- ❍ **Umling La pass** located in Eastern Ladakh has recently become the **world's highest motorable pass** (Project Himank).
- ❍ **Lipu Lekh Pass** is located close to the **tri junction of Uttarakhand (India), China and Nepal**.
- ❍ **Nathu La** (Sikkim) is situated on the **Indo-Tibetan border**. It is **one of the three open trading** passes between India and China (other two: **Shipki La and Lipu Lekh Pass)**.
- ❍ **Naku La**, located in Sikkim, was recently in news due to the **Indo-China face-off along the LAC at the pass**.
- ❍ **Zoji La** links Leh with Srinagar and is known as the **"Mountain Pass of Blizzards"**. The Zojila tunnel is **Asia's longest tunnel**.
- ❍ **Dungri La** (or Mana) Pass connects India and Tibet. It is **located in the Nanda Devi Biosphere** Reserve of the Zanskar mountain range (Uttarakhand). Even Indian nationals **need prior permits from the Army** to travel through this pass.
- ❍ **Rohtang Pass** (Himachal Pradesh) is situated in the **Pir Panjal Range** of the great Himalayas and **connects Kullu Valley with Lahaul and Spiti Valleys**.
- ❍ The **widest gap of Western Ghats is at Palakkad (or Pal Ghat)** in Kerala adjoining Tamil Nadu.

Drishti IAS

Read More: Air-Launched Unmanned Aerial Vehicle

Note:

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Public Sector Lenders Raise MCLR

Public sector lenders like **State Bank of India and Bank of Baroda** have raised their **Marginal Cost of funds based Lending Rates (MCLR)**. This will lead to higher **Equated Monthly Instalments (EMIs)** for borrowers.

➤ The Marginal Cost of Fund based Lending Rate refers to the minimum interest rate a bank must charge for lending. The bank cannot grant any loan below that rate, except in certain cases permitted by the Reserve Bank of India (RBI).

○ MCLR is an "internal benchmark" which varies from bank to bank. It is calculated based on the marginal cost of funds.

○ Main components of MCLR:

- Marginal cost of funds
- Negative carry on account of CRR
- Operating costs
- Tenor premium

➤ If the **cost of funds goes up, the MCLR increases**, and the loans linked to any MCLR tenor get more expensive. Similarly, if the MCLR comes down, loans get cheaper.

➤ In 2019, the **Reserve Bank of India (RBI)** introduced the **External Benchmark Based Lending Rate (EBLR)**, to replace the MCLR regime.

➤ Consequently, all retail loans and floating-rate loans to **Micro, Small, and Medium Enterprises (MSMEs)** are now linked to the EBLR.

Read More: External Benchmarks Lending Rate

States Oppose PM-SHRI

As per a report published by Indian Express, The Education Ministry has stopped funds under the **Samagra Shiksha Abhiyan (SSA)**, to **Delhi, Punjab and West Bengal** because of their reluctance to participate in the **Pradhan Mantri Schools for Rising India (PM-SHRI) scheme**.

➤ The scheme includes a provision for **establishing over 14,500 PM SHRI Schools (PM Schools for Rising India)** by **enhancing existing schools** managed by the Central government, State/UT governments, and local bodies to showcase the implementation of the **National Education Policy (NEP) 2020**.

○ The Centre will cover 60% of the financial burden and states will cover 40% and the States must confirm their participation by signing a **Memorandum of Understanding (MoU) with the Education Ministry.**

➤ **Five states - Tamil Nadu, Kerala, Delhi, Punjab, and West Bengal have not signed the MoU.**

○ Tamil Nadu and Kerala have shown willingness, while **Delhi, Punjab, and West Bengal have refused**, leading to the Centre stopping their SSA funds.

➤ **Samagra Shiksha** is an **integrated scheme for school education** extending from **pre-school to class XII** to ensure inclusive and equitable quality education at **all levels of school education.**

○ It **subsumes** the three Schemes of **Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).**

○ The main emphasis of the Scheme is on improving the quality of school education by focussing on the **two T's – Teacher and Technology.**

Read More: PM SHRI Schools

World Day for International Justice

Every year on **17th July, the World Day for International Justice** is observed to promote international criminal justice and honour the fight against impunity for serious crimes affecting the global community.

➤ **Historical Significance:** Originated on 17th July 1998, with the adoption of the **Rome Statute,** establishing the **International Criminal Court (ICC).**

○ The ICC is not part of the **United Nations** system and has a separate agreement governing its relationship with the UN. Currently, 124 countries are States Parties to the Rome Statute of the ICC, **India is not a party to the Rome Statute/ICC.**

○ The ICC is the **first permanent international court** and has **jurisdiction over crimes under international law** including genocide, war crimes, crimes against humanity and crimes of aggression committed on or after 1st July 2002.

○ The Rome Statute marks a significant step in the fight against impunity for grave crimes, ensuring accountability for perpetrators.

➤ The day raises awareness about international justice mechanisms and their role in addressing impunity, and promoting global peace and security.

Read more: International Criminal Court (ICC)

Note:

Project PARI

Recently, the **Ministry of Culture** initiated **Project PARI (Public Art of India)** during the **46ᵗʰ Session** of the **World Heritage Committee Meeting in New Delhi**.

➢ It aims to bring forth **public art** that draws inspiration from **India's artistic heritage (lok kala/lok sanskriti)** while incorporating **modern themes and techniques**.

➢ Over 150 visual artists from across the country will create various artworks including **wall paintings, murals, sculptures**, and **installations for the beautification** of public spaces in Delhi.

➢ The sculptures will pay tribute to nature, ideas from the **Natyashastra, Gandhi, toys** of India, **ancient knowledge, Naad or Primeval Sound**, **Harmony of life,** and the **Kalpataru** (divine tree).

World Heritage Committee (WHC):

➢ It decides on the **inscription of new sites** into the **UNESCO World Heritage List.**

➢ **India** will be hosting the meeting for the **first time** in July 2024.

➢ India has **42 UNESCO** **World Heritage Sites**, with the 'Sacred Ensembles of the Hoysala' added recently. These include 34 (cultural sites), 7 (natural) and 1 (mixed).

Read More: **World Heritage Sites in India**

Euro 2024

The 17ᵗʰ edition of the **UEFA European Championship, fondly known as Euro 2024,** took place in Germany and saw **Spain crowned as champions for the fourth time.** Additionally, The **48ᵗʰ edition of the Copa América,** held in the United States concluded with **Argentina emerging victorious.**

➢ The UEFA European Football Championship organised by the Union of European Football Associations (UEFA) is a men's international football tournament exclusive to **European teams**. Founded in 1958, the competition began in 1960.

Note:

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- The tournament is **typically held every four years,** but Euro 2020 was postponed due to the pandemic.
  - ○ It is the second most-watched football tournament worldwide, after the **FIFA World Cup.**
- The Copa América, also known as the America's Cup, is the top men's international football (soccer) tournament contested among national teams from **South America in Quadrennial format**.
  - ○ It's the **oldest still-running continental football competition** in the world, dating back to 1916, and is considered the third most watched football tournament globally.
  - **Read More: FIFA World Cup Qatar 2022**

Enhancing Waterways Potential in Nagaland

The Union Minister of Ports, Shipping & Waterways (MoPSW), along with the Chief Minister of Nagaland announced a series of transformative initiatives aimed at harnessing the untapped **potential of Nagaland's waterways** during a Stakeholder's Conference held in Dimapur, Nagaland.

- **Development of Tizu Zunki (National Waterways 101):** The **Inland Waterways Authority of India (IWAI)** and the Transport Department of Nagaland will collaborate to conduct a feasibility study for the development of fairway, skill development, and vessel procurement for **Inland Water Transport.**
  - ○ Tizu river in Nagaland further flows into **Chindown river (Third largest Tributary of river Irrawaddy river),** also known as **Ningthi river in Myanmar.**
    - Chindown River enters into Irrawaddy River (the largest river of Myanmar) and drains into Andaman Sea providing waterways for cargo movement from Northeast to the international trade routes.
  - ○ Emphasised waterways as an **economical, sustainable, and efficient mode of transportation**, aligning with PM Modi's vision for India's growth.
- **Tourism Initiatives**: Plans to develop the **Doyang River Lake** with community jetties and study the feasibility of **Ro Pax ferries** to enhance tourism.
- **Maritime Skill Development**: Call for local youth to train in maritime skills at the **Maritime Skill Development Centre**, promoting employment in the marine sector.
- **Kaladaan Multimodal Transit Transport Project**: MoPSW through IWAI is working on various projects in the region, including the **Kaladaan Multimodal Transit Transport Project,** linking NW 2 and NW 16 with **Indo Bangladesh Protocol Route (IBPR)**, developing fairway on IBPR, and declaring **Ports of Call among others.**
  Read more: Nagaland Statehood Day, India's Inland Water Transport

Pradhan Mantri Colleges of Excellence

Recently, Union Home Minister inaugurated the Pradhan Mantri Colleges of Excellence in all 55 districts of Madhya Pradesh from Indore.

- These colleges started by the state government, to offer courses aligned with the **New Education Policy 2020** aim to make **education employment-oriented.**
  - ○ **Madhya Pradesh** has become the **first state to implement the New Education Policy (NEP).**
- These colleges will built strong educational foundations by 2047**.**
  - ○ To achieve this **New Education Policy 2020** was introduced. It focuses on **holistic development of youth** rather than just awarding degrees.
  - ○ It includes teaching both **academic subjects and life skills.** The emphasis is on **encouraging out-of-the-box thinking** instead of traditional thinking in students.
  Read More: New Education Policy 2020

World's Rarest Whale

Recently, New Zealand scientists may have made a breakthrough as the country's conservation agency announced that a creature found washed up on a **South Island beach** is likely a **spade-toothed whale**.

- The spade-toothed whales **considered the rarest in the world**, have **never been observed alive**, which means their population size, diet, and habitat in the vast **southern Pacific Ocean** remain largely mysterious.
  - ○ The first spade-toothed whale bones were found in 1872 on **New Zealand's Pitt Island.**
- The latest discovered species, a five-meter-long beaked whale, was **identified by its colour patterns and the shape of its skull**, beak, and teeth after washing ashore.
  - ○ The researchers will collaborate with **local Maori tribes** to determine how it will be studied.
- Whales are revered as **sacred taonga by New Zealand's Indigenous people**, with past treaties **recognizing them as "legal persons,"** though **not legally binding globally.**
- IUCN Status: Data Deficient (DD)
  Read more: Sperm Whales

132nd session of IMO

The Indian Ministry of Ports, Shipping and Waterways participated in the **132nd session of the Council** of the **International Maritime Organization (IMO)** in **London.**

➢ India, as an elected member of the IMO Council for countries with a large interest in international seaborne trade, highlighted the pressing **issue of seafarer abandonment.**

   ❍ Seafarers are people who work on ships or people who travel regularly on the sea.

➢ India secured its position as **one of the eight governments representing IMO in the Joint Tripartite Working Group,** dedicated to addressing seafarers' issues and the human element in maritime operations.

   ❍ Other proposed members are the **Philippines, Thailand, Liberia, Panama, Greece, the US, and France.**

➢ Concerns over **disruptions in the Red Sea, Gulf of Aden, and adjoining areas,** which have been **impacting shipping and trade logistics** were also addressed.

➢ India reiterated its proposal for the **South Asian Centre of Excellence for Sustainable Maritime Transport (SACE-SMarT).**

   ❍ This regional hub aims to transform the maritime sector in India and South Asia into a technologically advanced, environmentally sustainable, and digitally proficient industry.

   ❍ The centre will focus on reducing greenhouse gas emissions, fostering technical cooperation, capacity-building, and digital transition.

   Read more: International Maritime Organization (IMO)

United States Secret Service

Recently, **Former US President Donald Trump**, the 2024 Republican candidate, was shot at during an election rally. The shooter was killed by the Secret Service.

United States Secret Service:

➢ The United States Secret Service was **founded in 1865.** It is mandated to protect the **Vice President,** the President-elect, their immediate families, **former Presidents and their spouses** (except when the spouse remarries) and children of former Presidents until age 16.

➢ **Originally focused on combating US currency counterfeiting, in 1902**, the Secret Service assumed full-time **responsibility** for the **safety of the US President** after the 1901 assassination of President William McKinley.

   ❍ Before McKinley, Presidents Abraham Lincoln and James A Garfield were assassinated in 1865 and 1881.

➢ After **President Robert Kennedy's assassination** in 1968, election candidates fell under the agency's jurisdiction.

   ❍ Robert Kennedy was running for the **1968 presidential election**.

   ❍ Kennedy was **shot and killed** in Los Angeles on 5th June 1968, **less than five years after his brother, President John F Kennedy**, was assassinated.

   Read more: Impact of US Election Results on India

GRSE Accelerated Innovation Nurturing Scheme (GAINS 2024)

Recently, Raksha Rajya Mantri launched **GRSE Accelerated Innovation Nurturing Scheme (GAINS 2024)** of **Garden Reach Shipbuilders & Engineers Limited (GRSE)** in Kolkata.

➢ The innovative scheme aims to **address shipyard-related issues and promote technology development through** the country's **start-ups.**

➢ It supports **Micro, Small and Medium Enterprises (MSME) and Start-Ups** to create innovative solutions for technological advancement, aligning with the '**Make in India**' **and 'Start-up India' policies** of the Government of India.

➢ The goal is to utilise the wide network of MSMEs and Start-Ups **to tackle current and future challenges in the ship design** and construction industry, while also achieving the goals of self-reliance.

   Read more: '**Make in India**', **Indian Startup Ecosystem**

Consumer Price Index for Industrial Workers

The Labour Bureau under **the Ministry of Labour & Employment,** has been compiling the **Consumer Price Index** for Industrial Workers (CPI-IW) every month.

➢ **Inflation** for the month of **May, 2024 moderated to 3.86%** as compared to **4.42% in May, 2023.**

Consumer Price Index for Industrial Workers (CPI-IW):

➢ The CPI-IW is **mainly used for determining dearness allowance (DA)** paid to central/state government employees and workers in the industrial sectors besides **measuring inflation** in retail prices, **fixation and revision of minimum wages in scheduled employment.**

➢ The **CPI has several sub-groups** including food and beverages, fuel and light, housing and clothing, bedding and footwear.

Note:

- ➢ **Four types of CPI** are as follows:
  - ○ CPI for Industrial Workers (IW).
  - ○ CPI for Agricultural Labourer (AL).
  - ○ CPI for Rural Labourer (RL).
  - ○ CPI (Rural/Urban/Combined) (CPI-C)
- ➢ **IW, AL, and RL are compiled by the Labour Bureau** in the Ministry of Labour and Employment. **CPI-C** is compiled by the **National Statistical Office (NSO)** in the Ministry of Statistics and Programme Implementation.

  Read more: Consumer Price Index for Industrial Workers

Samvidhaan Hatya Diwas

Recently, the declaration of 25th June as **Samvidhaan Hatya Diwas** serves as a poignant reminder of the period when the **Constitution of India** was undermined, particularly during the **Emergency imposed in 1975.**

- ➢ The Prime Minister of India emphasised that this day will pay homage to all those who suffered from the excesses of the Emergency. It serves as a tool for educating citizens about their rights and the significance of the Constitution in protecting democracy.
- ➢ The Emergency was a period from **25th June 1975 to 21st March 1977,** when then PM Indira Gandhi's government used **special provisions in the Constitution** to impose significant executive and legislative changes in the country.
  - ○ The declaration of Emergency **centralises power, allowing the Union to direct state governments,** bringing them under the complete control of the Centre, effectively creating a **unitary system.**
  - ○ India has declared a National Emergency **three times.** The first was from 1962 to 1968 during the **India-China war,** the second was in 1971 during the **Indo-Pakistan war,** and the third was from **1975 to 1977 due to political instability**.
- ➢ **Emergency Provisions in Constitution:**

Articles	Subject Matter
Article 352	Proclamation of Emergency
Article 353	Effect of Proclamation of Emergency
Article 354	Application of provisions relating to the distribution of revenues while a Proclamation of Emergency is in operation
Article 355	Duty of the Union to protect States against external aggression and internal disturbance
Article 356	Provisions in case of failure of constitutional machinery in States
Article 357	Exercise of legislative powers under proclamation issued under Article 356
Article 358	Suspension of provisions of Article 19 during Emergencies
Article 359	Suspension of the enforcement of the rights conferred by Part III during Emergencies
Article 360	Provisions as to Financial Emergency

Read More: 1975 Emergency and its Impact

Specialised Adoption Agencies (SAAs)

Recently, the **Supreme Court (SC)** has warned states and Union Territories of contempt proceedings if they don't establish **Specialised Adoption Agencies (SAAs)** in every district.

- ➢ **370** out of 760 districts in India lack operational SAAs, despite court orders mandating their establishment nationwide.
- ➢ This gap has led to a significant disparity between adoption registrations (**13,467** in 2023-2024) and actual adoptions (**approximately 4,000**), mainly due to inadequate infrastructure.
- ➢ Only **Goa, Karnataka, Kerala, Rajasthan, and Chandigarh** have fully complied with the SCs' directive.
- ➢ Larger states like **Uttar Pradesh** face serious challenges, **with 61 out of 75 districts lacking SAAs.**
- ➢ Adoption in India is governed by the **Hindu Adoption and Maintenance Act (HAMA),** 1956 (for Hindus, Jains, Sikhs, and Buddhists), and the **Juvenile Justice (Care and Protection of Children) Act, 2015**.
- ➢ **Central Adoption Resource Authority (CARA)** is the **nodal body** regulating the adoption of **orphaned, surrendered and abandoned children** in India.
  - ○ It was set up in **1990** under the **Ministry of Women and Child Development**.
  - ○ It is signatory to the **Hague Convention On Protection of Children and Co-operation of 1993**.
  - ○ It regulates **State Adoption Resource Agency (SARA), SAA, Authorised Foreign Adoption Agency (AFAA), Child Welfare Committees (CWCs),** and **District Child Protective Units (DPUs)**.

Note:

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TIMELINE OF ADOPTION LAWS IN INDIA

HINDU ADOPTION AND MAINTAINANCE ACT

1956
- **Objective**- to find children for "childless couples".
- Allowed **only hindus, sikhs, buddhists and jains** to adopt.

THE JUVENILE JUSTICE ACT

2000
- Facilitated rehabilitation of abandoned, orphaned and abused children in **formal institutions**
- extended adoption to all **religious communities**

THE JUVENILE JUSTICE ACT AMENDMENT

2006
- More concentration on **child rights**
- Terminology- **"legitimate"** parent
- Extended adoption to **single parents**
- Adoption process becomes clearer

THE JUVENILE JUSTICE ACT

2015
- terminology changes to **"lawful"** parent
- **Single male** is barred from adopting a **girl child**
- Central Adoption Resource Authority (CARA) becomes a statutory body
- All mechanism, processes and authorities become clear

ADOPTION REGULATIONS

2017
Laws for adoption- both within the country and overseas. Aided clarity on :
- procedures
- requirements
- involved bodies
- rules/framework
- eligibility criteria for children and parents

Read More: Adoption in India

■■■

Note:

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