ENSURE IAS

Monthly *Current Affairs*

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1. POLITY AND GOVERNANCE

1.1 CEC AND OTHER ECS (APPOINTMENT, CONDITIONS OF SERVICE AND TERM OF OFFICE) BILL, 2023

Context
- In August 2023, the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023 which repeals the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991 was introduced in Rajya Sabha.

Background
- **Anoop Baranwal vs Union of India judgment (2022)**: The SC declared that the President shall make appointment of CEC and the ECs on the advice of a Committee consisting of the:
  - Prime Minister
  - Leader of the Opposition (LoP) of the Lok Sabha.
    - **When no LoP is available**: The leader of the largest opposition Party in the Lok Sabha in terms of numerical strength.
  - Chief Justice of India (CJI).
    - Election Commissioners and CECs had been appointed by the President after recommendations from the central government till this SC ruling.
- **New Bill 2023**: In the committee for appointments, the proposed Bill will substitute a nominated Cabinet Minister for the Chief Justice of India.

Key features of the bill

Appointments	
Earlier	**Now**
• **Article 324 of the Constitution**: The ECI consists of the CEC and such number of other ECs, as the President may decide are appointed by the President.	• **Retain**: The Bill retains the same composition. • **Appointment**: They (CEC and ECs) will be appointed by the President on the recommendation of a Selection Committee.
Composition of Selection Committee	

• **Chairperson**: Prime Minister.
• **Member**:
    ○ **Leader of the Opposition (Lok Sabha).**
        ▪ **When Leader of Opposition in Lok Sabha has not been recognized**: The leader of the single largest opposition party in Lok Sabha will assume the role.
    ○ **1 Union Cabinet Minister**: Nominated by the Prime Minister.	

Search Committee	

• **Composition**: Headed by the Cabinet Secretary.
    ○ **Two other members:** Not below the rank of Secretary to the central government.
        ▪ **Qualifications:** possessing expertise and understanding in election-related topics.
• **Functions**: Prepare a panel of 5 persons for the consideration of the Selection Committee.
    ○ Candidates not on the search committee's panel may also be taken into consideration by the committee.	

Salary and Allowances	
Earlier	**Now**
• **1991 Act**: The ECs' salaries will be equal to that of a Judge of Supreme Court.	• **Salary, allowance, and service conditions of the CEC and other ECs**: Same as that of the Cabinet Secretary.
Conduct of Business	
• The Election Commission must operate in unanimous when doing all business. • When the CEC and the other ECs disagree on an issue, the decision will be made by the majority.	

Term of Office	
Earlier	**Now**
• **1991 Act**: The CEC and other ECs will hold office for a term of 6 years or until they reach the age of 65 years, whichever is earlier. • The entire term of an EC who is also appointed as the CEC cannot be exceed than 6 years.	• The Bill retains the same tenure. • They (CEC and other ECs) will not be eligible for re-appointment.
Removal and resignation	
Earlier	**Now**

• **Article 324 of the Constitution**: The Chief Election Commissioner (CEC) can only be removed from his office in a way same to that of a Judge of a Supreme Court.
• On the basis of a motion approved by both Houses of Parliament during the same session, the President issues an order to do this.
• The removal motion must be supported by:
    ○ Majority support from all House members together.
    ○ Support from the present and voting members must be at least two-thirds.
• **Resignation**: They may submit their resignation to the President.
	• The Bill retains the same removal procedure

Issues and Concerns related to the bill
- **Lack of balance of Power:** The Leader of Opposition is left with a minority vote which raises questions about the balance of power within the committee.
- **Impact on autonomy and functioning of the ECI:** Any perceived influence of the Executive/ ruling party in the selection process might raise concerns about the EC's ability to carry out its responsibilities without bias.
- **Against SC Order:** The proposed legislation overrides the SC judgment in the Anoop Baranwal vs. Union of India judgment.
- **Redundant search process**: Bill authorizes the selection committee to go beyond the search committee's recommendations and appoint anyone it wants as CEC/EC.
- **Downgrading Rank:** The rank of Election Commissioner is being reduced in the warrant of precedence. This could impact their stature.

Way ahead
- **Equal constitutional protection required**: Article 324(5) of the Constitution should be amended to equate the removal procedures of the two Election Commissioners with that of the Chief Election Commissioner.
- **Multi-Stakeholder approach**: Steps should be taken to engage prominent jurists, CJI, independent experts, civil society members, etc., to widen the committee's scope and ensure transparency in the appointment process.
- **Principle of Seniority:** The elevation of an Election Commissioner should be based on seniority unless the three-member committee, for reasons to be recorded in writing, finds such Commissioner unfit, as recommended by the law commission.
- **More comprehensive consultation**: Before finalizing the Bill, the government should conduct comprehensive consultations with opposition parties, legal experts, and stakeholders.

Important Articles related to Election Commission of India	
Article 324	Responsibility of overseeing, directing, and controlling elections.
Article 325	No one shall be excluded from or assert a claim to inclusion in a special electoral roster on the basis of their religion, race, caste, or sex.
Article 326	Elections to the House of the People (Lok Sabha) and to the Legislative Assemblies (Vidhan Sabha) of States to be on the basis of adult suffrage (right of voting).

Article 327	Parliament has the authority to create rules governing election to legislature.
Article 328	Power of Legislature of a State to make provision with respect to elections to such Legislature.
Article 329	Preventing courts from interfering in electoral processes.

1.2 DIGITAL PERSONAL DATA PROTECTION ACT 2023

Context

- Recently, the President of India has given assent to the Digital Personal Data Protection Act 2023, a landmark legislation designed to regulate the processing of personal data in the digital domain.
- Use of personal data is regulated under the Information Technology (IT) Act, 2000 in India.

THE JOURNEY OF THE BILL

Aug 2017: Privacy as a fundamental right reaffirmed in Justice KS Puttaswamy vs Union of India by SC | Justice Srikrishna Committee constituted to examine data protection issues | **Jul 2018**: Committee releases draft of Personal Data Protection Bill (PDPB) and report

Dec 2021: JPC releases its report and a new version of law as the Data Protection Bill (DPB) | **Dec 2019**: Revised draft bill sent to joint parliamentary committee (JPC) for both Houses to review | **5 July 2023** Union Cabinet approves the draft DPDP Bill, 2023

Aug 2022: Draft DPB withdrawn | **Nov 2022**: Meity releases draft Digital Personal Data Protection Bill (DPDPB) for public consultation

Key Features of the Act

Key definitions
• **Personal data**: Any information that can be used to identify a specific person from such information.   • **Processing**: procedure or collection of operations on digital personal data that are fully or partially automated. It comprises collecting, keeping, using, and sharing.   **Key Terms in PDP Act**   **Data Fiduciary** who decides the purpose of data processing   **Data Processor** who processes data on behalf   **Critical Personal Data** Categories of data which require most protection as defined by the PDP Act   **Data Principal** Individual whose data is processed   **Data Processing** Personal data and Sensitive Personal Data

Applicability

• Processing of digital personal data is covered by the act:
     o **Within India**: either (i) online or (ii) offline or digitized.
     o **Outside India**: If it is for offering goods or services in India.
     o **Cross Border Transfer:** The act permits the transfer of personal data outside of India, with the exception of nations that are prohibited by central government notification.

Consent

• **Usage of data:** Only with the individual's consent and for a legal purpose may personal data be used.
 • **Mandatory notice before seeking consent**: Information about the personal data to be collected and the processing purpose should be included in the notification.
 • **Consent for minors**: Consent will be provided by the parent or the legal guardian for individuals below 18 years of age.
 • **Right to withdraw consent**: The choice to revoke consent is always available.
 • **Exemptions**: For "legitimate uses," which include:
     o Specified purposes for which data has been voluntarily submitted by an individual, consent will not be required.
     o Provision of benefit or service by the government.
     o Medical emergency.
     o Employment.

Rights of data principal

• The data principal, or person whose data is being processed, has the following rights:
     o Obtain information about processing.
     o Seek correction and erasure of personal data.

- o Nominate another person to exercise rights in the event of death or incapacity.
- o Grievance redressal

Duties of data principal

- Data principals must not:
  - o Register a false or frivolous complaint, and
  - o Provide any incorrect information or, in certain circumstances, act in someone else's place.
  - o A fine of up to Rs 10,000 may be imposed for duty violations.

Obligations of data fiduciaries (entity determining the purpose and means of processing)

- They must:
  - o Make reasonable efforts to ensure that data is accurate and complete;
  - o establish reasonable security safeguards to prevent a data breach;
  - o notify the Data Protection Board of India and any affected parties in the event of a breach;
  - o erase personal data as soon as the intended use is complete and retention is no longer required by law (storage limitation).
    - ▪ Government entities are exempt from storage restrictions and the data principal's right to request that their personal information be deleted.

Exemptions

- In certain circumstances, the rights of the data principal and the duties of data fiduciaries (apart from data security) do not apply. These include:
  - o Crime prevention and investigation;
  - o Legal rights or claims enforcement.
- The central government has the authority to notify specific activities that they are exempt from the act's application. These include:
  - o processing by government organizations for research, archiving, or statistical reasons; and
  - o processing in the interest of state security and public order.

Data Protection Board of India (DPBI)

- **Established by**: Central government.
- **Key functions of the Board include:**
  - o Monitoring compliance and imposing penalties,
  - o In the event of a data violation, directing data fiduciaries to take the appropriate action and hearing grievances from those who were impacted are both required.
  - o Board members will be appointed for terms of 2 years and may be reappointed.
- **Composition**: The number of Board members and the procedure for choosing them shall be specified by the central government.
- **Appellate authority**: Telecom Disputes Settlement and Appellate Tribunal (TDSAT) will hear appeals against the Board's decisions.

Penalties

- The schedule to the act specifies penalties for various offenses such as up to:
  - o Rs 250 crore for failing to take security precautions to prevent data violation.
  - o Rs 200 crore for failing to fulfill commitments for minors/ Children.
  - o The Board will assess fines after investigating.

Innovative features

- The act is concise and SARAL, that is, Simple, Accessible, Rational & Actionable Law as it:
  - o Uses plain language.
  - o Contains illustrations that make the meaning clear.
  - o Contains no provisos ("Provided that…").
  - o Has minimal cross-referencing.
- **Acknowledges women in law-making**: By using the word "she" instead of "he".

Significance of the Act

- **Principles-based approach:** The act focuses on principles and outcomes rather than modes and processes which will enhance the longevity of the bill and also give businesses flexibility in achieving compliance.
- **Enhanced Privacy Protection:** It will enhance the privacy cognizance of Indian citizens through transformative accountability measures to be adopted by enterprises.
- **Strengthened Data Security**: It is due to robust protection and security measures, combined with effective privacy policies and grievance redressal mechanisms.
- **Greater responsibility and remedies:** The law gives citizens the right to intervene in privacy violations, ensures the protection of their rights and promotes a culture of responsibility among data processors.

- **Boost to the startup ecosystem**: The act is a boon for start-ups as they are exempted from certain obligations after notification which will give the startup ecosystem a further boost and improve its global competitiveness.
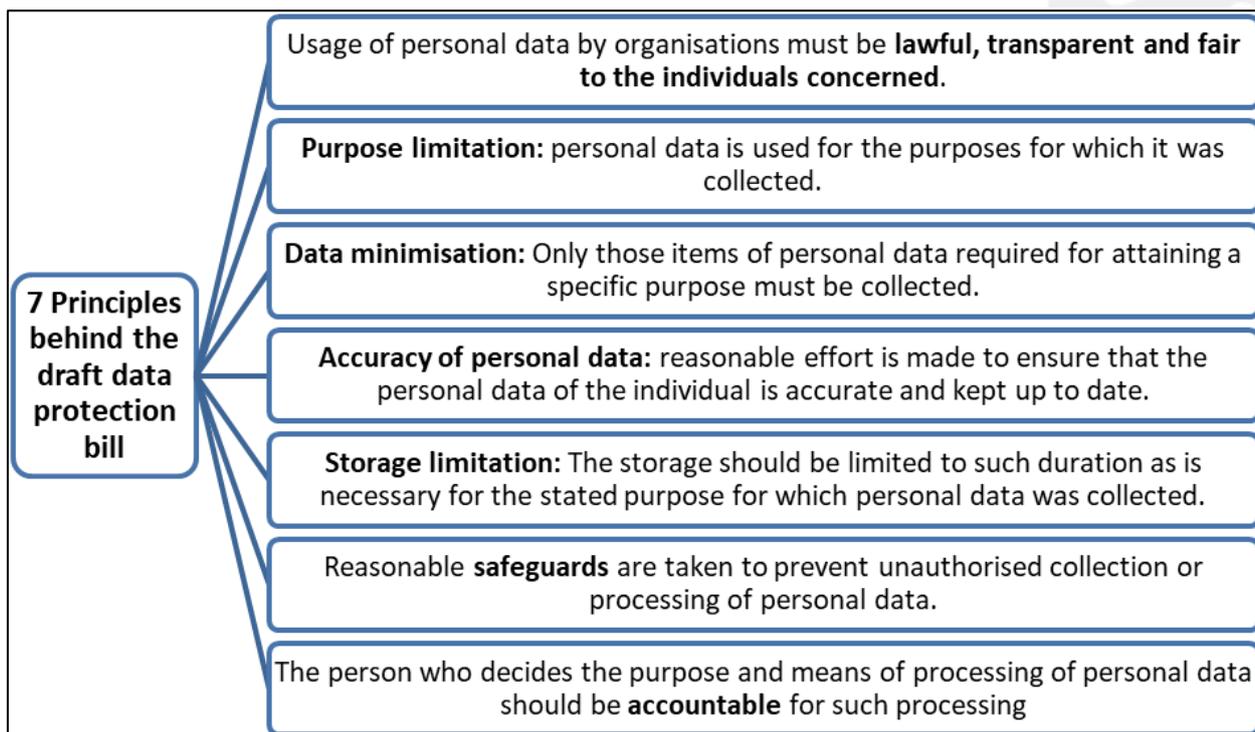
Issues related to the Act
- **Risk of surveillance**: Exceptions to the state may result in the collection, processing and storage of data beyond what is necessary and violate the fundamental right to privacy (Article 21).
- **Safety Issue**: The cross-border transfer of personal data may not ensure adequate data protection standards in the countries where the transfer of personal data is allowed.
- **No compensation:** The act excludes the application of Section 43A of IT Act, 2000 which imposes an obligation on corporations to award damages to affected persons in case of negligent handling of their sensitive data.
- **Multi-layer grievance redressal**: Affected persons must first apply to the data fiduciary's redressal mechanism. Unresolved complaints can be addressed to the Data Protection Board and appealed to TDSAT.
- **RTI Exemption:** The law proposes that personal data of public servants will not be disclosed under the Right to Information (RTI) Act, which can encourage corruption by not disclosing assets, liabilities, etc.
- **No clear definition**: According to the Act, the data fiduciary is prohibited from carrying out any processing that could be harmful to a child's wellbeing.
    - However, there is no definition of a negative effect or any advice on how to identify one.
- **Lack of Independence**: The short term (2 years) of the members of the Data Protection Board of India with scope for re-appointment may affect the independent functioning of the Board.
- **No provision for some rights:** The right to data portability and the right to be forgotten are not granted to the data principal by the Act.
    - **Right to data portability**: It permits data principals to obtain and transfer their data from a data fiduciary.
    - **Right to be forgotten:** It refers to the right of individuals to limit the disclosure of their personal data on the internet.
- **Issues related to the provisions for children**: A sizable number of children will need to seek parental consent for services they can easily access right now.
    - How data processing organizations will determine children's ages and secure parental permission is a topic of debate.
    - Anonymity in the digital domain might be lessened if every data fiduciary is required to confirm the age of every person signing up for its services.

Way Ahead
- **Data Governance**: There is a need to develop mechanisms to manage cross-border data transfers, especially to countries not listed in the Communication.
- **Provide Data Rights**: The right to data portability and the right to be forgotten should be provided especially in cases where data collection and storage pose harm to the reputation, life, identity etc. of a person.

- **Prevent Misuse:** Concepts such as sovereignty and integrity of India should be clearly defined and the procedure for granting exemption defined.
- **Determine the duration of time:** To delete data, a specific time must be defined when the purpose is fulfilled or when the data protection officer withdraws his consent to the processing of personal data.
- **Stakeholder consultation**: Contact data protection experts, industry representatives and civil society organizations for comprehensive feedback and diverse perspectives.
- **Strengthen privacy protections**: Minimize government exemptions, ensure an independent and effective data protection board and clarify data breach rules and penalties.
- **Transparency and accountability**: Establish clear guidelines for data controllers, conduct regular audits and provide accessible mechanisms for citizens to lodge complaints and seek redress.
- **Awareness and Education**: Launch public awareness campaigns, privacy-enhancing programs, and work with educational institutions to educate people about their privacy rights.
- **International cooperation**: Align standards with international frameworks, collaborate on data transfer mechanisms, and actively participate in global privacy discussions and forums.
- **Continuous review and adaptation**: Include provisions for regular review and updating to respond to emerging data protection issues and technological developments.

1.3 REVAMPING INDIA'S CRIMINAL LAWS

Context
- Recently, the Union Ministry of Home Affairs introduced three new bills in Lok Sabha to revamp India's criminal justice system enacted by the British in 1860.
- The Parliamentary Standing Committee has been tasked with further consideration of the legislation.

Key Points
- **The three bills are:**
  - **Bharatiya Nyaya Sanhita Bill, 2023:** It will replace the Indian Penal Code, 1860.
  - **Bharatiya Sakshya Bill, 2023:** It will replace the Indian Evidence Act, 1972.
  - **Bharatiya Nagrik Suraksha Sanhita Bill, 2023:** It will replace the Code of Criminal Procedure(CrPC), 1973.
- **Aim**: To provide prompt justice, the integrity of the evidence for a stronger conviction, and less waiting times (lower pendency).

Background		
Indian Penal Code (criminal code), 1860	**Indian Evidence Act, 1972**	**CrPC 1973**
• The Charter Act of 1833 resulted in the formation of the first law commission of India, which was led by Thomas Babington Macaulay and produced recommendations that became the foundation for the code. • The Princely states, who had their own courts and legal systems up to the 1940s, were exempt from its instant application. • The code has undergone multiple amendments since then and now contains more criminal provisions.	• The Indian Evidence Act, which offers a number of guidelines and related matters regulating the admissibility of evidence in Indian courts of law, was passed by the Imperial Legislative Council of India during the British Raj. • With the exception of a few irregular modifications, the Indian Evidence Act hasn't altered much in the more than 125 years since it was passed.	• The CrPC was first adopted by the British Parliament in 1882, and it has subsequently undergone multiple changes, most notably in 1898, 1923, and 1955. • In its 41st report, the Law Commission of India made a substantial amendment suggestion that led to the creation of CrPC 1973.

Key changes proposed in the Bharatiya Nyaya Sanhita Bill, 2023

Sedition	
Earlier	**Now**

• **Definition**: Sedition is defined under the IPC as fostering or trying to promote hatred or contempt for the government or igniting discontent.
 	
• **Punishment**: It is punishable with imprisonment between 3 years and life imprisonment, and/or a fine.
	• **Removed**: The Bill removes this offense. It instead penalizes the following:
	   ○ promoting feelings of separatism actions,
	   ○ attempting to incite armed revolt or revolutionary activity,
	   ○ compromising India's sovereignty or unity and integrity.
	• These violations may entail the use of money, technological communication, or the exchange of words or signs.
	• **Punishments**: These will be punishable with imprisonment of up to 7 years or life imprisonment, and a fine.

Terrorism

• **Definition**: According to the Bill, terrorism is defined as an act that aims to undermine the country's unity, integrity, and security, scare the populace, or disturb the peace. The following are examples of terrorist acts:
   ○ Using weapons, bombs, or dangerous materials (biological or chemical) to inflict harm on others, endanger life, or implant fear;
   ○ Destroying property or Interrupting Essential Services;
   ○ Acts Listed in the Second Schedule of the Unlawful Activities (Prevention) Act, 1967, such as the Unlawful Seizure of Aircraft or the Taking of Hostages.
• **Punishment**: Punishment for attempting or committing terrorism includes:
   ○ death or life imprisonment, where the offense has resulted in death of any person,
   ○ imprisonment term between five years and life in other cases.
      ▪ An offender will also be liable to a fine of at least five lakh rupees.
      ▪ Anyone who conspires, organizes, or aids in the planning of any terrorist attack faces a sentence of 5 years to life in jail and a fine of at least 5 lakh rupees.

Organized crime

• **Definition**: The Bill defines organized crime as:
   ○ a persistent illegal activity such as kidnapping, extortion, contract killing, land grabbing, financial scams, and cybercrime;
   ○ carried out by individuals acting alone or jointly, as members of or on behalf of a crime syndicate;
   ○ carried out to obtain material or financial benefit.
• **Punishment**: Organized crime attempts and offenses are punishable by death or life in prison if they result in the death of a person, or by a sentence of five years to life in prison in other circumstances.
   ○ Additionally, the offender will be required to pay a fine.

Petty organized crime
• **Definition:** Those caused in an overall feeling of disquiet among citizens and are committed by gangs or organized crime groups. These include organized snatching, theft, and pickpocketing. • **Punishment**: The proposed law stipulates that small organized crime shall be penalized by a fine and a term of imprisonment ranging from 1 to 7 years.

Murder by a group of persons on grounds of caste or race
• **Separate penalty**: For murder committed by five or more people on specified grounds which include race, caste, sex, place of birth, language, or personal belief. • **Punishment**: Each offender will face a sentence of death or imprisonment for a period ranging from 7 years to life. A fine will also be imposed.

Death penalty for gang rape of minor	
Earlier	**Now**
• The IPC permits the death sentence for group rape of women under the age of 12.	• The Bill allows death penalty for gang rape of women below 18 years of age.

Sexual intercourse by deceitful means
• **Grounds**: The Bill criminalizes engaging in sexual activity with a woman (that does not constitute rape) while using deceptive methods or while making an empty promise of marriage. • **Punishment**: It will result in a fine and up to 10 years of simple or solitary confinement as punishment.

Extending applicability of certain offenses to boys	
Earlier	**Now**
• Importing girls under the age of 21 years for unauthorized sexual contact with another individual is illegal under the IPC.	• The Bill states that it will also be illegal to import boys under the age of 18 for illicit sexual contact with another person.

Key changes proposed in the Bharatiya Sakshya Bill, 2023

Admissibility of electronic or digital records as evidence	
Earlier	**Now**

• Two kinds of evidence - documentary and oral evidence.
   o **Documentary evidence:** Information in electronic records that have been printed or stored on optical or magnetic media created by a computer.
      ▪ This information may have been processed or stored by a number of computers or by various computers.
   o **Oral evidence**: Oral evidence includes declarations made before Courts by witnesses about a fact that is being investigated.
	• **Documentary evidence:** According to the bill, digital or electronic records will be treated legally similarly to paper records.
	   o It broadens the definition of electronic records to include data kept on communication devices (such as cellphones and laptops) or in semiconductor memory.
	   o This will also comprise voicemails, server logs, smartphone, email, and locational proof records.
	   o The information may have been created on, stored in, or processed by one or more computers or communication devices:
	      ▪ either independent or connected to a computer network, or
	      ▪ through an intermediary.
	• **Oral evidence:** Any information given electronically.

Primary and Secondary evidence	
Earlier	**Now**

• **Two types of documentary evidence**: primary and secondary evidence.
• **Primary evidence:** It contains the original document and any copies, as well as electronic and visual records.
• **Secondary evidence:** It comprises specific copies of the original documents as well as oral accounts of the contents of the document as proof of the contents of the original.
• **Conditions**: In a number of circumstances, secondary evidence may be needed, such as when the original:
   o is in the possession of the person against whom the document is sought to be proved, or
   o has been destroyed.
	• **Expansion of secondary evidence:** It include Oral and written admissions
	• The Bill adds that secondary evidence may be necessary if the authenticity of the document itself is in issue.

Production of documents	
Earlier	**Now**
• Regardless of any objections to its production or admissibility, a witness who has been asked to produce a document and has it in their custody or control must present it to the court. • The Court will determine the validity of such a document.	• No Court shall order to bring before it of any privileged communication between the Ministers and the President.
Joint trials (Trial of more than one person for the same offense)	
Earlier	**Now**
• If it is established that a confession made by one of the accused affects the other accused, it will be viewed as a confession against both.	• When an accused escape from the site of an investigation or refuses to appear in court, the case will be considered as a joint trial.

Key changes proposed in the Bharatiya Nagrik Suraksha Sanhita Bill, 2023

Detention of undertrials	
Earlier	**Now**

• If an accused has served half of the maximum sentence for an offense while being held in custody for an investigation or trial, he must be released on his own recognizance.
• Death-related offenses are exempt from this rule.
	• The Bill additionally states that the following situations are exempt from this provision:
	  o crimes carrying a mandatory life sentence;
	  o people who are the subject of multiple criminal investigations.
	• The superintendent of the jail where the accused is being held must submit the application for the release of such undertrials on bail.
	• First-time offenders will be released on bail if they have served one-third of the maximum sentence that can be imposed for the offense.

Trials in electronic mode
• All trials, inquiries, and procedures may be conducted in an electronic format, according to the Bill, which also allows for the production of electronic communication devices that may hold digital evidence during an investigation, inquiry, or trial. • Communication across electronic channels includes using telephones, computers, or mobile devices.

Medical examination of accused	
Earlier	**Now**
• The Code permits a registered medical professional to examine the accused in specific circumstances, including rape cases, upon the request of a police official with at least sub inspector level authority.	• Any police officer may seek such an examination, according to the Bill.

Forensic investigation
• The Bill requires forensic investigation for crimes carrying a minimum sentence of seven years in prison. • In these circumstances, forensic experts visit crime scenes to gather forensic evidence and record the process on mobile phones or any other electronic devices. • If a state lacks a forensics facility, it must use one in another state.

Power to prohibit carrying arms	
Earlier	**Now**
• The Code gives the District Magistrate the authority to forbid carrying weapons during any parade, mass exercise, or large-scale arm training in public areas • Such restrictions can be in effect for as long as six months. • However, the Code did not provide notification of the provision.	• The Bill omits this provision.

Signatures and finger impressions	
Earlier	**Now**
• The Code allows a Metropolitan/Judicial Magistrate to order that anyone produce samples of their handwriting or signatures. • A person who has not been arrested in connection with the investigation, however, cannot have such a specimen taken from them.	• The Bill broadens this to allow for the collection of voice samples and finger impressions from people who haven't been arrested.

Timelines for procedures:
• The Bill establishes deadlines for certain operations.   o For instance, it mandates that doctors who evaluate rape victims send their reports to the investigating officer within seven days of their examinations. • Giving judgment within 30 days following the conclusion of the arguments (extendable up to 60 days) is another deadline that has been imposed. • Updating the victim within 90 days after the investigation's conclusion. • A sessions court must frame charges within 60 days of the initial hearing on those charges.

Trial in absence of offender
• The proposed legislation calls for a trial to be held without a declared criminal present in cases when the declared criminal escapes arrest and there is no likelihood of locating him right away.
• A person who has been declared an offender is one who: o is charged with a crime that carries a minimum 10-year sentence or death.
• A court-ordered appearance is missed at the appointed time and location.

Metropolitan magistrates	
Earlier	**Now**
• Any city or town with a population of more than 1 million people can be declared a metropolitan region under the Code, and these locations have Metropolitan Magistrates.	• The Bill omits this provision.

Need of these bills

- **To address Pendency**: According to the law ministry, almost 4.7 crore cases are pending collectively in the Supreme Court, High Courts and Subordinate Courts.
- **To deliver justice on time:** Undertrials in jails constitute around 70% of the prison population due to complex legal procedures and a lack of resources.
- **To address low conviction rates:** Low conviction rates (about 50%) are a result of the criminal justice system's inefficiencies, which also include poor forensic investigation, ineffective policing, and the influence of influential people on law enforcement.
- **To address emerging challenges:** There is a need for an evolving and adaptable criminal justice system and integrating modern technology in evidence gathering, storage, and presentation would aid in discovering various criminal dimensions.
- **To align with societal changes:** The colonial roots of India's criminal justice system have resulted in a collection of rules and processes that may not wholly be appropriate or relevant for the nation's current socio-economic and cultural milieu.
- **To change the Public Perception**: According to the Second ARC report, Police-public relations in India are unsatisfactory because citizens regard the police as dishonest, ineffective, and unresponsive, and frequently hesitate to call them.

Various Committees' and Their Recommendations to Reform the Criminal Justice System of India

Vohra Committee, 1993
• To address the growing issue of the criminalization of politics and the connections between officials, criminals, and antisocial elements. • It was advised that a structure be put in place to efficiently address this threat by gathering information from multiple sources and taking necessary action against such individuals.
Malimath Committee, 2003
• The creation of a new classification of crimes called "social welfare offenses" for small transgressions that can be resolved through the imposition of fines or community service. • Eschewing the adversarial system in favor of a "mixed system" that includes some aspects of the inquisitorial one, such as enabling judges to actively participate in gathering evidence and questioning witnesses. • Lowering the threshold for conviction from "beyond a reasonable doubt" to "clear and convincing evidence." • allowing confessions made in front of an experienced police officer to be used as evidence.
Madhav Menon Committee, 2007

• This committee was established to create a national criminal justice policy. It offered a number of guidelines and tactics for the reformation process, including:
  o ensuring that human rights and dignity are respected at all stages of the criminal justice system.
  o encouraging restorative justice, which emphasizes reparation over punishment for the harm inflicted by crime.
  o enhancing communication and collaboration between the various criminal justice institutions, including the police, the courts, the prosecution, etc.

Supreme Court Directives on Police Reforms, 2006

• The Supreme Court issued directives to promote functional autonomy, responsibility, and professionalism of the police force in response to a public interest lawsuit filed by two former police officers demanding reforms of the Indian police force. Among the instructions were:
   ○ **Establishing a State Security Commission** to establish guidelines for police operation, assess performance, and ensure that state administrations do not exert unauthorized pressure or influence on the police.
   ○ Ensuring that the **Director General of Police** has a set term and is chosen from a panel using objective criteria rather than at the whim of the political executive.
   ○ To achieve **faster investigation, better competence, and stronger** relations with the public, the police should separate their investigative and law and order functions.
   ○ Establishing a Police Complaints Authority to investigate claims of serious misconduct and abuse of authority by police officers at the state and district levels**.**

Ranbir Singh Committee on Criminal Law Reform (2020)

• It was formed in 2020 to review three codes of criminal law
   ○ Indian Penal Code (IPC), 1860
   ○ Code of Criminal Procedure (CrPC), 1973 and
   ○ Indian Evidence Act, 1872.

Issues and concerns
- **Unclear definitions of "criminal activity":** It may lead to their improper application and affect Freedom of Speech and Expression. For example: 'Terrorist acts', which now include damage to property and provocation or intimidation.
- **Increase the scope for arbitrary police action:** Due to enhanced discretionary action-taking powers of police personnel.
- **Delays in the actual trial of the offenses:** Although these measures do not apply to ongoing cases or trials, the courts are likely to receive a deluge of interpretation.
- **Issues of privacy:** It results from the confiscation of electronic devices and the access to any sensitive data that may be kept on them.
- **Violation of Human Rights:** The use of ambiguous and wide language in the bills, which may violate the human rights of those being accused, victims, witnesses, and other parties involved, has drawn criticism.
   - For instance, the BNS creates a new offense under Section 150 called "acts endangering sovereignty, unity, and integrity of India" that is comparable to the IPC's sedition offense under Section 124A, which was deleted. This might be applied to stifle free speech and dissent.
- **Lack of Coherence and Consistency:** The measures have been charged with being incoherent and in conflict with other current laws as well as one another.
   - For instance, The BNSS adds a new classification of offenses known as "social welfare offenses" that can be punished by fines or community service, but it is unclear which offenses fall into this classification.

Way Ahead
- **Need for Inclusivity**: Before making any changes, start a larger consultation process with all the stakeholders, including the general public, to account for different viewpoints.
- **Safeguarding Human Rights:** Explicitly including human rights safeguards and principles, and precisely defining and limiting ambiguous phrases to avoid misunderstandings.
- **Coherence and Consistency**: Make sure that the proposed legislation and current existing laws are all consistent and coherent.
- **Enhanced transparency:** Improve the use of technology in the criminal justice system through digitizing evidence collecting, conducting hearings online, and videotaping witness testimony to expedite trials and minimize backlog.
- **Capacity Building:** It entails making investments in training, hiring, and infrastructure to increase the capability of the legal aid system, court, and law enforcement.
- **Adoption restorative justice:** It emphasizes rapprochement, restitution, and rehabilitation in order to address the underlying causes of crime, lower recidivism, and provide victims closure.
- **Public Awareness campaigns:** To improve police-public relations by educating the public about their rights and responsibilities within the criminal justice system.

Conclusion
- The effectiveness of improvements in the criminal justice system depends on how well they fit with its ability to put them into practice. Criminal law reforms must undergo a difficult process beginning with their conception, formulation, implementation strategy, and ongoing scrutiny.

1.4 STANDING COMMITTEE REPORT ON ELECTORAL REFORMS

Context
- Recently, the Standing Committee on Personnel, Public Grievances, Law and Justice submitted its report on "Specific Aspects of Election Process and their Reform".
- **Issues identified**: The Committee identified three issues of the electoral process:
  - The status of the Common Electoral Roll.
  - False declarations during filing of nomination for elections.
  - The minimum age of voting and contesting elections.

Key Provisions

Key provisions related to Common Electoral Roll
Two types of electoral rolls: General electoral rolls (overseen by ECI) and Separate electoral rolls (prepared by SEC).   **Election Commission of India (ECI)**: Article 324 -> ECI administers Union and State elections like Lok Sabha, Rajya Sabha, State Legislative Assemblies, etc. in India.   **State Election Commissions (SEC)**: Article 243K (1) -> The SEC in each state has been constituted to conduct fair elections to local bodies (Panchayat and Municipality).
Key provisions related to False Declarations
Conduct of Elections Rules, 1961: Candidates must submit an Affidavit as per the Conduct of Elections Rules, 1961, disclosing assets, liabilities, education, etc.   **False information**: A legal violation and punishable under Section 125A of the RPA.
Key provisions related to minimum age for contesting elections
- Lok Sabha (Article 84) and Legislative Assembly (Article 173) is 25 years.   - Rajya Sabha (Article 84) and Legislative Council (Article 173) is 30 years.
Key provisions related to minimum age of voting
61st Constitutional Amendment (officially known as The Constitution (Sixty-first Amendment) Act, 1988): Lowered the voting age of elections to the Lok Sabha and to the Legislative Assemblies of States from 21 years to 18 years.

Key observations and recommendations of the Committee

Common Electoral Roll: identified two issues in implementing it.	
Current legal framework	**Constitutional regulations**
Observations: Given that municipal elections and panchayat elections are under the control of state election commissions, the committee concerned about the potential influence on state authorities. - The ECI is powerless to command State Election Commissions. **Recommendations**: The ECI should consider the constitutional provisions before preparing the Common Electoral Roll.	**Observations**: Article 325 of the Constitution does not apply to the implementation of the Common Electoral Roll that has been proposed by the central government and the ECI. - Elections to the Parliament and state legislatures must be conducted using distinct electoral rolls, according to Article 325. **Recommendations**: The Committee suggested that before making any decisions, the central government thoroughly consider the possible outcomes.

Age of contesting elections:	
Observations	**Recommendations**
• Reducing the minimum age requirement for candidacy in elections would give young individuals equal opportunities to engage in democracy.	• To prepare the youth for political engagement, both the ECI and the central government give high priority to comprehensive civic education programs.
False declarations	
Observations	**Recommendations**
• it is crucial to involve stakeholders in the process of developing election affidavit regulations and that the present six-month sentence for making a false declaration is insufficient and needs to be raised.	• There should be a clear definition of false declarations and affidavits as well as appropriate punishments that reflect the gravity of the offense. • The ECI should be in charge of taking legal action against fraudulent declarations/affidavits.
Aadhaar linking	
Observations	**Recommendations**
• Voters should be informed that Aadhaar linking is optional and that they are still able to exercise their right to vote without it.	• The ECI should put in place a legal clause or another mechanism to make sure that people who are not citizens but have Aadhaar are not listed on the Common Electoral Roll.

Other Issues and Concerns
- **Duplication of efforts in preparing electoral roll:** Local bodies, unlike the Assembly, do not keep a permanent electoral roll.
  - A new electoral roll is created for the local body before each election.
- **Lack of Periodic delimitation:** Delimitation occurs less regularly for assembly and parliamentary constituencies, typically every 15 to 20 years. On the other hand, local body delimitation frequently takes place prior to elections.
- **False affidavits:** It may mislead voters and influence their decisions, which could be detrimental to the fairness of the electoral process.
- **Lack of parity between the minimum age of voting and contesting elections:** It has led to low participation by India's youth population in the political arena.
  - Only 2.2% of MPs in the Lok Sabha are under 30.
  - According to ECI, it is unreasonable to anticipate that 18-year-olds will have the appropriate maturity and experience for these obligations.

Way Forward: Reforms recommended by the Election Commission of India
- **Single constituency:** According to the Commission, the legislation should be changed to provide that a candidate cannot contest more than one constituency at once.
- **Decriminalization of politics**: The Supreme Court's emphasis for a life ban on elected representatives and politicians once they are convicted in a criminal case was supported by the Election Commission.
- **Ban on advertising during elections**: The Commission suggests banning any advertising for Central or State government accomplishments for a period of six months previous to the date the House's term is set to expire in cases where a general election is required before that time.
- **Office protection to ECs**: The Election Commission is recommending a change to give Election Commissioners the same protections and safeguards regarding their potential to be removed from office as the Chief Election Commissioner.
- **Addressing anti-defection issues**: The Election Commission suggested that the President or the Governor make judgments about anti-defection issues.
- **Common electoral rolls:** At elections conducted by the Election Commission and State Election Commissions, common electoral rolls should be used.
- **False election-related statements:** It should be illegal.
- **Independence and transparency:** The Election Commission should be granted rule-making authority under the Representation of the People Act, 1950, and Representation of the People Act, 1951, rather than the Central Government.

Conclusion
- The duty to prevent the current political system from becoming tarnished by the evil of corruption is on the shoulders of the constitutional functionaries who have sworn to protect the constitutional ideals.

1.5 GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI (GNCTD AMENDMENT) ACT, 2023

Context

- In August 2023, the Government of National Capital Territory of Delhi (Amendment) Act, 2023 which seeks to diminish the powers of the elected government of Delhi over services, received the assent of the President.

Evolution of Delhi's Model of Governance
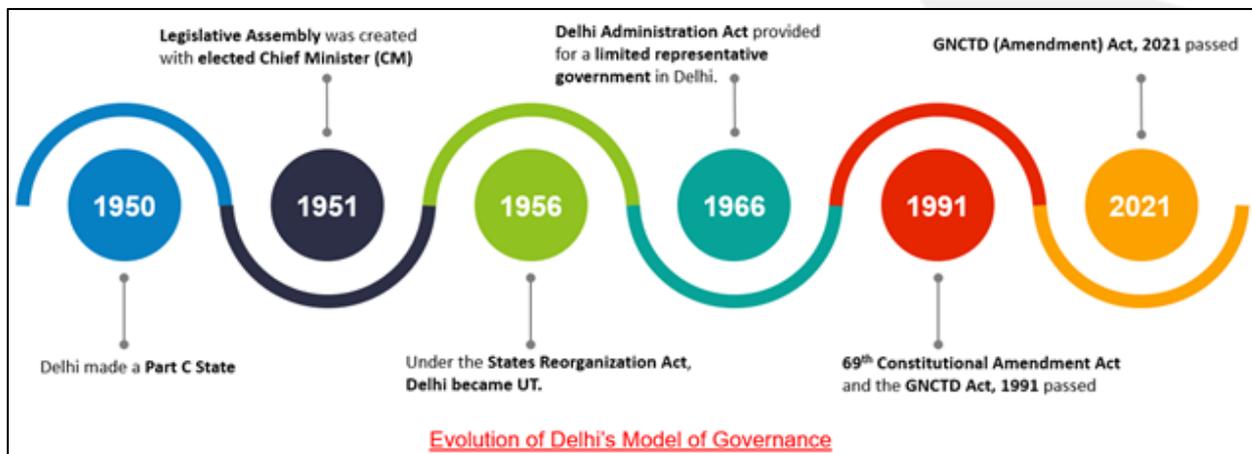
Background

- **States' Reorganization Act (1956)**: It classified Delhi as a UT and regulated by Article 239 of the Constitution.
- **69th Constitutional Amendment Act (1991):** Delhi was given special status and given the name National Capital Territory of Delhi (NCTD).
    - It amended the Constitution by adding Article 239AA, converting Delhi into a UT with a legislature and a council of ministers.
    - With the aid and advice of the Delhi Council of Ministers, the Lieutenant Governor (LG) is designated as the administrator of Delhi.
- **GNCTD Act 1991:** It lays down the guidelines for how the Delhi Assembly and Delhi government are to operate.
    - It describes the Assembly's authority, the LG's discretionary powers, and the Chief Minister's responsibility to inform the LG.
- **Supreme Court Judgement (2018)**: It ruled that the LG is obligated to follow the aid and advice of the Council of Ministers and lacked the ability to make independent decisions.
- **GNCTD vs. Union of India Judgement (2023):** With the exception of public order, land, and police, which are under the sole control of the central government, the Supreme Court ruled that the Delhi government has entire control over the majority of services in the city.
- **National Capital Territory of Delhi (Amendment) Ordinance 2023**: The Ordinance restored control of the services to the Lieutenant Governor. It mandated that the LG only consult the Chief Minister "discretionarily."
    - GNCTD Amendment Act, 2023 repealed the National Capital Territory of Delhi (Amendment) Ordinance 2023.

Previous Judgments of the Supreme Court on the issue

2018 Judgment → A **five-judge Constitution bench** of SC had unanimously held that the **LG of Delhi is bound by the aid and advice** of the elected government, and both needed to work **harmoniously** with each other.

One judge had ruled the **Delhi government has no power at all over administrative services.**

2019 Split Verdict: A two-judge Bench of the SC delivered a split verdict on the question of **powers** of the Government of NCT of Delhi and Union government **over services** and referred the matter **to a larger bench.**

Another judge, however, had said the transfer or posting of officers in top echelons of the bureaucracy (**joint director and above**) can only be done **by the Central government** and the **view of the L-G would prevail** in case of a difference of opinion for matters relating to **other bureaucrats.**

Key Features of the Act

National Capital Civil Services Authority (NCCSA)

- **About:** It is created by the act to advise the Lieutenant Governor of Delhi (LG) on specific service-related issues. These include:
    - Transfers and postings,
    - Matters related to vigilance,
    - Disciplinary proceedings, and
    - Prosecution sanctions of Group A of All India Services (except Indian Police Service), and Dadra and Nagar Haveli (Civil) Services (DANICS).
- **Composition of the Authority**:
    - **Chairperson**: Chief Minister of Delhi.
    - **Member Secretary**: Principal Home Secretary of the Delhi government.
    - **Member**: Chief Secretary of the Delhi government.
    - **Appointment**: The central government will appoint both the Principal Home Secretary and Chief Secretary.
    - **Quorum for a meeting**: 2 people.
        - A majority of the Authority's members who are present and voting shall decide on every decision.

Powers of the Lieutenant Governor:

- **Discretionary powers:** Matters where the LG may act on his discretion are:
    - Matters outside the legislative competence of the Delhi Legislative Assembly but which have been delegated to the LG, or
    - Matters where he is required by a law to act in his discretion or exercise any judicial or quasi-judicial functions.
- **Expansion of the discretionary role of the LG:** By giving him powers to approve the recommendations of the Authority, or return them for reconsideration.
- **Case of a difference of opinion between the LG and the Authority**: LG's decision will be final.

Disposal of matters by Ministers

- **Standing orders:** Issued by a Minister of the Delhi government in consultation with the concerned Department Secretary for the disposal of matters brought to his attention.
- **Mandatory prior opinion of LG:** These include proposals affecting:
    - The peace and tranquility of Delhi.
    - Relationships between Delhi's state government and other state governments, the Supreme Court, or the central government.
    - Legislative Assembly summoning, prorogation, and dissolution;
    - Matters on which the LG is to issue an order at his own discretion.

Duties of Secretaries

- **Notice the matters:** The concerned Department Secretary must bring certain matters to the notice of the LG, the Chief Minister, and the Chief Secretary.
- **Matters include:** Matters which may bring the Delhi Government into controversy with the central or any state government, the Supreme Court, or High Court of Delhi.

Issues and Concerns related

- **Lack of balance of Power**: The NCCSA meeting can be called without the Chief Minister present because two members are required for a quorum.
- **Violate the principle of parliamentary democracy**: The triple chain of accountability - civil servants, ministers, and legislatures - may be broken by giving the NCSSA authority over the transfer and posting of officers.
    - The Supreme Court claims that the three levels of accountability are the foundation of democratic administration.
- **Lack of collective responsibility**: Without first engaging the relevant minister, department secretaries will present some issues directly to the LG, the Chief Minister, and the Chief Secretary.
- **Expand the LG's discretion:** The LG must follow the aid and advice of the Council of Ministers in accordance with Article 239AA, unless the LG is acting independently.

- **Lack of clarity on controversial matters**: The Act stipulates notifying the LG of matters that could put GNCTD in conflict with the central government, but it doesn't specify what constitutes a controversial matter.
- **Undermining the principle of executive accountability:** The LG is not obligated to follow out any laws approved by the assembly or the orders of the house because he is not answerable to them.
- **Against Parliamentary privilege**: Each house of a legislature has the right to set the rules on how to conduct its business which is undermined by the act.
- **Delay in decision-making:** The requirement for LG's approval for many decisions leads to delays in decision-making, which will impact the development and governance of the city.
- **Accountability issues:** It is challenging to assign responsibility for acts and decisions because of the split of duties between the elected government and the Lieutenant Governor.
- **Against Co-operative Centralism**: The Act rejects cooperative centralism and fails to uphold the essential standards established by the Supreme Court in the Government of NCT Delhi v. Union of India case (2018), in addition to negating cooperative centralism.

Way Forward

- **Formation of Expert Committee:** This committee should carefully examine the administrative and legal concerns, examine prior decisions, and make recommendations for workable solutions that promote democratic ideals and preserve the delicate power dynamics between the central government and Delhi's elected government.
- **Dialogue and Negotiation:** Together, the central government and the Delhi administration should address their different issues and goals in order to find a mutually beneficial resolution that upholds democratic ideals and Delhi's unique role as the nation's capital.
- **Respecting the constitutional framework:** All parties involved in the settlement process must show a dedication to maintaining constitutional ideals, such as democratic governance, the separation of powers, and the rights of elected representatives.
- **Adoption of Global models:** Case studies on the models of governance followed in capital cities across the world - like Washington DC, Berlin, France, Ottawa and Canberra can help to form the law related to administration of Delhi.
- **Decentralization of decision-making**: Regional government and municipal councils that are elected can be combined to form a two-tier metropolitan authority.
  - **For example**: The Sydney metropolitan area in Australia is split up into 31 local governments, with the state government serving as the coordinator.
- **Zone demarcation**: While the rest of the NCT may fall under the purview of the State of Delhi, the locations of central government offices and their affiliates may be placed under central authority.
- **Enforcement powers of Police:** Municipalities may be given enforcement authority to use community police officers to compel civil compliance, while Delhi police can handle criminal matters.

Conclusion

- In order to break the deadlock and provide an accountable, democratic government in accordance with the Indian Constitution, there should be active cooperation between the Union and Delhi Government. Additionally, as emphasized in DC Wadhwa versus the State of Bihar, the power to promulgate ordinance should only be used in times of emergency and not for political purposes.

1.6   NO-CONFIDENCE MOTION

Context

- Recently, the no-confidence motion moved by the Opposition against the NDA government was defeated in the Lok Sabha.
- The motion was introduced in the midst of ongoing demonstrations by the opposition calling for the Prime Minister to make a comment regarding the situation in Manipur.

No-Confidence Motion

About
- A device of parliamentary proceedings used to test the government's support and majority in the legislature.
Introduced by Lok Sabha only
- A motion of "No Confidence" against the Government can be introduced only in the Lok Sabha under Rule 198.

- According to Article 75 of the Constitution, the council of ministers shall be collectively responsible to the Lok Sabha.

Procedure for a motion of no-confidence
- Rule 198 of the Lok Sabha specifies the procedure.   - The motion needs the support of 50 members to be admitted.   - Before 10 AM, the member must deliver a written notice.   - Within ten days, the Speaker sets a date for discussion.   - A simple majority, a majority of more than 50% of the members present and voting in the House, is required for the motion to pass.   - If it passes in the Lok Sabha, the council of ministers has to resign from the house.

Key Features
- It need not state the reasons for its adoption in the Lok Sabha.   - It can be moved against the entire council of ministers only.   - It cannot be moved against an individual minister or a group of ministers.

Key Facts
Total: There have been 27 different no-confidence motions (NCM) brought against various governments since 1952.   - Except for one in 1979, when the incumbent prime minister, Morarji Desai, resigned before voting could start, all 27 proposals were defeated by the ruling party.   **First No-Confidence Motion**: It was against the then Prime Minister Jawaharlal Nehru's government in August 1963.   - Acharya JB Kripalani proposed this resolution in August 1963, but it received just 62 votes in favor and 347 votes against it.   **Highest No-Confidence Motion**: Indira Gandhi has faced the Motion 15 times, which is the highest till date.

Number of No-Confidence Motions (NCMs) faced by Prime Ministers

Prime Minister	NCMs
J.L. Nehru	1
L.B. Shastri	3
Indira Gandhi	15
Morarji Desai	2
Rajiv Gandhi	1
Narasimha Rao	3
A.B. Vajpayee	1
Narendra Modi	2

1.7 MEDIATION BILL, 2023

Context
- In August 2023, the parliament passed the Mediation Bill 2023 to promote and facilitate mediation for amicable resolution of disputes.
- In December 2021, it was introduced in the Rajya Sabha, and the Parliamentary Standing Committee was tasked with reviewing it.

Background
- **About Mediation**: Mediation, a **mode of Alternate dispute resolution (ADR),** is a voluntary process in which parties try to settle disputes with the assistance of an independent third person (the mediator).
  - **Alternate dispute resolution (ADR):** It refers to means by which disputes are settled outside the traditional court system.
  - **Supreme Court of India's Project Committee on Mediation and Conciliation:** It describes mediation as a tried-and-tested alternative to traditional conflict resolution methods.
- **Current status:** India didn't have a separate law on mediation and with this bill, India now has a dedicated legislation governing mediation (Samadhan).

- **Methods to promote ADR in India:** At present, mediation in India can be:
  - **Contractual method:** Contractually provided for by a mediation clause in the contract.
  - **Code of Civil Procedure,1908**: Referred by court.
  - **Arbitration and Conciliation Act, 1996 and Arbitration and Conciliation (Amendment) Act, 2019:** Statutorily provided for in these laws and establishment of the Arbitration Council of India.
  - **Legal Services Authorities Act, 1987:** Lok Adalat, a forum where disputes/cases pending in the court of law or at pre-litigation stage are settled/ compromised amicably, have been given statutory status under the Legal Services Authorities Act, 1987.
  - **New Delhi International Arbitration Centre (NDIAC) Act, 2019:** Establishment of NDIAC for facilitating institutional arbitration.
  - **Commercial Courts Act, 2015:** It provides for Commercial Courts for adjudicating commercial disputes.

Key Features of the Mediation Bill 2023

Pre-litigation mediation
Mandatory for parties: Before going to any court or specific tribunals, parties must attempt to resolve their civil or commercial issues through mediation.   **After failing of mediation**: The court or tribunal may at any time refer the parties to mediation if they request it if pre-litigation mediation fails to result in a settlement.
Disputes not fit for mediation
List of disputes which are not fit for mediation include: - Relating to claims against minors or persons of unsound mind.   - Involving criminal prosecution.   - Affecting the rights of third parties.   **Amendment**: The central government may amend this list.
Applicability
Applicable to mediations conducted in India include: - Involving only domestic parties.   - Involving at least one foreign party and relating to a commercial dispute (i.e., international mediation).   - If the mediation agreement specifies that the Bill will be followed in the mediation.   **When the central or state government is a party**: The Bill will apply to: - Commercial disputes.   - Other disputes as notified.
Mediation process
Timeline: Must be completed within 180 days (may be extended by 180 days by the parties).   **Withdrawal from Mediation:** A party may withdraw from mediation after two sessions.   - The rules established by the Supreme Court or the High Courts must be followed when conducting court-annexed mediation.
Mediators
Appointment: Mediators may be appointed by: - The parties by agreement,   - A mediation service provider (an institution administering mediation).   **Replacement**: They must disclose any conflict of interest that may raise doubts on their independence.   - Parties may then choose to replace the mediator
Mediation Council of India
Established by: Central government   **Composition**:   - A chairperson.   2 full-time members: with experience in mediation or ADR.   3 ex-officio members: including the Law Secretary, and the Expenditure Secretary.   1 part-time member from an industry body.   **Functions**:   - Registration of mediators.   - Recognizing mediation service providers and mediation institutes (which train, educate, and certify mediators).
Mediated settlement agreement
Agreements resulting from mediation: Be final, enforceable, and binding in the same way as court judgements.   **May be challenged on grounds of**:

- o Fraud
- o Corruption.
- o Impersonation.
- o Relating to disputes not fit for mediation.

Community mediation
- **Process**: It will be conducted by a panel of three mediators (may include persons of standing in the community, and representatives of resident welfare associations).
- **Significance:** To resolve disputes likely to affect the peace and harmony amongst residents of a locality.

Significance/ Need of the bill

- **Reduces the workload of the courts**: According to the Ministry of Law and Justice, there were 5.02 crore cases pending in various courts, the bill helps to reduce the buren of the courts.
- **Cost effective:** Bill introduces the idea of online mediation, which can help litigants save money on travel expenses.
- **Less Time Consuming:** As compared to courts, people settle their disagreements quickly.
- **Peaceful resolution**: Supports the preservation of relationships between disputants and lowers the likelihood of further problems.
- **Align with Singapore Convention**: This is also consistent with India's commitment to the Singapore Convention on Mediation, to which it is a party.

> **Singapore Convention on Mediation (Adopted in 2018)**
> - **About**: It is a UN Convention, also called the United Nations Convention on International Settlement Agreements Resulting from Mediation, that aims to facilitate international trade through international mediation and dispute resolution.
> - **Members**: 56 states have signed the convention and 11 states have deposited their respective instruments of ratification or approval.
>   - o States and regional economic integration organizations (referred to as "Parties") are eligible to sign the Convention.
> - **Has India signed the Singapore Convention on Mediation?** Yes, India is a signatory to the Convention.
> - **Is it binding?** Yes, it is a binding international instrument.

Issues and Concerns

- **Mandatory Pre-litigation mediation:** This violates Article 21, which establishes access to justice as a fundamental right that cannot be curtailed or limited.
- **Issue of International Mediation:** It does not allow for the carrying out of settlement agreements concluded through foreign mediation that took place outside of India.
  - o **For example**, Because the Singapore Convention does not apply to settlements that already have the status of a judgment or decree, it will be terrible if one party is from abroad.
- **Power given to the SC or the High court to make laws of pre-litigation:** Pre-litigation mediation will be undertaken in accordance with the guidelines or norms established by the Supreme Court or High Courts.
  - o In countries that adhere to the Common Law system, there is a positive tradition that apex court rulings and judgements hold equal weight in the absence of statutes.
  - o But as soon as a law is passed, it takes the place of court orders or rulings as the supreme authority.
- **Non-Applicability to Non-Commercial Disputes:** The non-applicability of the Bill's provisions to disputes or other non-commercial concerns involving the government and its agents has been questioned by the Parliamentary Standing Committee.
- **Conflict of interest**: Mediation Council requires prior approval from the central government before issuing regulations related to its essential functions.
  - o However, the government is the biggest litigant in the country.
- **No punishment/liability:** For violating confidentiality.

Way ahead

- **Need for providing penalty or accountability for confidentiality breach:** A formal agreement must be in place before the mediation ever begins to ring-fence any potential breach of confidentiality.
- **Reducing the disputes from the list**: To ensure that the greatest number of conflicts can be resolved by pre-litigation mediation, the number of disputes in the Schedule should be decreased.
- **Include Government-related disputes:** Disputes involving the government had been suggested to be included by the bill by the standing committee.
- **Thorough discussions**: The Bill needs to be enacted following consultation with stakeholders in order to facilitate a quicker resolution of disputes.

- **Gradual implementation**: Instead of implementing Pre-Litigation Mediation for all civil and commercial conflicts immediately, it should be implemented gradually.
- **Court annexed mediation:** The panel states that court-annexed mediation, including pre-litigation mediation in court-annexed mediation premises, must be conducted in accordance with the custom, norms, or rules, under whatever term the Supreme Court or the High Court may refer to them.
- **Appointment**: The appointment of the Chairperson and Members of the Mediation Council of India should be made by a selection Committee constituted by the Central Government.

Conclusion
- It is important to promote mediation as a preferred and voluntarily used method of obtaining justice. The law has to be changed since it may cause a delay in the administration of justice and increase the cost of litigation, even though the legislature may have intended to lessen the burden on the judiciary.

1.8 ASCI GUIDELINES FOR CELEBRITIES AND INFLUENCERS

Context
- In August 2023, the comprehensive Guidelines for Influencer Advertising in Digital Media was released by the Advertising Standards Council of India (ASCI).
- The Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements, 2022, are expanded by these rules.

Key Provisions under Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements, 2022

	Advertising Standards Council of India (ASCI)
- **Prohibit Surrogate Advertisements:** For products or services whose advertising is forbidden or limited, substitute advertising (like Alcohol brands advertising for sodas/music) is not permitted. - **Prohibit Targeting Children:** Advertise in a way that exploits children's inexperience is not permitted. - **Penalties**: Under the Consumer Protection Act of 2019 and other pertinent legal requirements, violations may result in penalties. ○ The Central Consumer Protection Authority (CCPA) has the authority to fine manufacturers, advertisers, and promoters up to Rs 10 lakh. Penalties for consecutive crimes might reach Rs. 50 lakhs.	- **About**: It is a voluntary self-regulatory body for the Indian advertising sector. - **Origin**: ASCI was founded in 1985 and is recognized by section 25 of the Company Act as a non-profit organization. - **Objective**: In order to protect consumer interests, it is dedicated to the cause of self-regulation in advertising.

Key Features of the Guidelines for Influencer Advertising in Digital Media

Key Definitions
- **Influencer:** Someone who, because to their authority, expertise, position, or connection with their audience, has access to and the ability to influence their audiences' purchasing decisions or opinions about a good, service, brand, or experience.
- **Virtual Influence**: These are fictional computer generated 'people' or avatars who have the realistic characteristics, features and personalities of humans, and behave in a similar manner as influencers.
- **Material connection:** It is any connection between an advertiser and influencer that may affect the weight or credibility of the representation made by the influencer.
- **It includes:** Monetary or other compensation, free products with or without any conditions attached including those received unsolicited, discounts, gifts, contest and sweepstakes entries, trips or hotel stays, media barters, coverage, awards, or any family or employment relationship, etc.
- **Digital media**: A digital media platform is used to receive, store, transmit, edit, or otherwise handle communication that can be transmitted over the internet or other digital networks.
- **Digital media includes:**   ○ **Internet**: Advergames, sponsored posts, branded content, promotional blogs, paid-for links, gamification, in-game advertising, teasers, viral advertising, augmented reality, native advertising, connected devices, influencers, etc.

	o	**On-demand across platforms** including near video on demand, subscription video on demand, near movie on demand, free video on demand, transactional video on demand, advertising video on demand, video on demand, pay per view, etc.
	o	**Mobile broadcast,** mobile, communications content, websites, blogs, apps, etc./digital TV (including digital video broadcasting, handheld and terrestrial), etc.
	o	**NSTV**: Non-standard television (NSTV) means audiovisual programming delivered by any means of transmission.
	o	**DDHE:** Digital delivery home entertainment such as NETFLIX, Amazon Prime, Smart TV etc.
	o	**DTT**: Digital terrestrial television (DTT) is a technology for terrestrial television in which land-based (terrestrial) television stations broadcast television content by radio waves to televisions in consumers' residences in a digital format.

Important Guidelines		
Guidelines for All	•	**Disclosure**: All advertisements published by social media influencers or their representatives, on such influencers' accounts must carry a disclosure label that clearly identifies it as an advertisement.
		o Disclosure must be upfront and prominent so that it is not missed by an average consumer
		o They may use terms like "advertisement," "sponsored," "collaboration," and "paid promotion," but they must be identified with a hashtag or headline.
	•	**Due Diligence**: The influencers are advised to evaluate the advertisement and determine for themselves whether the advertiser can support the claims made in it.
Guidelines for Health Influencer	•	**Disclose information:** Influencers are required to make clear that they are licensed doctors and fitness professionals.
	•	**Disclaimer**: Influencers need to make sure the public is aware that their endorsements shouldn't be used as a replacement for expert medical advice.
Guidelines for Financial Influencer	•	**Registration**: Influencers must register with the Securities and Exchange Board of India (SEBI) before they can provide investment-related advice on topics like banking, financial services, and insurance (BFSI).
	•	**Other financial influencers:** They must have the necessary credentials, such as an Insurance Regulatory and Development Authority of India (IRDAI) license.

Nodal Authority
• These rules will be regularly monitored and enforced by the Department of Consumer Affairs (Ministry of Consumer Affairs).

Penalties
• Influencers found to be in violation of the new guidelines could face penalties under the Consumer Protection Act (2019).

Issues and Challenges
- **Rising number of influencers:** Due to this, regulation will be difficult.
- **Less awareness:** People know a lot about famous people (like any cricket player), but consumers might not be as knowledgeable about influencers.
- **Improper disclosure and disclaimer:** Guidelines have not enough clarity about the disclosure of information.

Significance of the guidelines
- **To safeguard the Consumer's Right to Choose:** People follow the advice of celebrities, influencers, and virtual influencers because they believe in them and respect them.
  - These guidelines will help to address the negative consequences such as financial loss, health issues, etc.
- **To create awareness: Guidelines will help** people to know about famous people and influencers of social media platforms.
- **To create social responsibility:** Celebrities and influencers would benefit from guidelines because they will be better

Consumer Protection Act, 1986 Vs. Consumer Protection Act, 2019

No separate regulator	**REGULATOR**	Central Consumer Protection Authority (CCPA) to be formed
No separate regulator	**CONSUMER COURT**	Complaint can be filed in a consumer court where the complainant resides or works
Complaint could be filed in a consumer court where the seller's (defendant) office is located	**PRODUCT LIABILITY**	Consumer can seek compensation for harm caused by a product or service
District: Up to Rs. 20 lakh State: Rs. 20 lakh to Rs. 1 cr National: Above 1 cr	**PECUNIARY JURISDICTION**	District: Up to Rs. 1 cr State: Rs. 1 cr to Rs. 10 cr National: Above Rs. 10 cr
No provision	**E-COMMERCE**	All rules of direct selling extended to e-commerce
No legal provision	**MEDIATION CELLS**	Court can refer settlement through mediation

able to comprehend their social responsibilities and become more sensitive to their followers.
- **To address deceptive/ false marketing:** Influencers claim themselves as experts of products and services but the reality may be different.
  - The market for social influencers is expected to grow significantly and reach about Rs 2,800 crore in value by 2025.

Conclusion
- As digital media becomes increasingly pervasive and more consumers start to consume advertising on various digital platforms, Consumer interests will be protected by guidelines. By examining deceptive commercials, it will increase openness in advertising. The ability to recognize promotional information will aid consumers in selecting goods and services with knowledge.

1.9   REGISTRATION OF BIRTHS AND DEATHS (AMENDMENT) BILL, 2023

Context
- In August 2023, the Registration of Births and Deaths (Amendment) Act, 2023 seeks to amend the Registration of Births and Deaths Act, 1969 was passed in the parliament.

Registration of Birth and Death (RBD) Act, 1969
- **Registration of Births and Deaths in India**: mandatory with the enactment of RBD, Act 1969.
  - It is done as per the place of occurrence of the event.
- **Responsible Authority**: Responsibility of the States to register births and deaths.
  - State governments have set up facilities for registering births and deaths and keeping records.
- **Implementing Authority in the state:** A Chief Registrar appointed in every State.
- **Nodal Authority:** The Registrar General of India is responsible for coordinating and unifying the implementation of the RBD Act.
- **Hierarchy of officials:**

> **Registrar General and Census Commissioner of India**
> - **About**: It is founded in 1961 for arranging, conducting and analyzing the results of the demographic surveys of India including Census of India and Linguistic Survey of India.
> - **Nodal Ministry**: Ministry of Home Affairs.
> - **Designation**: Designated under Registration of Birth and Death (RBD) Act, 1969.

Authority	Jurisdiction
Registrar General of India	At central level
Chief Registrar	At state level
District Registrar	At district level
Registrars	At local level

Key Features Registration of Births and Deaths (Amendment) Act, 2023

Database of births and deaths	
Earlier	**Now**
• **1969 Act**: It provides for the appointment of a Registrar-General of India who may issue general directions for registration of births and deaths.	• The Chief Registrars (appointed by states) and Registrars (appointed by states for local area jurisdiction) will be required to share data of registered births and deaths to the national database. • The Chief Registrar shall maintain a similar database at the state level. • The Registrar General will keep track of all recorded births and deaths in a nationwide database..
Electronic certificates	
Earlier	**Now**
• **1969 Act**: It provides that any person may:	• **Amendment**: The Bill amends this to provide for obtaining a birth or death certificate (electronically or otherwise) instead of extracts.

o Request that the Registrar conduct a search for any entry in a register of births and deaths. o Request a copy of any birth or death-related extract from the register.	

Aadhaar details of parents and informants required	
Earlier	**Now**

• **1969 Act**: It is required that some people notify the Registrar of births and deaths.
    o **For example**: The medical officer in charge of the hospital where a baby is born, for instance, is required to record the birth.
	• The specified individuals must give the Aadhaar numbers of the informant and the parents in situations of births. This provision also applies to:
	    o Jailor in case of births in a jail.
	    o The manager of a hotel or lodge in the event that a birth occurs there.
	• **Expands the list of specified persons**: It include:
	    o Adoptive parents for non-institutional adoption.
	    o Biological parents for births through surrogacy.
	    o The parent in the event that a child is born to an unmarried or single parent.

Connecting database

• Use of the national database requires central government approval.
• The state database may be made accessible to authorities dealing with other state databases, subject to state government consent.
• Such databases include:
    o Population registers
    o Electoral rolls
    o Ration card
    o Any other national databases as notified

Use of birth certificate

• The bill mandates the use of birth and death certificates to substantiate the date and place of birth.
• The data will be utilized for things like:
    o admission to an educational institution
    o preparation of voter lists
    o appointment to a government post
    o Any other objectives decided upon by the central government.

Appeal process
• Any person who is aggrieved by a decision made by the Registrar or District Registrar may file an appeal with the Chief Registrar or District Registrar, respectively. • This appeal must be filed 30 days after receiving the relevant action or order. • The District Registrar or Chief Registrar must issue a ruling 90 days after the appeal was filed.

Significance/ Need of the Amendment
- **Increase coverage:** Streamlining the birth and death registration processes results in increased registration rates, as emphasized by the Office of the High Commissioner for Human Rights (OHCHR) of the United Nations.
- **To address policy gaps**: Death registration for females is lower than males, poor compliance creates a data gap that leads to misguided policies (NFHS-5 Data).
- **To address institutional gaps**: Lack of complete and timely death registration data on India's COVID-19 deaths prevented accurate measures of mortality.
- **Helpful for collecting data:** Unable to find the estimates of poverty, hunger, education, healthcare access resulting delay in census.
- **Efficient and transparent delivery of public services:** By consolidating records of births and deaths across the country in a national database, the act will ensure 'efficient and transparent delivery of public services and social benefits and digital registration'.
- **Citizen specific:** There is a provision of digital registration to keep in pace with societal change and technological advancements.
- **Avoid multiplicity of documents**: Birth certificate as a single document for issuance of a passport, Aadhaar number etc., as determined by the central government to enhance the public convenience.

Issues and Concerns

- **Conflict with the constitutional rights:** The right to education may be violated if students are denied entry to schools due to the absence of birth certificates.
  - The right to privacy is violated when databases are linked without the individual whose data is being linked giving their consent.
- **Lack of transparency**: Critics questioning the government's approach to data collection and usage which may result in loss of accountability.
- **Digital Divide**: Critics claim that digital birth certificates could unintentionally exclude people who do not have access to digital platforms, thereby leading to inequities in service access.
- **Sole conclusive proof of age:** The Act does not offer an alternate form of identification if a person lacks a birth certificate, making it the only convincing proof of age.
- **Surveillance state:** The database being centralized could lead to extensive surveillance.
- **Inaccuracy issue:** 55 lakh voters were removed from the system as a result of linking Aadhaar to voter identification cards.
  - For example: 5 crore workers' names were found missing from MGNREGA scheme.
- **Security Issue:** India lacks a reliable security surveillance system, and the lack of data guidelines is of concern.

Conclusion

- E-governance will benefit from the Act's implementation. Despite the fact that the act described a database as an "organized collection of data, generally stored and accessed in electronic form from a computer network," the government is still free to enact strict privacy and surveillance regulations.

1.10 PRESS AND REGISTRATION OF PERIODICALS BILL, 2023

Context

- In August 203, the Press and Registration of Periodicals Bill, 2023 which repeals the Press and Registration of Books Act, 1867 was passed in Rajya Sabha.

Press and Registration of Books (PRB) Act 1867

- **About**: It oversees India's printing and publishing business.
- **Origin**: It was enacted during the British colonial period and is still in effect with minor changes.
- **Primary objective:** To govern the printing and publication of books, newspapers, and magazines, as well as to preserve copies of such publications and to allow for their registration.

Key Features of the Press and Registration of Periodicals Bill, 2023

Registration of periodicals	
Earlier	**Now**
• **1867 Act**: It provides for the registration of newspapers, periodicals, and books. • It also provides for the cataloging or listing of books.	• The Bill proposes the registration of periodicals, which are defined as any publication that publishes public news or commentary on public news but excludes books and scholarly journals.
Declaration of certificate of registration	
Earlier	**Now**
• The Press Registrar General (PRG) lacks Suo moto powers to revoke or suspend the Certificate of Registration it has granted. o Suo moto is an action taken by a government agency, court or other central authority on their own apprehension. • Only the District Magistrate (DM) has the right to revoke a periodical's declaration.	• By submitting an online application to the Press Registrar General and a specific local authority, the Bill enables the publisher of a periodical to get a registration certificate. • It is forbidden to print a magazine if one has committed a terrorist act, engaged in illegal activities, or acted in a way that endangered state security.
Press Registrar General	
Earlier	**Now**
• The 1867 Act allows for the appointment of a Press Registrar by the central government, who keeps a list of newspapers.	• All publications will receive registration certificates from the Press Registrar General of India. • Other functions of the Press Registrar General include:

	o Maintaining a register of periodicals o Making guidelines for the admissibility of title of periodicals o Verifying circulation figures of prescribed periodicals o Revising, suspending, or canceling registration.

Registration of a printing press	
Earlier	**Now**
• A printing press must be declared to the DM.	• The Bill enables the Press Registrar General to receive information about printing presses via online portal.

Foreign periodicals
• An exact reproduction of a foreign periodical may only be printed in India with the prior approval of the central government. • The method of registering such publications will be prescribed.

Suspension and cancellation of registration

• **Suspension**: The Press Registrar General may suspend a periodical's registration under the Bill for a minimum of 30 days and a maximum of 180 days.
    o If the registration was obtained by providing fraudulent information, it may be suspended.
        ▪ Not consistently publishing periodicals.
        ▪ Making fraudulent statements in yearly reports**.**
• **Cancellation**: If the publisher doesn't fix these errors, the Press Registrar General may cancel the registration. A periodical's registration may also be revoked if:
    o Its title is the same as or similar to another periodical's.
    o Its owner or publisher has been found guilty of terrorism, criminal conduct, or other offenses that compromise national security.

Penalties and appeal

• The Bill gives the Press Registrar General the authority to levy fines of up to five lakh rupees for:
    o Publishing periodicals without registration.
    o Not providing an annual statement within the allotted period (up to Rs 20,000 for the first default).
• The Press Registrar General has the authority to order the suspension of publication of a magazine if it is published without registration.
• If one doesn't follow this instruction within six months, one could spend up to six months in jail.

Appellate authority
• Any person may file an appeal with the Press and Registration Appellate Board after 60 days of the refusal to grant a registration certificate, suspension or cancellation of registration, or imposition of a fine.

1.11 ADVOCATES (AMENDMENT) BILL, 2023

Context
- In August 2023, the Advocates (Amendment) Bill, 2023 which amends the Advocates Act, 1961 and repeals certain sections related to touts under the Legal Practitioners Act, 1879. was passed by the Rajya Sabha.

Advocates Act, 1961	Legal Practitioners Act, 1879

• **About**: It consolidated existing laws on the legal profession and established the Bar Council of India and State Bar Councils.
• **Key Features:**
    o It abolished the difference between a vakil and an advocate.
    o An advocate can move from one state bar council to another but cannot enroll under more than one state council.
    o The act grants attorneys the right to practice in any area of the country, in any
	• **About**: It was enacted to consolidate and amend the law relating to legal practitioners.
	• **Key Features:**
	    o **Practice of Advocate or vakil**: An Advocate or vakil on the role of any high Court can practice in all the courts subordinate to the courts on the role of which he was entered.
	    o **Suspension and dismissal:** The High court was empowered to make rules consistent with the act as to suspension and dismissal of pleaders and mukhtars.

High Court, as well as at the Supreme Court of India.	▪ Pleaders and Mukhtars were the Indian lawyers, but advocates were to be the barristers (someone who has obtained a legal degree from England).

Key Features of Advocates (Amendment) Bill, 2023
- **Tout**: It refers to a person who either proposes to procure or procures the employment of a legal practitioner in a legal business in return for any payment.
- **Nodal Authority**: The Bill provides that every High Court, district judge, sessions judge, district magistrate, and revenue officer (not below the rank of a district collector) may frame and publish lists of touts.
- **Punishments**: Any person who acts as a tout while his name is included in the list of touts will be punished with imprisonment up to three months, a fine up to Rs 500, or both.

2. ECONOMY

2.1 MODIFICATIONS MADE TO THE OFFSHORE AREAS MINERAL (DEVELOPMENT AND REGULATION) ACT OF 2002

Latest Context:
The Offshore Areas Mineral (Development and Regulation) Amendment Bill for 2023 has received approval from the President, marking a significant development in mineral resource regulation.

Introduction
- **Amendments to the Existing Act:** The Offshore Areas Mineral (Development and Regulation) Act of 2002 has been amended. This act primarily deals with the development and regulation of mineral resources in various maritime zones within India's jurisdiction, including territorial waters, the continental shelf, and the exclusive economic zone (EEZ).
- **Union Control of Offshore Mineral Resources:** The regulation and control of offshore mineral resources fall under the purview of the Union government. Offshore mining involves extracting mineral deposits from the seabed at depths exceeding 200 meters.

Key Changes in the Amended Act:
- **License Structure:** The amendments introduce a composite license that combines rights for both exploration and production, whereas the previous act had separate licenses for reconnaissance, exploration, and production.
- **License Validity:** Under the amendments, production leases can be granted for up to 30 years, extendable for an additional 20 years. In contrast, a production lease under a composite license can now be valid for 50 years.
- **Auction Process:** The earlier act allowed for concessions to be granted through administrative allocation, while the amendments introduce competitive bidding. Private sector participation is encouraged through competitive bidding for production leases and composite licenses.
- **Mining in Reserved Areas:** The amendments allow the government to reserve offshore areas not held under any operating right. The administering authority can grant a composite license or production lease to the government or a government company in such cases.

New Provisions in the 2023 Act
- **Mining of Atomic Minerals:** Exploration, production, and composite licenses for atomic minerals will now be granted exclusively to the government or government companies.
- **Offshore Areas Mineral Trust:** A new entity called the "Offshore Areas Mineral Trust" will manage funds under the Public Account of India. These funds will be non-lapsable and used for specified purposes, including exploration in offshore areas.

Need for the Amendment
- **Utilizing Offshore Mineral Wealth:** The lack of transparent legal frameworks in the earlier act hindered any mining activity in offshore areas. The amendments aim to rectify this and tap into India's offshore mineral wealth.
- **Encouraging Private Sector Participation:** The amendments introduce competitive bidding to encourage private sector involvement. Private entities can bring expertise and technology to explore and mine offshore resources.
- **Alignment with the Mines and Minerals Act:** The amendments align the offshore mineral sector with the Mines and Minerals (Development and Regulation) Act of 1957, which has been successful in effectively utilizing onshore mineral wealth through auctions and other mechanisms.

Concerns Related to the Act
- **Environmental Impact:** Mining activities in marine ecosystems, including coral ecosystems, could harm the environment and potentially lead to species extinction. Noise and marine pollution may also increase due to extraction activities.

- **Socio-economic Impact:** The involvement of large private entities may threaten the livelihoods of those dependent on the sea, especially fishermen.
- **Economic Viability:** Offshore mineral extraction is costlier than onshore mining due to the need for advanced technologies and other factors.
- **Privilege to Government Entities:** The act grants operating rights without competitive bidding to government entities in mineral-bearing areas reserved by the Centre.

Conclusion:

The Offshore Areas Mineral (Development and Regulation) Amendment Act of 2023 opens up India's vast mineral-bearing offshore areas, serving strategic interests and strengthening the country's position in territorial waters. However, it also raises concerns related to environmental impact, socio-economic consequences, economic viability, and the privilege given to government entities.

2.2   SIXTH CENSUS REPORT ON MINOR IRRIGATION SCHEMES

Latest Context:

The Ministry of Jal Shakti has recently unveiled the sixth Census Report on Minor Irrigation Schemes, drawing attention to the significance of this sector in India's agricultural landscape.

Understanding Minor Irrigation (MI):

Classification of Irrigation Projects: Irrigation projects in India fall into three primary categories: Major, Medium, and Minor Irrigation.

- Major Irrigation Projects: These encompass cultivable command areas (CCA) exceeding 10,000 hectares.
- Medium Irrigation Projects: Encompassing CCAs less than 10,000 hectares but exceeding 2,000 hectares.
- Minor Irrigation Projects: Covering CCAs of 2,000 hectares or less.

Water Sources for MI: Minor irrigation projects draw water from both surface and groundwater sources, whereas major and medium projects predominantly rely on surface water resources. State Governments execute the MI sector, implementing state-specific schemes.

Role of RMIS: The Centrally Sponsored Plan Scheme "Rationalisation of Minor Irrigation Statistics (RMIS)" was initiated in 1987-88. Subsequently, it became a part of the Central Sector Plan Scheme "Development of Water Resources Information System (DWRIS)." RMIS aims to establish a comprehensive and reliable database in the Minor Irrigation (MI) Sector to facilitate effective planning and policymaking.

The Sixth Census: The sixth census report has been conducted under the centrally sponsored scheme "Irrigation Census" of the Ministry of Jal Shakti. The first census of minor irrigation schemes took place in 1986-87, with the report published in November 1993. Census data plays a pivotal role in shaping planning and policies within the irrigation and agricultural sector.

Significance of Minor Irrigation Schemes

Minor irrigation schemes hold several vital roles, including:

- Recharging groundwater through surface minor irrigation projects.
- Offering cost-effective solutions that can be adopted by small and marginal farmers.
- Providing government support in the form of subsidies and assistance.
- Enhancing water use efficiency and reducing water wastage through improved distribution devices.

Key Highlights of the Report

Introduction of the First Census of Water Bodies:

- Conducted in conjunction with the sixth Minor Irrigation schemes and using 2017-18 as the reference year, this census aimed to create a national database for all water bodies.

Statistics on Minor Irrigation Schemes:

- The country reported 23.14 million minor irrigation schemes across 695 districts.
- Approximately 94.8% of these schemes rely on groundwater, with the remaining 5.2% being surface water schemes.

- Uttar Pradesh leads with 17.2% of all minor irrigation schemes, followed by Maharashtra (15.4%), Madhya Pradesh (9.9%), and Tamil Nadu (9.1%).
- Dug wells represent the most prominent share in MI schemes, followed by shallow tube wells, medium tube wells, and deep tube wells.

Increase in Minor Irrigation Schemes:
- Compared to the previous census, there has been an increase of 1.42 million minor irrigation schemes.

Ownership of Schemes:
- Out of all the schemes, 96.6% are privately owned, while 3.4% are under public ownership. Of the individually owned schemes, 18.1% belong to women.

Scheme Usage:
- Approximately 97% of the irrigation schemes are currently in use, with 2.1% temporarily not in use and 0.9% permanently not in use.

Challenges in Minor Irrigation Schemes
Several challenges persist in the minor irrigation sector, including:
- Rampant groundwater exploitation with environmental and geological consequences.
- Technical infeasibility of tube-well technology in non-alluvial tracts, comprising nearly 70% of India's landmass.
- Private ownership impacting the distribution of the common resource of water.
- Vulnerability to climate change, particularly drought, due to limited reservoir capacity.

Conclusion and the Way Forward:
Efforts are needed to prevent groundwater overexploitation through state and district-level policies. Additionally, promoting community ownership of minor irrigation projects through panchayats and schemes like MGNREGA can offer significant benefits in addressing these challenges.

2.3   FUNCTIONING OF MAJOR PORTS IN THE COUNTRY

Latest Context:
The 352nd Report titled 'Functioning of Major Ports in the Country' was recently presented by the Department-related Parliamentary Standing Committee on Transport, Tourism, and Culture.

India's Port Classification:
Ports in India are categorized into two primary types based on the volume of traffic they manage:
- **Major Ports:** These ports are directly administered by the Central Government and are included in the Union List outlined in the 7th Schedule of the Constitution.
- **Minor Ports:** Under the jurisdiction of respective State Maritime Boards, minor ports are listed in the Concurrent List.
- India boasts a total of 12 major ports and approximately 213 non-major ports.
- The regulatory framework governing the operations of major ports is primarily defined by two key statutes, namely, the Major Port Authorities Act, 2021, and the Indian Ports Act.

Assessment of Port Performance in India
- **Turn Around Time (TRT):** The duration a vessel spends at Indian ports, measured from its arrival to its departure, has consistently reduced over the years. This decline has been notable, dropping from 94 hours in the fiscal year 2013-14 to 52 hours in the fiscal year 2023-24.
- **Traffic Volume:** Indian ports have experienced a continuous upward trajectory in container traffic, surging from 555 million tonnes in the fiscal year 2013-14 to an impressive 796 million tonnes in the fiscal year 2023-24.
- **Cargo Handling Growth:** The handling of cargo at Major Ports has exhibited steady growth over time, with the latest figures indicating a notable 10% increase from the previous year.
- **Improved Operating Ratio:** The operating ratio, which signifies the amount spent in rupees for every rupee earned, has seen improvement. It has decreased from Rs. 53 in the fiscal year 2020-21 to Rs. 48 in the current fiscal year, indicating that Rs. 48 is now spent for every Rs. 100 earned.

Challenges Faced by Major Ports

- **Financial Constraints and Pension Liabilities:** Major ports in India face financial challenges, especially due to pension obligations. For example, the Mumbai port has a significant pension fund debt of 13,000 crores.
- **Suboptimal Capacity Utilization:** Capacity utilization in major ports stands at approximately 49%, leading to resource wastage.
- **Transshipment Revenue Loss:** Indian ports handle a mere 25% of the country's transshipment cargo, resulting in missed revenue opportunities.
- **Connectivity Hurdles:** Challenges like rail congestion and limited multimodal transport connectivity negatively impact freight movement at specific ports.
- **Infrastructure Bottlenecks:** Low capacity and non-optimum utilization due to infrastructure bottlenecks remain significant challenges for Indian ports, including evacuation bottlenecks due to the low availability of railway rakes.
- **Lack of Mega Ports:** Only five major ports and two non-major ports boast a capacity exceeding 100 million tonnes per annum (MTPA).
- **Inflexible Tariff Structures:** Government-owned major ports struggle to attract more cargo due to rigid tariff structures, unlike private ports.

Initiatives to Enhance Port Functionality

- **Holistic Monitoring:** The Sagarmanthan Dashboard offers regular project monitoring and financial and operational performance tracking of ports.
- **Real-Time Vessel Tracking:** The Sagar Setu App provides real-time vessel information for improved traffic management.
- **Trade Facilitation:** The National Logistics Portal (NLP) (Marine) serves as a national maritime single window platform, facilitating trade between importers, exporters, and service providers.
- **Port Performance Monitoring:** Sagar Unnati functions as a dashboard for monitoring key performance indicators like Turnaround Time at major ports.
- **Enhanced Connectivity:** Under the Sagarmala Project, 101 road and 90 rail connectivity projects have been initiated for improved transport connectivity.
- **Cybersecurity Measures:** Ports have implemented asset management systems, multi-factor authentication, and IT security policies to bolster cybersecurity.
- **Digital Transformation:** Initiatives like the Vessel Traffic Management System, Enterprise Business System, and online RFID System have been implemented to digitize port operations.

Recommendations for Port Efficiency Enhancement

- **Integrated Planning:** Port development plans should integrate the local economy, industrial clusters, and connectivity.
- **Modernization and Mechanization:** Major ports should invest in modern equipment to replace outdated machinery at old berths, enhancing productivity. Prioritizing mechanization projects is crucial.
- **Boosting PPP Investments**: Major ports must achieve their PPP investment targets under the Maritime India Vision (MIV) to enhance productivity and competitiveness. MIV envisions developing world-class Mega Ports, transshipment hubs, and port infrastructure modernization.
- **Port-Led Industrialization:** Leasing port land to private investors through PPP arrangements for industrial facilities can boost coastal economies and port revenues.
- **Promoting Connectivity:** Efforts to establish water, rail, and road connectivity to the hinterland, including dedicated rail freight corridors, are essential.
- **Expanded Port Community System (PCS):** The extensive implementation of the Port Community System (PCS) can serve as a centralized web application that streamlines port operations and facilitates communication among port stakeholders.

Conclusion:

The report sheds light on the performance, challenges, and initiatives related to major ports in India, with a focus on improving their functionality and efficiency for the betterment of the country's maritime infrastructure and trade.

2.4   DIRECT BENEFIT TRANSFER (DBT)

Latest Context:
Recently, the Union Finance Ministry revealed that the government has saved almost Rs 2.73 lakh crore between the year 2014 to 2023 by adopting the system of Direct Benefit Transfer (DBT).

System of subsidies in India before DBT:
- Before the introduction of DBT system, the government used to provide **subsidies by directly fixing the prices of goods and services**, so that they can be affordable for the public in large.
- In this system, the **government used to pay the subsidy amount directly to the company** who is providing those goods and services.
- The amount of subsidy used to be calculated through, **Market Price of a good- Price fixed by the government= Subsidy amount.**
- The main disadvantage of this system used to be that **there were high leakages in subsidies as many middlemen were there.**
- To overcome this, the government introduced the system of DBT.

About Direct Benefit Transfer (DBT)
- It aims to **transfer subsidies and other government benefits directly to the bank accounts** of beneficiaries.
- It was **launched** by the Government of India in **2013.**
- The primary objective of DBT is to **reduce leakages in the delivery of various benefits** and ensure that the benefits reach the intended beneficiaries in a more efficient and transparent manner.
- **Aadhaar, is often used as a means of verifying the identity of beneficiaries.** Linking Aadhaar to bank accounts and other government records helps in ensuring that the subsidies have reached to genuine beneficiaries.

End to End DBT Process Flow

1. Aadhaar to de-duplicate databases
2. Aadhaar as KYC to open bank account
3. Aadhaar as a payment address
4. Withdraw from any MicroATM at the doorstep
5. End to end auditability and transparency
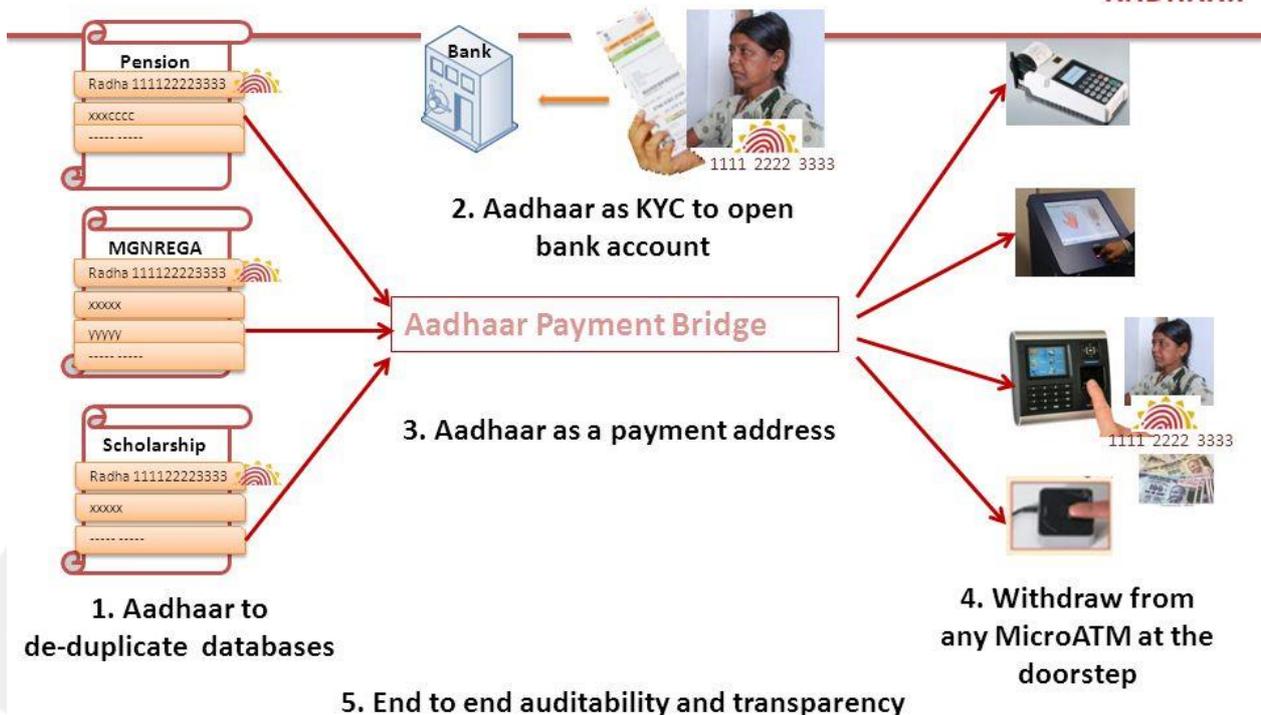
Impacts of DBT:

- **High Reduction in Leakages and Corruption:** The system of DBT has led to high reduction in leakages and corruption. By transferring subsidies and benefits directly into bank accounts, DBT minimizes the involvement of middlemen and reduces the chances of funds being diverted.

- **Increased Targeting Accuracy:** DBT has improved the targeting accuracy of welfare programs. With the use of Aadhaar-based authentication and other eligibility criteria, the government can better identify and reach the targeted beneficiaries, ensuring that benefits are provided to those, who genuinely need them.

- **Financial Inclusion:** The integration of DBT with the Pradhan Mantri Jan Dhan Yojana (PMJDY) has promoted financial inclusion. Many individuals who were previously excluded from the formal banking system now have access to bank accounts, which make the direct transfers possible.

- **Empowerment of Beneficiaries:** DBT empowers beneficiaries by giving them greater control and awareness of their entitlements. Beneficiaries can track their payments online and verify their eligibility, reducing dependency on middlemen.

- **Cost Savings:** The implementation of DBT has led to cost savings for the government. By eliminating duplicate and fraud beneficiaries and reducing administrative costs associated with physical distribution, the government has been able to use its resources more efficiently.

- **Efficiency in Delivery:** The use of digital payment channels and technology in DBT has made the delivery of benefits more efficient and on time. Payments are processed faster, reducing delays and inconvenience for beneficiaries.

- **Encouragement of Digital Payments:** DBT has played a role in promoting digital payments in India. As beneficiaries receive subsidies and benefits in their bank accounts, it encourages them to use digital payment methods for other transactions, contributing to India's move toward a cashless economy.

- **Social Impact:** DBT has had positive social impacts by ensuring that welfare benefits reach vulnerable and marginalized sections of society more effectively. This has helped in reducing poverty and improving the quality of life for many individuals and families.

Challenges in the implementation of DBT

- **Aadhaar-Related Issues:** Aadhar card is mandatory for DBT benefits. However, concerns have arisen regarding Aadhaar data privacy and security. There have been instances of data breaches and unauthorized access to Aadhaar information, raising privacy concerns.

- **Exclusion Errors:** The Aadhaar-based authentication system can sometimes lead to exclusion errors, where eligible beneficiaries are wrongly excluded from receiving benefits due to technical issues or fingerprint mismatches. This has been a significant concern, especially for marginalized and vulnerable populations.

- **Technical Challenges:** Ensuring that the digital infrastructure is smooth and accessible to all, especially in remote and rural areas, has been a technical challenge. Poor connectivity and inadequate digital literacy can hinder beneficiaries' access to their bank accounts and information about their entitlements.

- **Last-Mile Delivery:** While DBT eliminates intermediaries, the last-mile delivery of benefits can still be challenging. Some beneficiaries face difficulties accessing banks or using ATMs, which can result in delays in accessing funds.

- **Awareness and Education:** Many beneficiaries, especially in rural areas, may lack awareness or understanding of the DBT system. They may not know how to use ATMs or digital banking services, which can affect their ability to access benefits.

- **Data Connectivity:** In remote and underserved regions, inadequate internet connectivity can restrict the real-time processing of payments and verification of beneficiaries, leading to delays and inefficiencies.

- **Coordination Across Departments:** DBT involves multiple government departments and agencies, and coordination among them can be challenging. Ensuring that beneficiary data is accurate and up-to-date across different systems is crucial for successful implementation.

- **Fraud and Identity Theft:** While DBT reduces corruption, it also introduces new risks, such as identity theft and fraud. Unauthorized individuals may try to manipulate the system to receive benefits meant for others.

- **Legal and Regulatory Issues:** There have been legal challenges related to the mandatory linking of Aadhaar to various services, including bank accounts. The Supreme Court of India has issued rulings and guidelines on the use of Aadhaar, which have impacted DBT implementation.

Conclusion and Way Forward:

To address these challenges, the **government has been working on improving the DBT system, improving data security, expanding digital infrastructure, and increasing   awareness and digital literacy among beneficiaries.** Continuous efforts are essential to ensure that DBT effectively reaches the intended beneficiaries, while mitigating the associated challenges.

2.5 BHARATNET TRANSFORMATION: CONNECTING INDIA'S VILLAGES

Latest Context:
The government has given the green light to a substantial investment of Rs 1.39 lakh crore to modernize the BharatNet project, making it a headline-worthy development.

Introduction
- **Revamping Strategy with Village Level Entrepreneurs (VLEs):** The project's overhaul involves a change in execution strategy, focusing on extending fiber connections to the last mile through Village Level Entrepreneurs (VLEs), also known as Udyamis. These local entrepreneurs will play a pivotal role by extending fiber connections to households through a 50:50 revenue-sharing arrangement.
- **Accelerating Village Connectivity:** This upgrade aims to expedite the mission of connecting all 640,000 villages across India within the next two years. Notably, the government will bear the cost of bringing the infrastructure to homes. Rural entrepreneurs will primarily be responsible for maintaining and operating home connections, including addressing consumer complaints related to fiber disruptions.
- **Third Major Funding Package:** This marks the third major funding package for the BharatNet project. In 2017, the Cabinet approved financial assistance for the first two phases. In 2021, the Cabinet allocated additional funds to implement last-mile connectivity under a Public-Private Partnership (PPP) model, which encountered challenges in attracting interest.

The Significance of BharatNet:
- **Village Modernization:** By digitizing essential infrastructure like banking and post offices.
- **Agriculture Sector Benefits:** Enhancing farmers' awareness, including online guidance on pesticide application.
- **Improved Medical Facilities:** Broadband connectivity enables medical service delivery at home.
- **Enhancing Education Quality:** Enabling students to access quality education online and facilitating government scheme penetration, such as DIKSHA, in rural areas.
- **E-Commerce Advancement:** Village-level broadband connectivity can promote e-commerce, aligning with government initiatives for Open Networks for Digital Commerce.
- **Employment Opportunities:** The extension program is expected to create approximately 2.50 lakh jobs.

Challenges in Implementing BharatNet
- **Project Delay:** The initial project deadline was in 2019, but work is still ongoing.
- **Lack of Infrastructure Support:** Basic infrastructure support at the Gram Panchayat level, including protected space and power supply, remains a significant challenge.
- **Escalating Project Costs:** Delays have led to a substantial increase in project costs. For instance, the cost of laying one kilometer of optic fiber cable (OFC) doubled between 2020-21 and 2021-22.
- **Low Utilization:** As of March 2022, only 27% of the expected villages had received network connectivity.
- **Quality of Service Issues:** Complaints about frequent line faults, connection outages, and inadequate response to service and repair requests have become increasingly common.
- **Administrative Capacity Challenges:** BSNL has faced criticism for its slow decision-making and bureaucratic hurdles.
- **Private Sector Participation Dilemma:** In the 2022 bid, not a single bid was received, and the tender was eventually canceled due to insufficient incentives and increased responsibilities for private sector operation and BharatNet's upgrade.

The Path Forward for BharatNet
- **Panchayat Raj Institution Involvement:** Enhancing implementation and utility through the participation of Panchayat Raj institutions.
- **Enhanced Implementation Efficiency:** Implementing a proper administrative framework and governance structure to improve project efficiency.
- **Private Sector Engagement:** Encouraging increased private sector involvement in investment, infrastructure development, and project operation.
- **Boosting Awareness:** Raising awareness among rural populations about the benefits of BharatNet, which faces competition from private-sector broadband providers.

2.6 URBAN INFRASTRUCTURE DEVELOPMENT FUND (UIDF): RECENT DEVELOPMENTS

Latest Context:
- The National Housing Bank (NHB) has initiated the operation of the Urban Infrastructure Development Fund (UIDF) with a substantial allocation of ₹10,000 crore.
- This establishment was officially announced during the 2023-24 Union Budget.
- Funding for UIDF will be sourced from the shortfall in priority sector lending.
- The UIDF framework draws inspiration from the Rural Infrastructure Development Fund (RIDF).

Understanding NHB
- The National Housing Bank (NHB) is a regulatory and developmental institution in India, established to oversee and promote the housing finance sector.
- It regulates housing finance companies, provides refinancing support, formulates policies, and encourages affordable housing initiatives.
- NHB is owned by the Reserve Bank of India (RBI) and plays a crucial role in maintaining the stability and growth of India's housing finance industry.

Understanding UIDF
- The UIDF aims to complement the efforts of state governments and union territories by providing a stable and predictable source of finance for infrastructure development.
- States are encouraged to utilize grants from the 15th Finance Commission and existing schemes while accessing the UIDF, potentially adopting user charges where appropriate.
- UIDF coverage encompasses 459 Tier 2 cities (with populations ranging from 1 lakh to 9,99,999) and 580 Tier 3 cities (with populations between 50,000 to 99,999) based on the 2011 Census data.
- Allocation of funds is determined by the population of eligible cities within each state or union territory, with interest rates on funds set at Bank Rate minus 1.5.
- Eligible activities align with the Missions and programs of the Ministry of Housing and Urban Affairs, giving priority to essential services like sewage and solid waste management, water supply, sanitation, and impact-oriented projects.
- Project proposals should range from a minimum of ₹5 crores (₹1 crore for northeast and hilly states) to a maximum of ₹100 crore.
- The Finance Department of respective states serves as the nodal agency, while funding for administrative expenses and maintenance is excluded from the fund's purview.
- Certain sectors, such as housing, power, telecom, rolling stock (buses and trams), urban transport, health, and education institutions, are not covered by UIDF.
- The original loan amount must be paid back in five uniform annual payments over a span of seven years, which includes a two-year grace period before repayments begin.
- Borrowing by states adheres to Article 293(3) of the Indian Constitution, remaining within their borrowing limits from the market and financial institutions during a financial year.

Other Initiatives for Tier 2 and 3 City Infrastructure Development
In addition to UIDF, several other initiatives have been undertaken for the development of Tier 2 and 3 cities, including the Smart Cities Mission (2015), Atal Mission for Rejuvenation and Urban Transformation (AMRUT, 2015), and Heritage City Development and Augmentation Yojana (HRIDAY, 2015), among others.

Building infrastructure in smaller Indian cities (Tier 2 and 3) faces several challenges:
- **Funding Constraints:** Tier 2 and 3 cities often have limited financial resources and face difficulties in raising funds for infrastructure projects.
- **Lack of Planning:** In many cases, these cities lack proper urban planning and zoning regulations.
- **Infrastructure Gaps:** Existing infrastructure in these cities may be inadequate or outdated. This includes roads, public transportation, sewage systems, and water supply.
- **Limited Technical Expertise:** Tier 2 and 3 cities may lack the technical expertise needed for efficient urban planning and project execution.

- **Land Acquisition and Rehabilitation:** Acquiring land for infrastructure development can be challenging, especially when it involves displacing communities. Resettlement and rehabilitation issues can lead to conflicts and project delays.
- **Environmental Concerns:** Environmental regulations and concerns are increasingly important in infrastructure development.

Importance and Relevance of UIDF:
- **Contributing to SDGs:** UIDF aligns with Sustainable Development Goal (SDG) 11, which emphasizes making cities and human settlements inclusive, safe, resilient, and sustainable.
- **Urban Planning Promotion:** UIDF encourages states to undertake urban planning reforms.
- **Infrastructure Enhancement:** It supports Tier 2 and 3 cities in becoming significant hubs for small and medium-sized enterprises and major textile producers, contributing to economic growth.
- **Addressing Urban Congestion:** With 40% of India's urban population residing in Tier 2 and 3 cities, UIDF can help alleviate urban congestion by bolstering development in these areas.

About RIDF
- Established in 1995-96, RIDF is focused on financing rural infrastructure projects.
- It is managed by the National Bank for Agriculture and Rural Development (NABARD).
- Domestic commercial banks contribute to RIDF to offset their shortfall in stipulated priority sector lending to agriculture.

Conclusion:
UIDF plays a pivotal role in Tier 2 and 3 city development, enhancing the overall quality of urbanization in India. Successful implementation of this initiative necessitates active involvement from all stakeholders.

2.7 EXPLORING MEDICAL AND WELLNESS TOURISM IN INDIA

Latest Context:
The Ministry of Home Affairs recently introduced a new AYUSH visa category for foreign nationals seeking treatment under traditional Indian medicine systems, known as AYUSH. This move aims to facilitate medical and wellness tourism in India.

Introduction
- **A New Chapter in Visas:** A new section called "Ayush Visa" has been added to the Medical Visa category in the Visa Manual. This section addresses treatment under Indian traditional medicine systems. Amendments have also been made to various chapters of the Visa Manual, 2019, to accommodate these changes.
- **Boosting Medical Value Travel:** This development is expected to enhance Medical Value Travel (MVT) in India and promote traditional Indian medicine on a global scale. AYUSH encompasses Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy, as well as other traditional healthcare systems like Sowa Rigpa.

Understanding Medical and Wellness Tourism:
- **Medical Tourism:** Medical tourism refers to the practice of traveling to foreign countries to seek healthcare services. Travelers often seek elective procedures and complex surgeries abroad, either for cost savings or quicker access to treatment.
- **Wellness Tourism:** Wellness tourism focuses on maintaining or enhancing well-being. It involves activities such as spa treatments, yoga retreats, and holistic health practices that contribute to physical, mental, spiritual, or environmental well-being during travel for leisure or business.
- **Part of the Wellness Economy:** Medical and wellness tourism are integral parts of the wellness economy, where people invest in their health and well-being.
- **National Strategy:** The Ministry of Tourism has developed a National Strategy and Roadmap for Medical and Wellness Tourism. The strategy aims to create an institutional framework, strengthen the ecosystem, establish a brand, and ensure quality assurance. Key pillars of the strategy include digitalization, enhancing accessibility, and the formation of the National Medical and Wellness Tourism Promotion Board.

Significance for India:

- **Meeting Demand for Wellness and Alternate Cures:** India is well-positioned to attract medical value travelers, especially for AYUSH treatments.
- **Reducing Waiting Periods:** India can provide quicker access to treatments compared to developed countries with long waiting times.
- **Catering to Undeveloped Medical Facilities:** Demand comes from countries with underdeveloped medical facilities.
- **Improved Connectivity:** Initiatives like the Regional Connectivity Scheme-UDAN connect smaller cities, enhancing medical and wellness tourism.
- **Catering to Aging Populations:** India can cater to the healthcare needs of aging populations.

Challenges
- **Regional Competition:** India faces competition from countries like Malaysia, Thailand, and Singapore.
- **Lack of International Accreditation:** India has fewer Joint Commission International (JCI) accredited hospitals, affecting global recognition.
- **Limited Insurance Coverage:** Overseas medical care is often not covered by insurance.
- **Skilled Manpower Shortage:** The wellness industry struggles with recruiting and retaining skilled personnel.
- **Middleman Exploitation:** Medical tourism facilitators are not well-regulated, leading to exploitation and overcharging.

The Way Forward:
- **Incentives for Medical Equipment Import:** Encourage relaxation and incentives for importing medical equipment.
- **Medical and Wellness Tourism Diplomacy:** Attracting the diaspora and forging diplomatic ties.
- **Infrastructure Development:** Extend schemes like UDAN to major AYUSH-located regions.
- **Regulation Strengthening:** Ensure stronger regulation of hospitals and wellness centers to prevent exploitation.
- **Stakeholder Collaboration:** Establish linkages and understanding among stakeholders for sector promotion.

Government Initiatives:
- **Market Development Assistance (MDA) Scheme:** Provides assistance to medical/wellness tourism service providers and centers.
- **National AYUSH Mission:** Preserves and promotes traditional Indian medicine systems.
- **Promotion of Information, Education, and Communication (IEC) in AYUSH:** Organizes events like Arogya Fairs, Ayurveda Parv, and Yoga Fest.
- **National Accreditation Board for Hospitals & Healthcare Providers (NABH):** Works to establish accreditation programs for healthcare organizations in India.

2.8 SELF-HELP GROUPS (SHGs)

Latest Context:
Recently, the Government of India announced that skill development training will cover 2 crore women under the 'Lakhpati Didi' scheme.

About Lakhpati Didi Scheme
- Launched by the **Ministry of Rural Development in 2021.**
- The primary objective of the scheme is to **enable rural SHG women to earn at least Rs.1 lakh per annum.**
- Under this scheme, the **women's will be trained in skills like plumbing, LED bulb making, and other such activities.**

What are Self-Help Groups (SHGs)?
- SHGs are **community-based organizations formed by a small group of individuals, typically between 10 to 20 members**, who come together for a common purpose, mostly related to improving their socio-economic conditions.
- SHGs are most commonly associated with **women's empowerment and poverty alleviation.**
- SHGs consist of a small number of members, usually from the same community or locality. This small group size allows for effective communication and cooperation among members.

- **One of the primary functions of SHGs is to encourage members to save money regularly.** Members contribute a certain amount during each meeting, and these savings are used to provide loans to group members in need.
- Many SHGs are engaged in income-generating activities collectively. These activities can include small-scale businesses, agriculture, handicrafts, and more. The income generated is often used for the benefit of the group members.
- **SHGs often receive support from government agencies, non-governmental organizations (NGOs), banks, and other institutions.** This support can come in the form of training, capacity building, access to credit, and technical assistance.

Background of Self-Help Groups (SHGs) in India
- **1970s:** The concept of SHGs began to gain attention in India during the early 1970s. The idea of small groups of individuals coming together for mutual support and empowerment was inspired by similar models in other countries, particularly the Grameen Bank model in Bangladesh.
- **1979:** The first formal SHG in India was formed in the state of Andhra Pradesh. This SHG, known as the 'Deccan Development Society', focused on rural development and women's empowerment.
- **1980s:** During the 1980s, several NGOs and community-based organizations across various states in India experimented with the SHG concept, primarily to address rural poverty and the lack of access to financial services.
- **1990s:** This period marked a significant turning point for SHGs in India. The National Bank for Agriculture and Rural Development (NABARD) launched a pilot project in 1992 to promote SHGs as a tool for rural development. This project aimed to link SHGs with formal banking institutions, enabling them to access credit and other financial services.
- **1999:** The Reserve Bank of India (RBI) issued guidelines, recognizing SHGs as a formal channel for delivering microcredit and other financial services. These guidelines paved the way for the growth of SHG-bank linkage programs.
- **2000s:** The 2000s witnessed a rapid expansion of SHGs throughout India. Various government programs and initiatives were launched to support and promote SHGs, especially among women in rural areas. States like Kerala, Tamil Nadu, and Andhra Pradesh saw significant success in SHG mobilization.
- **2001:** The Swarnjayanti Gram Swarozgar Yojana (SGSY) was launched, which aimed at promoting self-employment and micro-enterprises through SHGs. It later evolved into the National Rural Livelihood Mission (NRLM), renamed Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) in 2015, with a broader scope of poverty reduction and livelihood promotion.
- **2010s:** SHGs continued to play a crucial role in rural development, women's empowerment, and poverty reduction. Initiatives like the "Nai Roshni" program focused on women's leadership and capacity-building within SHGs.
- **2020s:** The development and support of SHGs continued into the 2020s, with an increasing emphasis on digital financial inclusion and leveraging technology to enhance the reach and impact of SHG initiatives.

Role of SHG's in Empowering Women in India
- **Economic Empowerment:**
  - **Access to Credit:** SHGs provide women with access to credit and financial services. Members can take loans from the group's savings, and many SHGs are linked to formal financial institutions, allowing women to access microloans for income-generating activities.
  - **Income Generation:** SHGs often engage in income-generating activities collectively. Women can start small businesses, engage in agriculture, or participate in handicrafts and other ventures, leading to increased income for themselves and their families.
  - **Financial Literacy:** SHGs promote financial literacy and entrepreneurship skills among women. Members learn about savings, budgeting, and managing small enterprises, enhancing their financial decision-making abilities.
- **Social Empowerment:**
  - **Awareness and Knowledge:** SHGs provide a platform for women to share knowledge and information on various issues, including health, education, legal rights, and government schemes. This empowers women with knowledge that can lead to better choices and improved well-being.
  - **Support System:** SHGs offer a social support network. Women can discuss their problems, seek advice, and find emotional support within the group, helping them deal with personal and family challenges more effectively.
  - **Voice and Participation:** SHGs empower women to have a voice in decision-making at the household and community levels. This increased participation helps challenge traditional gender norms and promotes women's agency.
- **Political Empowerment:**

o **Leadership Development:** Many SHGs focus on leadership development and capacity building. Women are encouraged to take on leadership roles within the group, which can lead to increased confidence and participation in local governance and politics.

o **Representation:** Empowered women from SHGs often seek representation in local panchayats (village councils) and other decision-making bodies. Their involvement in local governance can lead to more gender-sensitive policies and improved access to resources.

- **Reducing Gender-Based Violence:** SHGs can act as a platform for discussing and addressing issues related to gender-based violence. By providing support and raising awareness, SHGs contribute to reducing violence against women.

Conclusion:

Overall, SHGs have been instrumental in challenging traditional gender roles, promoting gender equality, and women's empowerment in India. They provide a platform for women to access financial resources, and gain the skills and confidence needed to take their rights and improve their socio-economic status.

2.9 STARTUPS IN INDIA

Latest Context:

Recently, the Parliamentary Standing Committee (PSC) on commerce tabled "Ecosystem of Startups to Benefit India" report in the parliament.

What are Startups?
- The term **'startup' refers to a company which is in the initial stage of operations.**
- Startups are **mostly founded by one or more entrepreneurs**, **who want to develop a product or service** for which they believe that there is a demand for it in the market.
- These companies **generally start with high costs and limited revenues**, that is why they look for capital from a variety of sources.

Eligibility Criteria for startups in India:

Private Limited Company
- It must be a Private Limited Company or registered as a Partnership Firm or a Limited Liability Partnership (LLP)

Turnover
- Turnover must not exceed more than Rs 100 crores i.e it must be less than 100 crores in any of the previous financial years

Duration
- Entity shall be recognised as a start up to 10 years from the date of its incorporation.

Innovation
- It should work towards innovation/improvement of existing products, services, and processes and should have the potential to generate employment/create wealth. An entity formed by splitting up or reconstruction of an existing business shall not be considered as "Start-up".

Key highlights of the report are:
- **India has become the 3rd largest startup ecosystem in the world, having more than 98,120 Startups (as on April 2023).**
- Around **47%** of the startups in India are from **Tier 2 and Tier 3 cities.**

- **At present**, India is home to **108 unicorns** (startups having a valuation of $1 Billion or more).
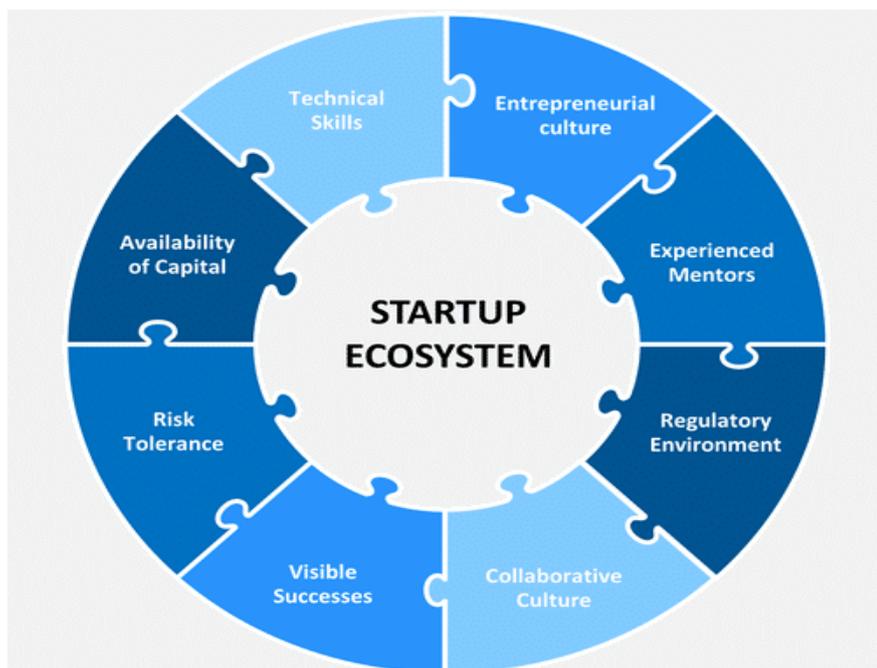
- Startups in India are **spread across more than 56 diversified sectors** which includes IT services, healthcare and life sciences, education, agriculture, food & beverages.
- Almost **47%** of the recognised startups **have at least one women sitting at the position of director.**

What are the factors that lead to the growth of startup ecosystem in India?
- **Government Initiatives and Policies:** The Indian government has introduced several policies and initiatives to support startups, such as the "Startup India" campaign, which provides benefits like tax exemptions and simplified regulations. These policies have helped create a more conducive environment for startups to flourish.
- **Access to Funding:** The availability of funding from various sources has increased significantly.
- **Increasing Entrepreneurial Culture:** There has been a cultural shift towards entrepreneurship in India, with more individuals willing to take risks and start their own businesses. This change in mindset has led to a surge in the number of startups.
- **Rising Middle Class and Consumer Market:** India's growing middle class and consumer market present a vast opportunity for startups to offer innovative products and services. This large consumer base provides a ready market for testing and scaling startup ideas.
- **Technology and Innovation:** The rapid advancement of technology and the availability of affordable tech infrastructure have lowered entry barriers for startups. Cloud computing, mobile technology, and access to open-source resources have facilitated innovation across various sectors.
- **Educational Institutions:** India is home to numerous world-class educational institutions that produce a skilled workforce in fields like engineering, technology, and business. Many of these graduates are now interested in starting their own business rather than pursuing traditional careers.
- **Globalization and Outsourcing:** India's reputation as a hub for IT and outsourcing has attracted international attention. This has led to collaborations, partnerships, and even acquisitions by multinational companies, thereby boosting the startup ecosystem.
- **Economic Factors:** The relatively lower cost of operating a business in India compared to more developed countries has attracted entrepreneurs looking to maximize their resources.
- **Success Stories:** The success stories of Indian startups like Flipkart, Ola, Paytm, and Zomato have inspired aspiring entrepreneurs and investors, further fuelling the growth of the ecosystem.
- **Digital Penetration:** The widespread availability of smartphones and internet connectivity has expanded the potential customer base for digital and tech-driven startups.

Challenges in front of startups in India are:

- **Regulatory Hurdles:** Despite improvements, regulatory norms can still pose challenges for startups. Facing various regulations related to licensing, taxation, labour laws, and intellectual property can be time-consuming and resource-intensive.
- **Access to Funding:** While funding opportunities have expanded, early-stage startups often struggle to secure adequate funding. There is a funding gap between seed-stage and growth-stage financing, which can restrict the scaling of startups.
- **Lack of Infrastructure:** While there has been progress in creating supportive infrastructure, startups outside major cities may still face difficulties accessing quality office spaces, reliable internet connectivity, and other essential facilities.
- **Talent Shortage:** Finding and retaining skilled and specialized talent can be challenging. Established companies and multinational corporations often compete for the same pool of skilled professionals, making it difficult for startups to attract the right talent.
- **Market Competition:** Some sectors within the startup ecosystem in India have become saturated, leading to intense competition. New startups entering these sectors may struggle to differentiate themselves and capture market share.
- **Slow Adoption of New Technologies:** While India has a large tech-savvy population, the adoption of new technologies can sometimes be slower than expected. Convincing customers to adopt new solutions and changing established behaviours can be a challenge.
- **Intellectual Property Protection:** Startups may face challenges in protecting their intellectual property, as the legal framework for intellectual property rights is complex and slow to enforce.
- **Global Competition:** Indian startups often face competition not just domestically, but also from international startups and established companies with larger resources and established market presence.
- **Data Privacy and Security:** With increasing reliance on digital technologies, startups need to ensure robust data privacy and security measures to gain customer trust and comply with regulations.

Some major government initiatives for startups are:
- **Credit Guarantee Scheme for Startups (CGSS)**
  - The scheme was approved for the purpose of providing credit guarantees to the loans given by Member Institutions (MI) to finance eligible startups.
  - Here, Member Institutions (MIs) include financial intermediaries like banks and other financial institutions like Non-Banking Financial Companies (NBFCs) which are engaged in lending.
- **Startup India Seed Fund Scheme (SISFS):** It aims to provide financial assistance to startups for product trials, market entry and commercialization.
- **National Startup Awards:** It seeks to recognize and reward outstanding startups and ecosystems that are contributing to innovation and competition.
- **SCO Startup Forum:** The first-ever Shanghai Cooperation Organisation (SCO) Startup Forum was launched in October 2020 to develop and improve startup ecosystems collectively.
- **Prarambh:** The 'Prarambh' Summit aims to provide a platform to startups and young minds from around the world to come up with new ideas, innovation and invention.

Conclusion:
Despite these challenges, the **Indian startup ecosystem continues to evolve, with entrepreneurs, investors and government stakeholders working together to address these issues and create an environment favourable to startup growth and innovation.** Overall, these factors have contributed to the vibrant and dynamic startup ecosystem in India, attracting attention both domestically and internationally.

2.10 GOLDILOCK SCENARIO

What is the Goldilocks Scenario?
The Goldilocks scenario in economics describes an **ideal situation** where an economy experiences **stable and balanced growth**. In simpler terms, **it's like finding the perfect balance for economic progress - not too high and not too Low.**

Features of the Goldilocks Scenario
In a Goldilocks scenario, there are a few key characteristics:
- **Low Unemployment:** People have jobs, and the job market is healthy.
- **Steady GDP Growth:** The economy is growing at a consistent and sustainable rate.

- **Reasonable Prices and Interest Rates:** Inflation and interest rates are under control, so things aren't getting too expensive, and borrowing money is affordable.

Why Does the Goldilocks Scenario Happen?

This balanced phase in the economy typically occurs after a rough patch, like a recession or economic crisis. It's during the recovery and growth period that the Goldilocks scenario often sets in. However, it's important to note that this **"just right"** economic state is usually temporary and **doesn't last forever**.

2.11 DISCOVER YOUR UNCLAIMED DEPOSITS WITH UDGAM PORTAL

Latest Context:

The Reserve Bank of India (RBI) has introduced a user-friendly web portal called UDGAM, which stands for **Unclaimed Deposits - Gateway to Access Information**. This portal has been created with the **primary aim of helping bank customers locate their unclaimed deposits across various banks, all in one convenient location.**

Objective:

The main goal of the UDGAM Portal is to empower bank customers by providing easy access to information about their unclaimed deposits. These unclaimed deposits consist of two types:

- **Unoperated Balances:** These are funds lying dormant in savings or current accounts that haven't been used for a period of 10 years.
- **Unclaimed Term Deposits:** These are term deposits that have reached maturity but haven't been claimed within 10 years from their maturity date

Advancing Financial Inclusivity

The UDGAM Portal represents a major move forward in ensuring that more people have access to financial services. It leverages digital technology to **efficiently deliver banking services to customers**. By centralizing information on unclaimed deposits from multiple banks, **it simplifies the process of locating and retrieving these funds**. This initiative aligns with the broader goal of making banking services more accessible and convenient for everyone.

Summary

UDGAM is an RBI initiative that simplifies the process of finding and accessing unclaimed deposits, making banking services more efficient and inclusive for all customers.

2.12 NEW IPO (INITIAL PUBLIC OFFERINGS) LISTING TIMELINE

Latest Context:

SEBI Cuts IPO Listing Time by Half

The Securities and Exchange Board of India (SEBI) has made significant changes to the timeline for Initial Public Offerings (IPOs). The time it takes for a company to list its IPO on the stock market has been **reduced from six days to just three days**, transitioning from T+6 to T+3.

Understanding IPOs

An IPO, short for Initial Public Offering, is when a company offers its shares to the public for the first time in the primary market. This is a crucial step for companies as it serves as their primary source of funds.

Benefits of the Change

This alteration in the IPO listing process aims to **simplify the process for companies** going public and provide investors with **quicker access to capital and liquidity.**

Effective Date

Starting from **1 December 2023**, the revised T+3 days' timeline will be **mandatory** for all IPOs. **This change is expected to have a positive impact on both companies and investors alike.**

2.13 CREDIT RATING AGENCIES (CRA)

Latest Context:
Recently, the credit rating agency Moody's has given "BAA3" rating on India.

What is sovereign credit rating?
- Also referred to as a **'country's credit rating'.**
- It is an **evaluation of a nation's creditworthiness**. **It assesses the government's ability and willingness to meet its financial commitments,** particularly its debt repayment commitments.
- These ratings are assigned by many credit rating agencies, which are independent financial institutions that analyze and rate the creditworthiness of various entities, including governments, corporations etc.

Historical background of sovereign credit ratings
- **Early 20th Century:** The concept of credit ratings began to take shape in the early 20th century as investors want more information about the creditworthiness of bonds issued by governments and corporations.
- **1930s:** The Great Depression led to increased interest in credit ratings as investors want to assess the risk of bond defaults. This period saw the expansion of rating agencies and the refinement of their methodologies.
- **1950s-1960s:** Sovereign credit ratings gained prominence during this period as governments and corporations issued a growing volume of debt in the Post-World War II era. Rating agencies, including Moody's and S&P, started providing credit ratings for countries.
- **1970s:** The 1970s marked a period of increased internationalization of credit ratings as agencies expanded their coverage to include foreign issuers.
- **1980s:** The 1980s saw the emergence of more structured and standardized rating systems, with agencies adopting letter-based rating scales. For example, Moody's introduced its well-known Aaa to C rating scale in 1982.
- **2000s:** This period witnessed significant growth in the issuance of complex financial instruments, leading to concerns about rating agencies' ability to assess risk accurately.
- **Post-2008:** In the wake of the financial crisis, regulatory authorities in various countries, including the United States and the European Union, introduced reforms to enhance the oversight of rating agencies and reduce their potential conflicts of interest. These reforms included increased transparency and the requirement for agencies to disclose their methodologies.
- **2010s:** The sovereign debt crises in Europe, particularly in Greece, highlighted the significance of sovereign credit ratings in the context of eurozone countries.
- **2020s:** Sovereign credit ratings continued to be relevant in the context of the COVID-19 pandemic as governments around the world issued substantial amounts of debt to fund economic relief measures. Rating agencies assessed the creditworthiness of governments during the crisis, with a focus on their fiscal responses and debt sustainability.

About Moody's and its rating system
- It is **one of the three major credit rating agencies globally, along with Standard & Poor's (S&P) and Fitch Ratings.**
- Moody's was **founded in 1909 by John Moody** and initially focused on providing financial information and analysis to investors. Over the years, it evolved into one of the leading credit rating agencies in the world.
- **Moody's uses a letter-based rating scale to evaluate credit risk. The ratings range from the highest quality to the lowest quality.**

- Moody's evaluates countries based on a wide range of factors, including **financial performance, debt levels, industry conditions, economic stability, management quality, and geopolitical factors.** The agency employs a team of analysts who conduct in-depth research and analysis to arrive at the ratings.

No	S&P	Moody's	Fitch	Meaning and Color
1	AAA	Aaa	AAA	Prime
2	AA+	Aa1	AA+	High Grade
3	AA	Aa2	AA	
4	AA-	Aa3	AA	
5	A+	A1	A+	Upper Medium Grade
6	A	A2	A	
7	A-	A3	A-	
8	BBB+	Baa1	BBB+	Lower Medium Grade
9	BBB	Baa2	BBB	
10	BBB-	Baa3	BBB-	
11	BB+	Ba1	BB+	Non Investment Grade Speculative
12	BB	Ba2	BB	
13	BB-	Ba3	BB-	
14	B+	B1	B+	Highly Speculative
15	B	B2	B	
16	B-	B3	B-	
17	CCC+	Caa1	CCC+	Substantial Risks
18	CCC	Caa2	CCC	Extremely Speculative

- In addition to assigning ratings, **Moody's provides a rating outlook, which indicates the potential direction in which a rating might move in the future.** The outlook can be "positive," "stable," or "negative," reflecting the agency's assessment of the entity's creditworthiness over the medium term.
- Moody's ratings are widely followed by investors, financial institutions, and governments**. These ratings influence investment decisions, interest rates on bonds, and overall market sentiment.** Low rating by Moody's can lead to higher borrowing costs for governments and corporations.

India's sovereign credit ratings by global credit rating agencies have been a topic of debate from several years. Some of the key issues and criticisms associated with India's ratings include:

- **Biasedness:** Recently, S&P and Fitch rated India 'BBB-' while Moody's has given 'Baa3' rating, indicative of the lowest possible investment grade. The Economic Survey of 2020-21 noted that never in the history of sovereign credit ratings has the 5th largest economy in the world been rated at this lowest level of the investment grade (BBB-/Baa3), except in the case of China and India.
- **Divergence in Ratings:** Different rating agencies often assign different credit ratings to India. For instance, India has an investment-grade rating from major agencies like Moody's, S&P, and Fitch, but the specific ratings within the investment-grade category can vary. These discrepancies can create confusion among investors and policymakers.
- **Structural Issues vs. Short-term Volatility:** Some critics believe that rating agencies often focus too much on short-term developments and overlook India's long-term structural strengths, such as its large and young population, growing middle class, and potential for economic growth. This can result in ratings that do not adequately capture the country's growth potential.
- **Policy Criticisms:** The Indian government has sometimes been critical of credit rating agencies, arguing that they do not give due consideration to the government's efforts to implement structural reforms and improve the business environment. India has undertaken several economic reforms in recent years, and policymakers believe these should be reflected in improved ratings.

- **Concerns about Sovereign Debt Levels:** India's public debt levels have been a concern for some analysts and agencies. While India's debt-to-GDP ratio is lower than many developed economies, the absolute amount of debt is high due to the country's large population. Some rating agencies have expressed concerns about fiscal consolidation and the ability to manage this debt.
- **Impact on Borrowing Costs:** A lower credit rating can result in higher borrowing costs for the Indian government when it issues bonds in the international markets. This can affect the cost of funding for various government projects and programs.

Conclusion and Way Forward:

Sovereign credit ratings are based on complex assessments that consider a wide range of economic, financial, and political factors. **While there are criticisms and concerns about the ratings assigned to India, these ratings also serve as important benchmarks for investors and policymakers.** Indian government should continue to engage with rating agencies and work on improving the country's credit profile through economic reforms and fiscal policies.

2.14 ADDRESSING INFLATION: WHY RATE HIKES MIGHT NOT BE THE BEST SOLUTION

Latest Context:

Inflation, the increase in prices of goods and services, has been a growing concern, and there's a debate on how to tackle it effectively. Finance Minister's Perspective.

How Interest Rates Impact Inflation Control?

In India, the government follows an "inflation-targeting" approach to manage inflation levels. This strategy involves adjusting interest rates to influence economic activity.

- **Rate Hike to Reduce Inflation:** When inflation rises, increasing interest rates is seen as a way to slow down economic activity, which can, in turn, help bring inflation under control.
- **Rate Cut to Boost Inflation:** In contrast, lowering interest rates can stimulate economic growth but may lead to higher inflation.

RBI's Responsibility and Recent Challenges:

The Reserve Bank of India (RBI) bears the primary responsibility of keeping retail inflation within the range of 2%-6%. However, there have been recent challenges:

- **Inflation Surging Beyond Target:** Despite the RBI's efforts to tighten monetary policy, retail inflation recently surpassed 7.4%, breaching the target range.
- **Economic Consequences:** Further tightening of monetary policy could negatively impact India's GDP and potentially lead to higher unemployment.

Factors Contributing to Rising Inflation

Several factors beyond the control of monetary policy have contributed to the inflation surge:

- **Unpredictable Supply-Demand Issues:** Some inflationary pressures result from unanticipated and short-lived supply-demand imbalances that cannot be addressed through interest rate changes.
- **Domestic Challenges:** Factors such as the spread of diseases like white fly and uneven distribution of monsoons have driven up vegetable prices domestically.
- **Global Supply Shocks:** Geopolitical uncertainties in the world have caused supply shocks that are fueling inflation globally.

Fiscal Measures as an Alternative

In light of these challenges, the government has alternative options to combat inflation, such as:

- **Boosting Supply:** The government can increase the supply of essential goods by selling items like tomatoes and onions at subsidized rates or releasing stocks of wheat and sugar into the market.
- **Reducing Taxes:** Lowering taxes on commodities like petrol and diesel can also alleviate some of the inflationary pressures.

Conclusion:

While rate hikes are a tool to control inflation, the finance minister suggests that they may not be the best option at this moment, considering the potential harm to economic recovery. Alternative measures, such as fiscal interventions, can complement monetary policy to address the current inflationary challenges.

2.15 GLOBAL VALUE CHAINS (GVC)

Latest Context:

Recently, Trade and Investment Ministers of G20 nations agreed to increase cooperation in the areas of Global Value Chains (GVCs).

What are Global Value Chains (GVCs)?
- GVCs, also known as **Global Supply Chains**, **refers to the interconnected and internationalized production and distribution processes that many products go through before reaching consumers.**
- These chains involve various stages of production, from design and raw material extraction to manufacturing, assembly, marketing, and distribution.
- **These days, the products are no longer produced entirely within one country.** Instead, different stages of production may occur in various countries, each specializing in specific tasks.

Let's understand it more clearly through a simple example of a smartphone:
- **Design:** Let's say a company in the US designs a new smartphone. They come up with the idea and how it should look and work.
- **Components:** Some parts like the screen might be made in South Korea because they are good at making high-quality screens. The camera might be from Japan because they are experts in camera technology.
- **Manufacturing:** The actual phone might be put together in China because they have lots of skilled workers and factories to do the assembling.
- **Software:** The software might be developed in India, where there are many talented software engineers.
- **Distribution:** After everything is put together, the phones might be shipped to various countries around the world for sale.

So, in this example, the smartphone went through different countries, with each country specializing in a specific job. This makes the phone better and cheaper. Global Value Chains help products get made and distributed efficiently.

Historical Background of Global Value Chains (GVCs)
- **1950s-1960s:** During this period, international trade primarily involved the exchange of finished goods between countries. Products were often manufactured entirely within one country, and supply chains were relatively simple.
- **1970s:** The 1970s saw the beginning of GVCs with the emergence of multinational corporations. These companies started to shift their production activities across different countries to reduce costs and take advantage of cheap labour and resource availability.
- **1980s:** Advances in transportation and communication technologies, made it easier to coordinate production across borders. This led to a significant expansion of GVCs.
- **1990s:** The 1990s marked a crucial period in the development of GVCs due to the liberalization of trade policies in many countries and the spread of globalization. Companies increasingly outsourced various stages of production to lower-cost countries. This era also saw the rise of East Asian economies like South Korea, Japan as key players in global manufacturing supply chains.
- **2000s:** This era witnessed a further deepening of GVCs, with the rapid growth of e-commerce, which allowed consumers to access products from around the world more easily.
- **2010s:** In this decade, services like IT, customer support, research and development started being integrated into global supply chains.
- **2020:** The COVID-19 pandemic highlighted vulnerabilities in global supply chains, particularly in critical industries like healthcare and electronics. This led to discussions about supply chain resilience and diversification to reduce risks.

Risks and Challenges in GVC Participation

Participating in GVCs can offer numerous benefits, but it also comes with various risks and challenges that businesses and governments need to consider like:

- **Supply Chain Disruptions:** Events like natural disasters, pandemics (e.g., COVID-19), political instability, or trade disputes can disrupt supply chains, leading to production delays and increased costs.
- **Dependence on Suppliers:** Relying on suppliers from different countries can be risky if those suppliers face financial or operational problems.
- **Trade Barriers:** Changes in trade policies, tariffs, or trade tensions between countries can disrupt the flow of goods and services within a supply chain.
- **Quality Assurance:** Ensuring consistent product quality across different locations can be a challenge, which can affect the reputation of the final product.
- **Data Security:** Increased dependence on digital systems and communication in GVCs exposes businesses to cybersecurity threats, such as data breaches and cyberattacks.
- **Exchange Rate Risk:** Currency exchange rate fluctuations can impact costs and profits for businesses engaged in cross-border trade.
- **Carbon Footprint:** Long-distance transportation of goods in GVCs can contribute to higher carbon emissions, leading to environmental challenges.

What can be the ways to overcome these challenges?
- **Diversify Suppliers and Markets:** Reduce dependence on a single supplier or market. Exploring alternative suppliers and expand into new markets can reduce risk.
- **Supply Chain Resilience:** Develop a resilient supply chain by identifying critical points of failure and implementing backup plans by maintaining safety stock.
- **Collaborative Relationships:** To build strong and collaborative relationships with key suppliers, customers, and logistics partners to improve communication and responsiveness during disruptions.
- **Cybersecurity Measures:** Invest in cybersecurity technologies, employee training, and incident response plans to protect digital assets and data from cyber threats.
- **Government Engagement:** To engage with government agencies and trade associations to stay informed about changes in regulations and trade policies. Advocate for policies that promote open and predictable trade.

Smile Curve of High-Value Activities in Global Value Chains
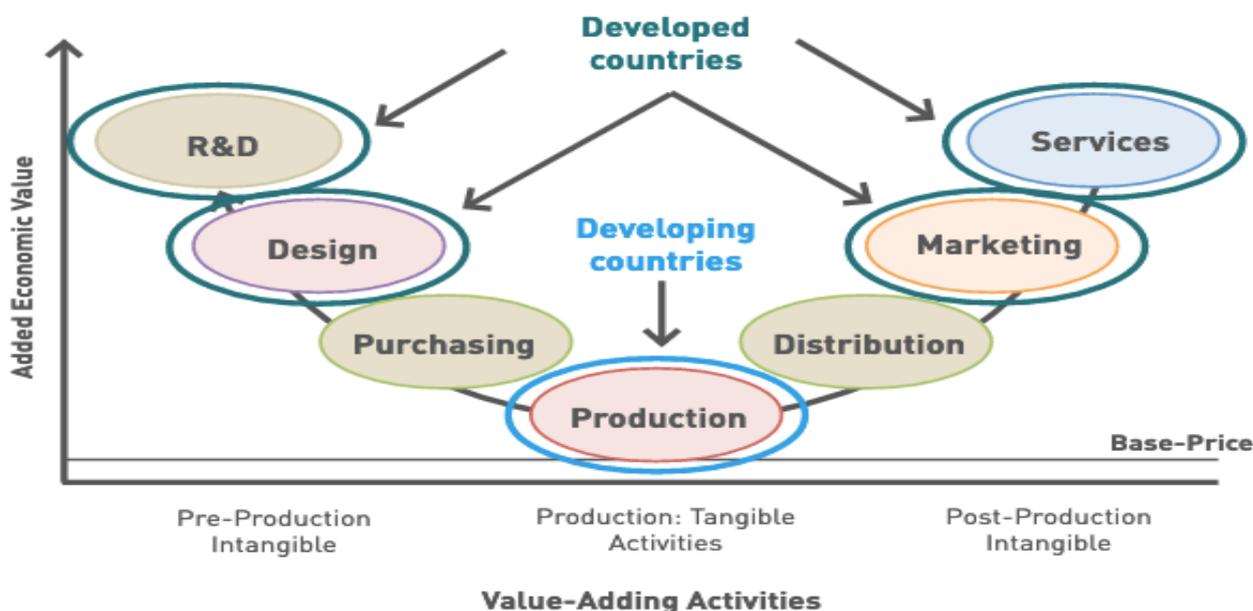
2.16 REPORT ON ENCOURAGING INDIAN STARTUPS TO STAY IN GIFT IFSC

Latest Context:
A Report on Bringing Indian Innovation Back to GIFT IFSC

Understanding the Committee's Mission
- The Committee of Experts (CoE) has submitted a report on the topic of "Onshoring the Indian Innovation to GIFT IFSC."

- Their goal is to figure out why some Indian startups choose to move abroad, like to Singapore, and provide suggestions to prevent this from happening in the future.
- They also want to encourage startups that have already moved abroad to come back to IFSC in GIFT City, Gujarat.
- The CoE was put together by the International Financial Services Centres Authority (IFSCA).

India's Startup Ecosystem
- India has the world's third-largest startup ecosystem, following the USA and China.
- A company is considered a startup if it's been around for up to ten years from the date of incorporation and is registered as a private limited company or a Limited Liability Partnership (LLP) in India.
- Additionally, its turnover for any financial year should not exceed Rs. 100 crores.

What's Driving Indian Startup Growth?
The growth of Indian startups is fueled by the country's significant purchasing power and the fact that 70% of its GDP comes from consumption. India also boasts a pool of high-quality tech talent.

Why Startups Move Abroad
Some startups choose to move overseas due to reasons like more flexible regulations and the potential for higher valuations when accessing foreign capital markets.

The Impact on India
When startups leave, India loses entrepreneurial talent, and foreign countries benefit from the value these startups create. There's also a loss of tax revenue.

Recommendations from the Committee
The CoE suggests a few actions to address these issues:
- Create a review committee to address delays in granting patents and trademarks.
- Offer exemptions from certain conditions for startups looking to list in GIFT IFSC.
- Establish a special court or arbitration process for dispute resolution.

2.17 RBI'S NEW INITIATIVE: PUBLIC TECH PLATFORM FOR EASY LOANS

Latest Context:
The Reserve Bank of India (RBI) has introduced a trial program called the 'Public Tech Platform for Frictionless Credit.'

Understanding the Platform
- **Open and Easy:** This platform will be a one-stop-shop with an open setup, open Application Programming Interfaces (APIs), and common rules that all financial organizations can easily connect to, like fitting pieces in a puzzle.
- **Connecting Services:** It will allow linking with various services such as Aadhaar e-KYC, land records from state governments, satellite information, PAN verification, and more.
- **Developed by RBI:** The platform is being created by the Reserve Bank Innovation Hub (RBIH), which is a part of RBI.
- **Pilot Run Focus:** In the initial phase, the pilot program will concentrate on providing loans for activities like Kisan Credit Cards (up to ₹1.6 lakh per borrower), Dairy Loans, unsecured MSME loans, Personal Loans, and Home Loans through collaborating banks.
- **Where It's Happening:** The pilot program is being tested in specific districts of Madhya Pradesh, Tamil Nadu, Karnataka, Uttar Pradesh, and Maharashtra.

Why It Matters:
Currently, the information required to decide if someone qualifies for a loan is scattered among different organizations, like governments and data aggregators. This makes it tricky to offer loans based on clear and consistent rules.

Benefits of the Public Tech Platform for Frictionless Credit
- **Ease of Access:** Borrowers will find it simpler to apply for loans as all the necessary data is brought together in one place.

- **Faster Loan Approval:** With quick access to required information, banks can process loan applications more swiftly, reducing wait times for borrowers.
- **Reduced Hassles:** Borrowers won't need to run around gathering documents and records from various sources, making the process less cumbersome.
- **Wider Reach:** Financial institutions can extend their services to more people, including those in remote areas, thanks to the streamlined platform.
- **Enhanced Accuracy:** Access to up-to-date and comprehensive data ensures better decision-making, reducing the chances of errors in loan approvals.
- **Financial Inclusion:** This initiative promotes financial inclusion by making loans more accessible to a broader range of individuals and businesses.

In a nutshell, the Public Tech Platform for Frictionless Credit aims to make borrowing money easier, faster, and more efficient for everyone involved.

2.18 CAG's REPORT ON INDIAN RAILWAYS' MONEY MATTERS

Latest Context:
The Comptroller and Auditor General of India (CAG) has shared a report about how the Indian Railways handles its finances.

Key Discoveries from the Report
- **Money Going Up:** The Indian Railways saw a 36.02% increase in its Gross Traffic Receipts in 2021-22 compared to 2020-21. Most of this money came from freight earnings.
- **Spending More:** The railways spent 22.61% more on creating new things, replacing old ones, and keeping stuff working in 2021-22.
- **Operating Ratio Troubles:** The Operating Ratio (OR) was 107.39% in 2021-22, which is higher than the 97.45% in 2020-21. A higher OR means the railways struggle to make extra money.
- **Money Going to Staff and More:** A big chunk, 75.47%, of the money spent went to staff salaries, pensions, and lease hire charges for rolling stock (like trains).
- **Helping Passengers with Freight Money:** Profits from freight operations are used to support passenger fares.
- **Not Saving Enough:** There wasn't enough money set aside for the Depreciation Reserve Fund. This led to delays in replacing old stuff.

Suggestions for Improvement:
- **Cutting Passenger Losses:** The railways should figure out how much it costs to carry passengers and try to spend less.
- **Mixing Up Freight:** To earn more money, they should try carrying different types of freight.
- **Making More Money Inside:** Find ways to make more money from within the organization.
- **Fixing Money Matters:** The railways should quickly sort out any unauthorized spending.
- **Better Money Control:** Improve the system to keep track of expenses properly.

In short, the report suggests that the Indian Railways should work on making their passenger operations more cost-effective, increase their income from various sources, and manage their money better to avoid unnecessary expenses.

2.19 UNDERSTANDING MAHARATNA, NAVRATNA, AND MINIRATNA CATEGORIES IN CPSES

Latest Context:
Two government-owned companies, Oil India and ONGC Videsh, have seen changes in their status. Oil India used to be a Navratna company but is now a Maharatna. ONGC Videsh, previously a Miniratna CPSE, has now become a Navratna.

Understanding CPSE Categories
Government-owned companies, known as Central Public Sector Enterprises (CPSEs), are categorized into different groups. These categories are mainly Maharatna, Navratna, Miniratna I, and Miniratna II.

The Nodal Department
The Department of Public Enterprises is responsible for overseeing and managing all Central Public Sector Enterprises (CPSEs). It plays a central role in their governance and operations.

Maharatna Category
- **What is Maharatna?** The Maharatna status is a prestigious classification given to Central Public Sector Enterprises (CPSEs).
- **Big Players on Stock Exchange:** These companies are listed on the Indian stock exchange, which means their shares can be bought and sold by the public.
- **Financial Criteria:** To be considered a Maharatna, a CPSE must meet specific financial criteria:
  Annual turnover of at least Rs. 25,000 crore for three years.
  Annual net worth of at least Rs. 15,000 crore for three years.
  Annual net profit of at least Rs. 5,000 crore for three years.
- **Global Presence:** Maharatna CPSEs have a significant presence on the global stage, often conducting business internationally.

Navratna Category
- **What is Navratna?** Navratna is another important category for CPSEs, just below Maharatna in terms of status.
- **Miniratna I and Schedule 'A':** Navratna CPSEs are usually Miniratna I companies and belong to the Schedule 'A' category.
- **Performance Criteria:** To become a Navratna, a CPSE must meet certain performance criteria:
  They should have received an 'excellent' or 'very good' rating in three out of the last five years.

A composite score of 60 or above in six performance indicators, including Net Profit to Net Worth, Cost of Services, Earnings per Share, etc.

Miniratna Category-I:
- **What is Miniratna Category-I?** Miniratna Category-I is a classification for CPSEs that are doing well financially.
- **Profitability Criteria:** These CPSEs must have:
  Made a profit for the last three years consecutively.
  A pre-tax profit of Rs. 30 crores or more in at least one of the three years.
  A positive net worth.

Miniratna Category- II
- **What is Miniratna Category-II?** Miniratna Category-II is another category for CPSEs that are financially sound.
- **Financial Stability Criteria:** To be in this category, CPSEs must have:
  Made a profit for the last three years continuously.
  A positive net worth.
  No defaults in repaying loans or interest payments to the Government.
  No reliance on budgetary support or Government guarantees.

In simple terms, Maharatna CPSEs are the big players with impressive finances and a global presence. Navratna CPSEs are also doing well and belong to the Schedule 'A' category. Miniratna CPSEs, whether in Category-I or Category-II, are financially stable companies. These classifications help recognize and promote the excellence and growth of public sector enterprises.

2.20 TRENDS IN CORPORATE SOCIAL RESPONSIBILITY (CSR) SPENDING

Latest Context:
As per the data released by the Ministry of Corporate Affairs (MCA), the Corporate Social Responsibility (CSR) spending has increased in India but its impact on society still remains limited.

What is the concept of CSR?
- It refers to the concept, whereby **companies take responsibility for the impact of their activities on society and the environment.**
- CSR involves **adding social and environmental concerns into a company's business operations**.
- It involves **considering the interests of all stakeholders** (like employees, general public etc) and working to address their needs and concerns.
- CSR in India is governed by the **Companies Act, 2013.** The Act mandates that companies meeting certain financial criteria are required to spend at least **2%** of their average net profits from the preceding 3 years on CSR activities.

Historical Background of CSR in India
- **1948:** The Industrial Policy Resolution of 1948 emphasized the importance of social responsibility among Indian industrialists. It called for private sector enterprises to take on social responsibilities voluntarily.
- **1956:** The Industrial Development and Regulation Act of 1956 required companies to obtain government approval to start or expand their operations.
- **1960s-1970s:** The idea of businesses contributing to social welfare started gaining prominence during this period. Business leaders like J.R.D. Tata and G.D. Birla played key roles in promoting CSR in India.
- **1976:** The 'National Commission on Rural Labour highlighted the need for corporate support for rural development.
- **1980s:** The Bhopal gas tragedy brought attention to the responsibility of corporations toward their communities and the environment.
- **1991:** The liberalization of the Indian economy in 1991 led to the entry of foreign investment and increased the economic power of Indian businesses. This change in the economic landscape contributed to discussions on corporate social responsibility.
- **2003:** The Ministry of Corporate Affairs set up a committee on CSR to develop guidelines for companies to undertake CSR activities voluntarily.
- **2010:** The Ministry of Corporate Affairs released the "Voluntary Guidelines on Corporate Social Responsibility" to encourage companies to adopt socially responsible practices. However, compliance remained voluntary.
- **2013:** The Companies Act, 2013 was enacted, which made CSR spending mandatory for certain categories of companies.
- **2014:** The Ministry of Corporate Affairs issued a notification regarding the CSR rules under the Companies Act, providing detailed guidelines for the implementation of CSR activities.
- **2019:** The Companies (Amendment) Act, 2019 introduced changes to the CSR provisions, including provisions related to penalties for non-compliance and greater reporting requirements.
- **2020:** During COVID-19 pandemic, the Indian government allowed companies to classify COVID-19 related CSR spending as an eligible CSR activity.
- **2021:** The government introduced further amendments to the CSR rules, allowing companies to carry forward unspent CSR funds for up to three financial years and emphasizing the use of technology for monitoring and implementation of CSR activities.

Some more points on CSR in India are:
- **Applicability:** The CSR provision applies to companies with a net worth of **Rs 500 cr** or a turnover of **Rs 1,000 cr**, or a net profit of **Rs 5 cr or more in any financial year are obligated to fulfil CSR requirements.**
- **CSR Activities: The law provides a broad framework for CSR activities, including the below but not limited to:**
  1. Eradicating extreme hunger and poverty.
  2. Promoting education, including vocational training and skill development.
  3. Supporting gender equality and empowering women.
  4. Reducing child mortality and improving maternal health.
  5. Combating diseases, including HIV/AIDS, malaria, and other diseases.
  6. Ensuring environmental sustainability, including conservation of natural resources and ecological balance.
  7. Supporting social business projects.
  8. Promoting rural development initiatives.
  9. Protecting national heritage, art and culture.
  10. Contributions to the Prime Minister's National Relief Fund or other funds for socio-economic development.

- **Implementation:** Companies are required to constitute a **CSR committee** consisting of the board of directors. The committee formulates and recommends CSR policies and activities for approval by the board. The Act encourages companies to give preference to the local areas where they operate for their CSR initiatives.
- **Reporting:** Companies are required to **disclose their CSR initiatives in their annual reports,** including the composition of the CSR committee, CSR policy, and details of the activities undertaken during the year. Non-compliance with the CSR obligations must be justified and reported accordingly.
- **NGOs and Implementing Agencies:** Companies **can collaborate with non-governmental organizations, registered trusts or the societies** for implementing CSR projects. Such agencies must have a track record of at least 3 years in undertaking similar projects.

Findings of MCA data are:
- **CSR spending increased by almost 80%** and reached at **₹26,210** crore in **FY21** as compare to **FY16.**
- **10 states** of India including Maharashtra, Gujarat, Karnataka and Andhra Pradesh received almost **44%** of the CSR funds in FY21.
- While, the **8 north-eastern states (Assam, Meghalaya, Tripura, Mizoram, Manipur, Arunachal Pradesh, Sikkim and Nagaland)** received just **0.91%** of total CSR funds.
- **Education sector** received about **37%** of the total CSR spending, while health sector received almost **30%** share between **the FY15 to FY21.**

Theme wise CSR fund flow in between FY14-15 to FY18-19 (INR Cr.)*

Theme	INR Cr.
Others (Admin. Misc. Projects)	3116
Urban Slum Development	288
Rural Development	5896
Prime Minister's National Relief Fund	719
Rural Sports and Paralympic	911
Technology Incubation	144
Environment Sustainability	4842
Benefits to Armed Forces Veteran	96
Protection of Heritage & Art	815
Gender Equality and Women Empowerment	1534
Education & Skills	15484
Poverty Alleviation, Healthcare and WASH	14094

Benefits of CSR for the company are:
- **Enhanced Reputation and Brand Image:** Engaging in CSR activities can improve a company's reputation and brand image. By showing a commitment to social and environmental concerns, companies can build trust among consumers, investors, employees, and other stakeholders.
- **Increased Customer Loyalty:** Consumers today are increasingly conscious of social and environmental issues. By aligning CSR initiatives with consumer values, companies can enhance customer loyalty and attract socially responsible consumers. Studies have shown that customers are more likely to support and remain loyal to companies that shows a commitment to social responsibility.
- **Improved Employee Engagement and Retention:** CSR initiatives can boost employee morale, engagement, and job satisfaction. Employees often take pride in working for a company that contributes positively to society. A strong CSR program can attract and retain talented employees who value a company's ethical and socially responsible practices.
- **Risk Mitigation:** CSR activities can help companies mitigate risks associated with negative environmental and social impacts. By proactively addressing issues such as environmental pollution, labour rights and supply chain ethics, companies can reduce the likelihood of legal disputes and reputational damage.
- **Access to New Markets and Opportunities:** CSR initiatives can open doors to new markets and business opportunities. Many governments, organizations, and consumers prefer to engage with companies that are engaged in responsible business practices. Participating in CSR programs can create partnerships and collaborations with NGOs, government agencies, and local communities, leading to new market opportunities and potential business growth.
- **Cost Savings and Operational Efficiency:** CSR activities often involve adopting sustainable practices, such as energy conservation, waste reduction, and resource efficiency. By implementing environmentally friendly measures, companies can reduce costs, increase operational efficiency, and achieve long-term savings.

- **Improved Investor Relations:** CSR can positively influence investor perception and attract socially responsible investors. Investors are increasingly considering environmental, social, and governance factors, when making investment decisions.

Issues with CSR spending in India

- **Lack of Clarity and Accountability:** One of the primary issues is the lack of clarity in defining what constitutes CSR activities. This has led to confusion among businesses about what they can or cannot include in their CSR initiatives. Furthermore, there's a need for greater accountability and transparency in reporting and monitoring CSR spending.
- **Compliance over Genuine Commitment:** Many companies view CSR spending as a compliance requirement rather than a genuine commitment to social responsibility. They may allocate funds to CSR initiatives solely to meet legal obligations rather than to make a meaningful impact.
- **Underutilization of Funds:** A significant portion of CSR funds remains unutilized or underutilized due to various reasons, such as difficulties in identifying suitable projects, bureaucratic hurdles, or a lack of understanding of the CSR ecosystem.
- **Geographical Disparities:** CSR spending is often concentrated in urban and developed areas, leading to geographical disparities. Rural and marginalized communities may not receive adequate attention or support.
- **Lack of Impact Assessment:** Many companies do not conduct rigorous impact assessments of their CSR projects, making it challenging to determine whether the funds are being used effectively to bring about positive change.
- **Conflict of Interest:** There have been instances where companies have engaged in CSR activities that benefit their business interests indirectly, raising questions about conflicts of interest.
- **Dependency on Corporate Funding:** Over-reliance on corporate funding for social development can lead to reduced government accountability and decreased budget allocation for critical social sector.

What can be done to improve CSR spending and its efficiency?

- **Clearer Guidelines and Reporting Standards:** The government should provide clearer guidelines on what qualifies as CSR activities and establish standardized reporting requirements. This will reduce confusion and improve transparency.
- **Stricter Enforcement and Penalties:** Implement stricter enforcement mechanisms and penalties for non-compliance to ensure that companies fulfil their CSR obligations. This can encourage greater commitment to CSR.
- **Capacity Building:** Invest in capacity building for companies to help them identify, plan, and execute effective CSR projects.
- **Impact Assessment:** Mandate regular impact assessments for CSR projects. Companies should be required to measure and report on the social and environmental impact of their initiatives.
- **Long-Term Focus:** Encourage companies to adopt a more long-term and sustainable approach to CSR by supporting projects that address root causes of social issues rather than just providing short-term solutions.
- **Partnerships:** To promote partnerships between businesses, government agencies, NGOs, and local communities. Collaboration can lead to more comprehensive and impactful CSR projects.
- **Geographical Equity:** Encourage companies to spread their CSR initiatives to rural and marginalized areas to address geographical disparities. Incentives can be provided for projects in underserved regions.
- **Innovation and Technology:** Promote the use of innovative technologies and solutions in CSR projects to enhance their effectiveness. This can include using digital platforms for monitoring and evaluation.

2.21 INCREMENTAL CASH RESERVE RATIO (ICRRR)

Latest Context:
Recently, the Reserve Bank of India (RBI) asked banks to maintain an Incremental Cash Reserve Ratio (ICRR) of 10%.
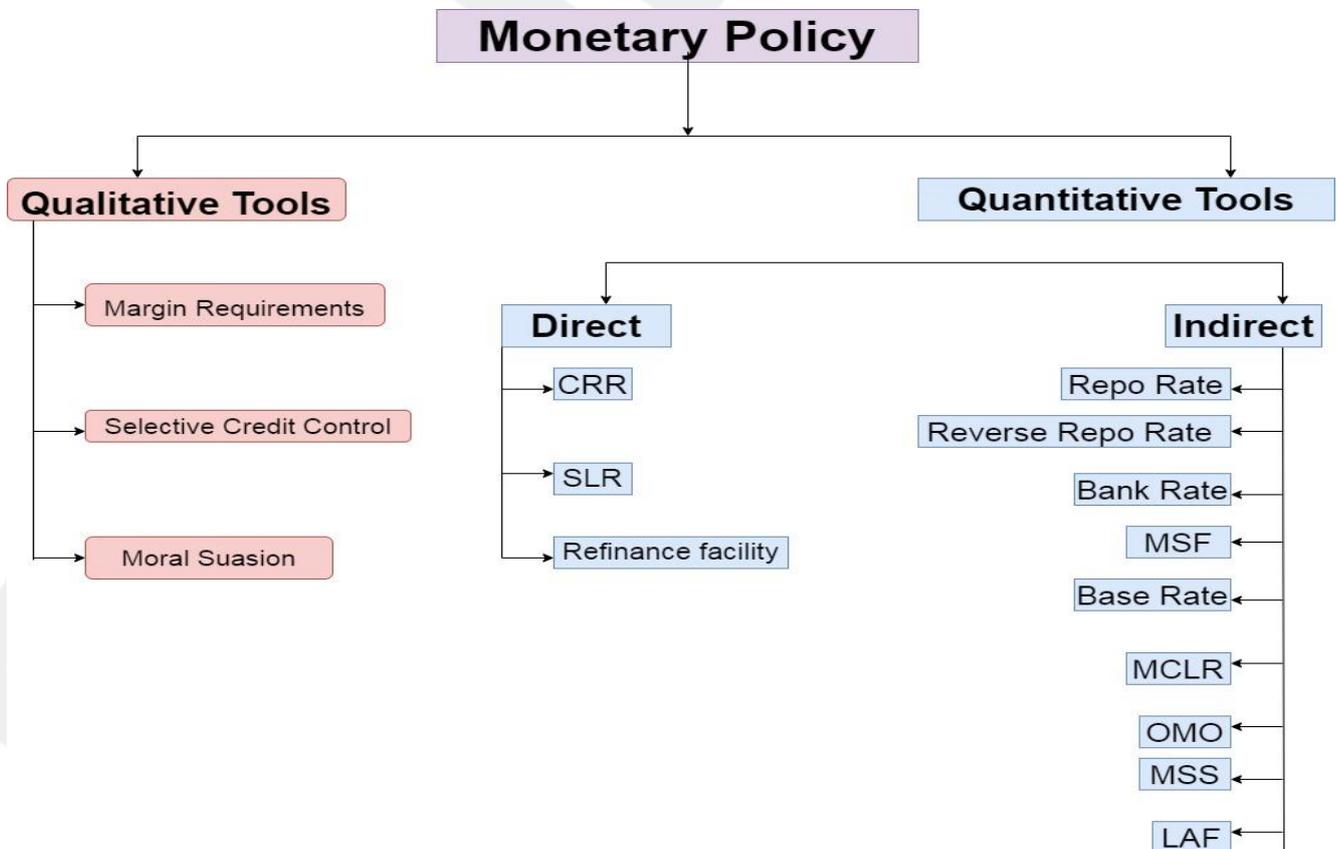
What is Cash Reserve Ratio (CRR)?

- Sometimes, the **banks get excess deposits** from depositors and **if they lend this entire amount of deposits in the form of loans, then it can lead to excess money supply** in the market.

- **Cash Reserve Ratio (CRR) is a tool used by central banks to regulate the money supply in the economy.** So, CRR is that portion of a bank's total deposits that must be kept in reserve with the central bank in the form of cash.
- In other words, it's the **percentage of a bank's deposits that it is legally required to maintain as a reserve with the central bank** and cannot be used for lending or investment purposes.
- When the **central bank increases the CRR**, banks are required to hold a larger portion of their deposits in reserve, which **reduces the amount of money available for lending and investment.** This can help control inflation by reducing the money supply.
- Conversely, when the **central bank decreases the CRR**, banks are required to hold a smaller portion of their deposits in reserve, which **increases the money available for lending and investment.** This can promote economic growth and borrowing.
- **CRR is usually expressed as a percentage of a bank's total deposits.**
- As per the **RBI Act 1934**, all Scheduled Commercial Banks (that includes public and private sector banks, foreign banks, regional rural banks, and cooperative banks) are required to maintain the CRR.
- **Generally, the banks in India are required to maintain 4.5% of their deposits as CRR with the RBI.** However, in periods of excess liquidity, the RBI can impose incremental CRR, which means that the banks will have to park even more cash with the RBI. This measure helps the central bank to manage excess money supply in the market.

Reasons for imposing ICRR

- **Manage Liquidity:** Recently, there was an increase in liquidity in the economy due to a high government spending, increased foreign inflows, and withdrawal of Rs. 2000 notes. As per an estimate, ICRR will pull out somewhere between ₹20,000 to ₹40,000 crore from the system.
- **Inflation Control:** Retail inflation in India rose to 7.5% in July, compared with 4.9% in June.
- **Banking Resilience:** Increased CRR protects banks in uncertain times by creating cash buffers, which can be used in case of external or internal economic shocks.
- **Decreased Lending:** A decrease in money supply will lead to a decrease in the lending capacity of the Banks and this lower lending will, in turn, bring down demand for goods and services, reducing the aggregate demand of the economy.

Monetary Policy

Qualitative Tools
- Margin Requirements
- Selective Credit Control
- Moral Suasion

Quantitative Tools

Direct
- CRR
- SLR
- Refinance facility

Indirect
- Repo Rate
- Reverse Repo Rate
- Bank Rate
- MSF
- Base Rate
- MCLR
- OMO
- MSS
- LAF

2.22 PHARMACY (AMENDMENT) ACT, 2023

Latest Context:

The Pharmacy (Amendment) Act, 2023 has been making headlines because it extends the Pharmacy Act of 1948 to the Union Territory of Jammu & Kashmir.

Understanding the Pharmacy (Amendment) Bill 2023

- **Registration Simplified:** This bill states that anyone registered as a pharmacist under the Jammu and Kashmir Pharmacy Act of 2011 or possessing the necessary qualifications will automatically be considered registered under the Pharmacy Act of 1948.

About the Pharmacy Act of 1948:

- **Regulating Pharmacy:** This act has provisions for regulating the pharmacy profession and practice in India.
- **Mandatory Registration:** To work as a pharmacist in India, registration under this act is compulsory.
- **Establishment of Pharmacy Councils:** This act led to the creation of various pharmacy councils, including the Pharmacy Council of India and State Pharmacy Councils, which oversee pharmacy education and practice.
- **Penalties and Removal:** The act allows for penalties in cases of false claims of being a registered pharmacist and outlines a process for removing a pharmacist's name from the register with a 30-day appeal period.
- **Commission of Enquiry:** The central government can appoint a Commission of Enquiry if the Pharmacy Council isn't complying with the act's provisions.

Pharmacy Sector in India

- **Global Role:** India's pharmaceutical industry is significant globally.
- **Key Segments:** Major segments include generic drugs, over-the-counter medicines, bulk drugs, vaccines, contract research and manufacturing, biosimilars, and biologics.
- **Vaccine Supplier:** India is a major supplier of low-cost vaccines worldwide.

Issues in the Pharmaceutical Sector

- **Dependency on China:** India relies heavily on China for pharmaceutical requirements, such as bulk drugs.
- **Higher API Costs:** Active Pharmaceutical Ingredients (APIs) produced in India are about 20% more expensive than those from China.
- **API Price Hikes:** API prices have risen due to factors like inflation and increased costs of starting materials and solvents.
- **Lack of R&D Investment:** Pharmaceutical companies hesitate to invest in research and development due to poor returns.
- **Fake and Spurious Drugs:** Fake drugs make up a substantial part of the domestic medicines market in India.
- **Intellectual Property Challenges:** Protecting patents can be complex and costly.

The Way Forward:

- **Export Expansion:** The industry can grow by exploring new markets, including China and Japan.
- **Research Ecosystem:** Building a research ecosystem requires regulatory support, streamlined clinical trials, and support for health-tech startups.
- **Educational Institutions:** Establishing well-funded research institutes is crucial for fostering innovation.
- **Independent Ministry for Pharmaceuticals:** Consider creating a dedicated ministry, similar to the Ministry of AYUSH or the Ministry of New and Renewable Energy.

Government Initiatives:

- **Strengthening Pharmaceuticals Industry:** Various schemes like APICF, PTUAS, and PPDS support the pharmaceutical industry.
- **Production Linked Incentive (PLI) Schemes:** Schemes encourage domestic manufacturing of key pharmaceutical components.
- **Bulk Drug Parks:** Financial assistance is provided for establishing Bulk Drug Parks.
- **Foreign Direct Investment (FDI):** FDI is allowed in the medical devices sector and the pharmaceutical sector.
- **National Medical Devices Promotion Council:** Established to address issues in the MedTech industry.

2.23 FAIR AND REMUNERATIVE PRICE (FRP)

Latest Context:
The Finance Ministry has introduced new regulations that empower cooperative sugar mills to address outstanding cane price payments from the past. This development marks a significant change in how these payments are treated.

Past Payments as Business Expenses: A Tax Amendment
* The recent notification has paved the way for payments made to sugarcane farmers that exceed the Fair and Remunerative Price (FRP) set by the government before the fiscal year 2015-16 to be categorized as "business expenditure."
* This modification was carried out by amending Section 155 of the Income Tax Act, and its implementation is expected to provide substantial relief to mills, amounting to approximately Rs 10,000 crore.

Understanding Fair and Remunerative Price (FRP):
* FRP is essentially the minimum price that sugar mill owners are obligated to pay to sugarcane farmers.
* This price is established and regulated under the Sugarcane (Control) Order of 1966, which falls under the Essential Commodities Act (ECA) of 1955.
* The determination of FRP is based on recommendations made by the Commission for Agricultural Costs and Prices, primarily taking into account the cost of production.

Cooperative Mills and Deviations from FRP
* In practice, cooperative sugar factories often pay farmers a cane price that exceeds the government's mandated FRP. This occurs due to factors such as State Advised Prices (typically higher than FRP) and the demands put forth by farmer unions.

Additional Concerns Regarding FRP
Beyond the recent regulatory changes, several other issues related to Fair and Remunerative Price (FRP) deserve attention:
* **Price Adequacy:** Evaluating whether the FRP truly reflects the actual costs incurred by sugarcane farmers in cultivating their crops.
* **Delayed Payments:** Instances where sugarcane farmers face delays in receiving their dues at the FRP, impacting their livelihoods.
* **Market Dynamics:** Understanding how factors like supply and demand affect the FRP and its implementation in the real world.

Conclusion:
In conclusion, while the Finance Ministry's move aims to address past dues, there are broader concerns surrounding the adequacy of FRP, payment timeliness, and the dynamics of the sugarcane market that require ongoing attention and solutions.

2.24 NEW REGULATION FOR ONLINE ADS

Latest Context:
The Union Cabinet has made a significant decision regarding the regulation of online advertisements. They have entrusted the **Ministry of Information & Broadcasting (I&B)** with the responsibility of overseeing and managing online advertising activities. This decision was made through an **amendment to the Allocation of Business (AoB) Rules, 1961.**

Ministry of I&B's Previous Involvement
Even before this amendment, the Ministry of Information & Broadcasting had already been actively involved in monitoring online advertising. In 2022, they issued circulars aimed at removing advertisements from companies involved in "**betting and gambling**" from both television and Over-The-Top (OTT) platforms

Shift in Responsibility

Prior to this development, the regulation of online gaming content and advertisements primarily fell under the jurisdiction of the **Ministry of Electronics and Information Technology (MeitY)** and the Information Technology Act, 2000.

In essence, this decision signifies a **transfer of authority and responsibility** in the oversight of online advertisements to the Ministry of Information & Broadcasting.

2.25 CAG'S AUDIT REPORT ON UDAN SCHEME

Latest Context:

Recently, the Comptroller and Auditor General's (CAG) audit report on the Regional Connectivity Scheme – UDAN (Ude Desh Ka Aam Naagrik) was laid down in both the houses of Parliament.

About UDAN Scheme
- It's an initiative **launched by the Government of India in 2016 to enhance regional connectivity through affordable air travel.**
- The primary objective of the scheme is to make **air travel more accessible and affordable for the common citizens of India,** particularly those residing in remote regions.
- The scheme comes under the control of **Ministry of Civil Aviation and Airports Authority of India (AAI)** was designated as the implementing agency of the scheme.

Key Features of the RCS-UDAN Scheme are:
- **Increased Connectivity:** The scheme aims to connect small cities, remote areas, and tourist destinations that have limited or no air connectivity. It promotes regional development by making air travel more accessible and affordable for people residing in these areas.
- **Priority to Underserved Airports:** RCS-UDAN focuses on developing underserved airports that have potential for increased passenger traffic. These airports may have limited infrastructure and low or no commercial airline operations.
- **Incentives for Airlines:** The scheme offers various incentives to participating airlines to operate flights on RCS routes. These incentives include exclusivity of operations for 3 years, reduced airport charges etc.
- **Viability Gap Funding (VGF):** To make operations financially suitable for airlines, the government provides funding support. The VGF is funded through a combination of contributions from the central government, state governments, and airport operators.
- **Bidding Process:** Airlines are selected through a competitive bidding process. The bidding is based on the amount of VGF support requested by the airline to operate on a particular RCS route. The airline that bids for the lowest VGF requirement is awarded the route.
- **Fixed Fare Structure:** Under the RCS-UDAN scheme, airfares are fixed based on the duration of the flight and distance travelled. This ensures that air travel remains affordable for passengers.
- **Focus on Remote and Hilly Areas:** The scheme places special emphasis on providing air connectivity to remote, hilly, and difficult terrains, including areas of the Northeast, Jammu and Kashmir, Himachal Pradesh, Uttarakhand and to the Indian islands of Andaman and Nicobar.
- **Socio-Economic Benefits:** By improving air connectivity to underserved areas, the RCS-UDAN scheme aims to boost tourism, promote economic development, create employment opportunities, and facilitate access to healthcare and education in remote regions.

The scheme has been continuously amended to keep it in line with evolving priorities and objectives of the government. Features of different versions of UDAN are:
- **UDAN 1.0 (December 2016):** In this phase, selected unserved and underserved airports across the country were connected through subsidized flights.
- **UDAN 2.0 (September 2017):** There was increased focus on hilly areas, and Northeastern as well as island states to enhance connectivity to these under connected regions.
- **UDAN 3.0 (October 2018):** Inclusion of tourism routes under UDAN 3 in coordination with the Ministry of Tourism.
  a) Inclusion of seaplanes.

b) International air connectivity scheme was also introduced and incorporated within the broader framework of RCS-UDAN.

- **UDAN 4.0 (December 2019):** Main focus was on awarding and operationalizing the cancelled routes of past UDAN rounds as well as the routes which are specifically requested by the state governments, Ministry of Tourism and other ministries.
- **UDAN 5.0 (April 2023):** Objective is to further increase the connectivity to the remote and regional areas of the country and to achieve last mile connectivity.

About UDAN Scheme

It was launched as a Regional Connectivity Scheme (RCS) under the Ministry of Civil Aviation in 2016, to provide affordable, economically viable and profitable air travel on regional routes to the common man even in small towns.

	UDAN 1.0	UDAN 2.0	UDAN 3.0	UDAN 4.0	UDAN 5.0
Focus Category	Category 1 (19-78 Seats)	1 (19-78 Seats)	1 (19-78 Seats)	1 (19-78 Seats)	2 (20-80 Seats) and 3 (>80 Seats)
Distance Length Cap	500 km	500 km	800 km	1,200 km	Now no restriction on the distance between the origin and destination of the flight
Viability Gap Funding Cap	70% for Cat-1, 90% for Hilly States, J&K, Ladakh, NE and Island regions	Same	Same	Same	60% for Priority Areas, 20% for Non-Priority Areas
Number of Airports	70 airports	325 airports	688 airports	766 airports	766 airports

Key Issues in the Implementation of the UDAN Scheme

- **Lack for Infrastructure:** Many airports in remote and underserved areas lack adequate infrastructure and facilities for regular air operations. Upgrading and maintaining these airports can be expensive and time-consuming.
- **Viability Gap Funding (VGF) Requirement:** The UDAN scheme relies on Viability Gap Funding to make air travel economically viable for airlines. The government provides financial support to airlines for flying on less profitable routes. However, the availability of VGF is limited, and getting funding on time is a challenge.
- **Operational Challenges:** Operating flights to remote regions can be challenging due to factors like adverse weather conditions, difficult terrains, and lack of trained personnel. This can result in flight delays and cancellations, impacting the scheme's reliability.
- **Lack of Demand:** In some remote areas, there is an insufficient demand for air travel, making it difficult for airlines to sustain operations. This can lead to underutilization of resources and losses for airlines.
- **Airfare Caps:** The UDAN scheme imposes fare caps on certain routes to ensure affordability. While this benefits passengers, it can limit the revenue potential for airlines and make it difficult for them to cover their costs.
- **Airline Sustainability:** The financial health and sustainability of airlines participating in UDAN are critical. Many airlines have faced financial difficulties, which can restrict the continuity of air services on UDAN routes.

Way Forward (Recommendation of the CAG)
- **Check the Feasibility:** To assess the feasibility of routes for achieving the sustainability of operations in the long run and for the identification of unserved/underserved airports.
- **Monitoring:** To find a mechanism to monitor the levy collected by airlines and ensure that the amount collected from the passengers is not more than the amount to be submitted to the Government.
- **Issue of VGF:** A suitable mechanism should be developed to check the VGF claims filed by the airlines from the flight data available with Airport operators instead of providing the VGF on a self-certification basis.

2.26 INSURANCE SURETY BONDS

Latest Context:

NHAI (National Highways Authority of India) recently engaged in discussions with various stakeholders regarding the use of insurance surety bonds for NHAI contracts.

Understanding Insurance Surety Bonds

Insurance surety bonds are a type of agreement involving three parties:
1. **The Surety:** This is the party that guarantees the performance or obligations of the second party.
2. **The principal:** The second party, who is obligated to fulfil certain responsibilities.
3. **The Obligee:** The third party, who is expecting the principal to fulfil these obligations.

Purpose of Insurance Surety Bonds
These bonds serve as a form of security for infrastructure projects. They provide protection for both the contractor (the principal) and the entity hiring them (the obligee). Here's why they are important:
- **Security:** They ensure that the principal fulfils their duties as agreed upon.
- **Replacing Bank Guarantees**: Insurance Surety Bonds, which were approved by the Insurance Regulatory and Development Authority in April 2022, have taken the place of bank guarantees. This shift simplifies the process and enhances financial security for projects.

In essence, insurance surety bonds are a way to make sure everyone involved in a project is protected and that agreements are honoured.

2.27 REVOLUTIONIZING COAL TRANSPORTATION WITH RAIL-SEA-RAIL (RSR)

Latest Context:
The Ministry of Coal is working on the use of Rail-Sea-Rail (RSR) transportation to efficiently move coal to its destination.

What is RSR Transportation?
RSR is a versatile transportation system designed to flawlessly convey coal to its final users. It's crucial for achieving the goal of doubling coal production in the next seven years as better transportation can lead to high supply, which in turn can lead to increased production.

Railways Leading the Way
Currently, railways handle about 55% of coal transport in India, with expectations to increase this to 75% by 2030.

Challenges in Coal Transport
- Low handling capacity
- Inadequate loading/unloading infrastructure
- Wagon shortages
- Congestion on roads and railways.

Benefits of RSR System

The RSR system brings several advantages:
- Easing rail congestion
- Creating export opportunities.
- Lowering logistic costs for end-user states
- Ensuring a reliable coal supply system
- Reducing carbon emissions.

Government Initiatives for Coal Transportation
- The government is making efforts to increase the coal production and to take the production capacity to 885 million tonnes per year.
- The government released a draft National Coal Logistic Plan has been released.

Coal in India
India has an estimated coal reserve of 361,411.46 million tonnes, mainly located in Odisha, Jharkhand, and Chhattisgarh. Coal-based power generation and industries are strategically placed near production centres, optimizing supply chains.

2.28 THE AMRIT BHARAT STATION SCHEME (ABSS)

Latest Context:
The Prime Minister inaugurated the commencement of the redevelopment of 508 railway stations as part of the ABSS by laying the foundation stone.

Revamping Railway Stations: The Amrit Bharat Station Scheme (ABSS)
The Amrit Bharat Station Scheme (ABSS) is a significant initiative aimed at revitalizing railway stations across the country. This scheme is focused on enhancing public transportation facilities and providing top-notch amenities at railway stations. Here's a breakdown of the key aspects of the ABSS:
- **Foundation Stone Laid by Prime Minister:** The Prime Minister has initiated the ABSS by laying the foundation stone for the redevelopment of 508 railway stations. This marks the beginning of a comprehensive plan to transform these stations.
- **City-Cantered Station Redevelopment:** Under the ABSS, railway stations will not just be transporting hubs but will evolve into 'City Centres.' This transformation will involve an integrated approach to overall city development, with the station at the heart of it.
- **Embracing Local Culture and Heritage:** The design of these redeveloped stations will draw inspiration from the local culture, heritage, and architecture. This approach ensures that the new station buildings resonate with the unique character of their surroundings.

Modernization Initiatives by Indian Railways
In addition to the ABSS, Indian Railways has been implementing various modernization initiatives to enhance the rail network:

Train Modernization:
- Introduction of indigenously developed Vande Bharat Trains.
- Inclusion of Vistadome coaches.
- SMART coaches equipped with ultra-modern facilities.
- Attempts to enhance the velocity of cargo locomotives.

Signalling and Safety Features:
- Implementation of the Real-Time Information System (RTIS) for tracking.
- Adoption of Linke Hofmann Busch (LHB) coaches.
- Introduction of KAVACH, an indigenously developed Train Collision Avoidance System.
- Deployment of Electronic Interlocking systems for safety.

Combating Climate Change:
- Establishment of Dedicated Freight Corridors (DFCs).
- Commitment to become a Net Zero entity by 2030 by electrifying all railway tracks.

Other Initiatives:
- Elimination of unmanned level crossings on broad gauge lines.
- Provision of Wi-Fi services at stations.
- Implementation of the One Station One Product scheme.

Conclusion:
The Amrit Bharat Station Scheme (ABSS) aims to transform railway stations into vibrant City Centres while embracing local culture and heritage. It is part of a broader effort by Indian Railways to modernize its infrastructure, enhance safety features, and address environmental concerns in the pursuit of a more efficient and sustainable rail network.

2.29 BHARAT NEW CAR ASSESSMENT PROGRAM (BHARAT NCAP)

Latest Context:
Recently, the Ministry of Road Transport and Highways (MoRTH) has launched an Indian made star-rating system for vehicles to assess their safety in cases of collision.

More about news
- It **will enable the Indian auto manufacturers to get their vehicles tested** and evaluated on a five-star rating scale.
- Basically, **Bharat NCAP is modelled on the Global New Car Assessment Programme (Global NCAP)** that promotes the universal adoption of the United Nation's motor vehicle safety standards.

Background of vehicles safety framework in India:
- **1961:** The Motor Vehicles Act, 1961 was passed by the Parliament, which marked the beginning of formal regulations for vehicles in India. While, it primarily focused on vehicle registration and licensing but it laid the foundation for future safety regulations.
- **1989:** The first-ever frontal crash test was conducted in India by the Automotive Research Association of India (ARAI) in collaboration with the National Institute of Technology (NIT) Warangal. This was a significant step towards evaluating vehicle safety.
- **1990s:** In the 1990s, India began adopting European safety standards for vehicles. This led to the introduction of features such as seat belts, rear-view mirrors, and collapsible steering columns in vehicles.
- **2006:** India joined the United Nations Economic Commission for Europe (UNECE) and started adopting more international safety standards for vehicles, including the requirement for certain safety features and crash tests.
- **2010:** The Ministry of Road Transport and Highways (MoRTH) in India formed a committee to draft the Bharat New Vehicle Safety Assessment Programme (BNVSAP). This program aimed to introduce safety standards and testing protocols similar to those used in the Global New Car Assessment Programme (Global NCAP).
- **2014:** Global NCAP started conducting crash tests on Indian vehicles and releasing safety ratings. These tests brought the issue of vehicle safety into the public consciousness, promoting discussions about the need for safer cars.
- **2023**- The Ministry of Road Transport and Highways (MoRTH) officially launched the Bharat NCAP.

Key features of the Bharat NCAP are:
- **Applicability:** It will be applicable to passenger vehicles with not more than 8 seats in addition to the driver's seat (8+1) with total vehicle weight not exceeding 3,500 kg, which are either manufactured or sold in India.
- **Fuel Type:** Combustion engine vehicles (diesel and petrol), as well as CNG and Electric vehicles, can be tested under the program.
- **Testing Protocol:** It will evaluate Adult Occupant Protection (AOP), Child Occupant Protection (COP) and fitment of Safety Assist Technologies (SAT).
  - For this, 3 tests will be conducted: a frontal impact test, a side impact test, and a side pole impact test.
  - Based on the assessment, two separate star ratings will be awarded for AOP and COP.
  - The pole impact test will only be conducted for cars securing 3 stars and above.
- **Testing Format:** Testing will be voluntary, and carmakers will be encouraged to offer their models for testing. Bharat NCAP team will pick a base variant of the model offered through random sampling. The Automotive

Research Association of India (ARAI) is mandated with testing the vehicles under the scheme at its laboratories in Pune and Chakan.

- **Random Check:** Though it is voluntary but the authority can select a particular vehicle model for safety assessment in certain cases:
  - Base model of a popular variant (minimum sale of 30,000 units).
  - When MoRTH recommends a model for testing based on market feedback or in the interest of public safety.

Significance of Bharat NCAP

- **Enhancing Road Safety:** Bharat NCAP will play a crucial role in enhancing road safety in India. By evaluating and rating the safety features of vehicles, it encourages manufacturers to produce safer cars. This, in turn, reduces the risk of fatalities and injuries in road accidents.
- **Consumer Awareness:** Bharat NCAP provides consumers with valuable information about the safety of vehicles on the market. Car buyers can use these safety ratings to make informed choices, prioritizing safety when purchasing a vehicle. This encourages automakers to invest in safety features to compete in the market.
- **Reducing Road Traffic Injuries:** India has one of the highest rates of road traffic accidents and fatalities in the world. Bharat NCAP is an essential tool in the efforts to reduce road traffic injuries and fatalities by encouraging safer vehicle designs.
- **Global Alignment:** Bharat NCAP aligns with international safety standards and testing protocols. This alignment makes it easier for Indian manufacturers to export vehicles to markets with similar safety requirements and also improves India's standing in the global automotive industry.
- **Continuous Improvement:** Over time, Bharat NCAP can push manufacturers to continually improve the safety of their vehicles. As the program evolves and introduces more stringent testing criteria, it can promote innovation in automotive safety technology.

Conclusion:

In summary, Bharat NCAP is a significant initiative in India that **aims to make vehicles safer, reduce road accidents, and save lives. It achieves these goals by setting safety standards, providing information to consumers, and encouraging automakers** to prioritize safety features in their vehicles.

2.30 THE REAL ESTATE (REGULATION AND DEVELOPMENT) ACT OF 2016 AND ITS IMPACT ON STALLED HOUSING PROJECTS

Latest Context:

A committee, created in response to the Central Advisory Council's advice, has presented its findings to the Ministry of Housing and Urban Affairs (MoHUA) regarding housing projects that have come to a standstill.

Some key points:

- **Stalled Projects:** There are approximately 4.12 lakh housing units, with a significant portion (44%) located in the National Capital Region (NCR), valued at ₹4.08 lakh crores, that are currently halted.
- **Main Reason:** The primary cause for these projects getting stuck is the lack of financial viability, resulting in cost overruns and delays.
- **Importance of Resolution:** Finding a solution for these stalled projects is crucial as it can lead to the completion of more housing units and provide a boost to economic growth.

Recommendations for addressing this issue:

- **Mandatory RERA Registration:** Developers should be required to register with the Real Estate (Regulation and Development) Act (RERA). This ensures that developers are held accountable for their commitments to homebuyers.
- **Rehabilitation Package:** State Governments should offer financial support to make stalled projects financially viable.
- **Financing Stalled Projects:** Prioritize the financing of these projects and utilize the Special Window for Affordable and Mid-Income Housing (SWAMIH) Fund.
- **Resolution of Stalled Projects:** All parties involved, including developers, financiers, and land authorities, need to be willing to accept less than what is owed to them. This would improve the Internal Rate of Return of the projects, making them more attractive for funding.

- **Use of Legal Measures:** Legal interventions, such as resorting to the Insolvency and Bankruptcy Code, should only be considered as a last resort.

Conclusion:
The Real Estate (Regulation and Development) Act of 2016 has prompted efforts to address stalled housing projects, with recommendations focusing on accountability, financial support, and collaborative solutions to revitalize these projects and promote economic growth.

2.31 INDIA SMART CITIES AWARDS CONTEST (ISCAC) 2022

What is ISCAC 2022?
ISCAC is an event organized as part of the Smart Cities Mission by the Ministry of Housing and Urban Affairs in India.

What Does ISCAC Do?
ISCAC recognizes and rewards cities, projects, and innovative ideas that promote sustainable development in 100 smart cities. It aims to make these cities more inclusive, fair, healthy, and collaborative.

Past Editions of ISCAC
ISCAC has been held three times before, in 2018, 2019, and 2020.

Top 3 Smart Cities
In the 2022 edition, the top three smart cities were Indore, Surat, and Agra.

Top 3 States
Among the states, Madhya Pradesh, Tamil Nadu, and Rajasthan had the top three cities recognized by ISCAC.

Top Union Territory (UT)
Chandigarh was named the top-performing union territory in the contest.

2.32 'NAMOH 108' LOTUS VARIETY

Latest Context:
A unique lotus variety named 'Namoh 108' was recently revealed at the CSIR - National Botanical Research Institute in Lucknow. This unveiling was part of the "One Week One Lab" (OWOL) initiative by CSIR, where each laboratory showcases its history and scientific accomplishments for a week

Special Features of 'Namoh 108' Lotus
This particular lotus variety, 'Namoh 108,' was originally discovered in Manipur several years ago. What sets it apart is that it's the only lotus variety in India that has had its genetic makeup, or genome, fully sequenced.

Promoting Wider Cultivation
To encourage the growth of 'Namoh 108' lotus in different regions of the country, a Lotus Mission has also been launched as a part of the broader horticulture mission. This initiative aims to spread the cultivation of this unique lotus variety to various parts of India.

2.33 OPENING NEW MARKETS: 'BHAGWA' POMEGRANATE EXPORT TO THE USA

Latest Context:

With the cooperation of the National Plant Protection Organization (NPPO), the Agricultural and Processed Food Products Export Development Authority (APEDA) has facilitated the first experimental shipment of 'Bhagwa' pomegranates to the United States.

About 'Bhagwa' Pomegranate
'Bhagwa' pomegranates are distinct for their saffron-like colour and are known for their high antioxidant content, earning them the reputation of being a superfruit. Nearly half of India's pomegranate exports come from Solapur, Maharashtra.

Role of APEDA
APEDA is a statutory body established under the APEDA Act of 1985. It serves as the leading authority for promoting and facilitating the export of agricultural and processed food products.

The National Plant Protection Organization (NPPO)
The NPPO in India is managed by the Directorate of Plant Protection, Quarantine, and Storage. It holds the responsibility of ensuring phytosanitary measures for the export of agricultural commodities, safeguarding the quality and safety of these products.

2.34 "MERA BILL MERA ADHIKAAR" SCHEME

Latest Context:
The Central Board of Indirect Taxes and Customs (CBIC) is rolling out the "Mera Bill Mera Adhikaar" Invoice Incentive Scheme starting September 1, 2023, as a pilot project.

Aim of the Scheme
This initiative aims to bring a cultural shift in the public's behaviour, encouraging them to demand receipts as their rightful entitlement.

Key Features of the Scheme
- **Winning Cash Prizes:** Participants have the opportunity to win cash rewards ranging from ₹10,000 to ₹1 crore when they submit GST invoices.
- **Eligibility:** Any business-to-consumer (B2C) invoices issued by GST-registered suppliers to consumers are eligible for the scheme.
- **Minimum Invoice Value:** Invoices with a minimum value of Rs. 200 qualify for participation.

2.35 BOOSTING POWER SUPPLY: HIGH PRICE DAY AHEAD MARKET AND SURPLUS POWER PORTAL (PUSHP PORTAL)

Latest Context:
The Ministry of Power has introduced the PUSHP Portal to enhance the availability of electricity during high-demand periods.

How PUSHP Portal Works?
1. **Surplus Power Declaration:** Power Distribution Companies (DISCOMS) can declare the surplus electricity they have available during specific times, days, or months on the portal.
2. **Requesting Surplus Power:** DISCOMS in need of additional power can request the surplus power declared by others on the portal.

Benefits of PUSHP Portal
By doing this, the portal reduces the fixed cost burden on DISCOMS as DISCOMS need not to increase their infrastructure to store more electricity and ensures that the surplus electricity with other DISCOMS is used efficiently to meet high-demand periods.

3. SOCIAL ISSUE

3.1 DRUG ABUSE IN INDIA

Latest Context
- On 3 August, 2023, 51st Report of the Standing Committee on Social Justice and Empowerment on **'Drug Abuse among Young Persons-Problems and Solutions'** was presented in Lok Sabha.

Drug abuse in India
- Major drugs abused in India are Alcohol, Cannabis, Opium, and Heroin.
- About 37 crore people in India consume alcohol and various psychoactive substances.
- About 13% of people involved in drug and substance abuse in India are under 20 years of age.
- Adolescence is a significant risk period for the initiation of substance abuse.
  - Children affected by drug abuse are considered children in need of care and protection under the **JJ Act 2015** (Juvenile Justice (Care and Protection of Children) Act 2015).
- Assam, Mizoram, Chhattisgarh, Gujarat, Haryana, Bihar, Delhi, Odisha, Punjab, Rajasthan, Telangana etc. are among the most affected states across country.

Steps taken in India to curb drug abuse
- **Signatory to UN conventions:** Convention on Narcotic Drugs, 1961; Convention on Psychotropic Substances, 1971; Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.
- **Narcotics Drugs and Psychotropic Substances (NDPS) Act, 1985:** Provides for identification, treatment, rehabilitation, social re-integration of the addict among others and instituted Narcotics Control Bureau (NCB).
  - NCB under the Ministry of Home Affairs control the supply, production and distribution of drugs.
- **National Action Plan for Drug Demand Reduction (NAPDDR) for 2018-2025:** Provides for a multi-pronged strategy involving
  awareness generation programmes, Community outreach, etc.
- **Nasha Mukt Bharat Abhiyaan (NMBA):** Launched in 272 most vulnerable districts under which a massive community outreach is being done.
- e-portal '**SIMS' (Seizure Information Management System)** for cases involving large seizures.

Causes of Drug Abuse
- **Social:** Peer pressure, illiteracy, poverty, criminal activities.
- **Economic:** Unemployment, Financial worries, work stress.
- **Psychological:** Low self-esteem, stressful lifestyle, childhood trauma, isolation.
- **Biological:** Genetic predisposition, personality or medical disorders.

Consequences of Drug Abuse
- **Society:** Rise in health issue, domestic violence, accidents, child trafficking, etc
- **Economy:** Poverty, reduces the potential of workforce in the country
- **Political:** Drug cartels subvert & further corrupt state institutions.
- **National Security:** Money laundering, terrorism financing, etc

51 Report on 'Drug Abuse among Young Persons-Problems and Solutions' of Dept. of Social Justice and Empowerment

Major Recommendations
- Establish checks at Ports, Airports, borders and set up Narcotics Coordination Centre to control drug trafficking;
- Conduct survey to assess the adverse impact of Drug/Psychotropic substance use on Society;
- Ensure strict vigilance by State/UT Governments to control illegal sale of liquor;
- Evolve system to make NGOs/VOs realise their responsibility towards society and find mechanism to select genuine NGOs/VOs;
- Review Drug De-addiction Centre Scheme regularly to identify procedural problems early;
- Include chapters on problems and solutions of Drug addiction in Education Curriculum and involve Panchayati Raj Institutions for effective awareness;
- Persuade the concerned Departments of Central and State Governments to organise more activity specific training programmes and fix annual targets;
- Wider and better publicity of the scheme to encourage States/UTs to send proposals to set up treatment and rehabilitation centres; and
- Stringent execution of all interventions required to control drug abuse and cover more vulnerable districts under NMBA campaign.

Issues in restricting drug abuse in India
- **India is the centre of drug trafficking**: Because India is located between the **Death Triangle and the Death Crescent**, which are the major opium production areas in the world.
- **Proximity to the sea:** 70% of illicit/illegal drugs smuggled into India through sea routes (Arabian Sea and the Bay of Bengal).
- **Criminalizing drug abuse**: It brings social stigma to drug addicts who in turn avoid seeking any kind of medical help.
- **Gaps in treatment**: Insufficient health facilities to deal with the consequences of drug dependence.
- **Other issues**
  - No studies have been conducted to assess the impact of drug abuse on society.
  - Decrease in financial allocation on preventive education and awareness generation programmes.
  - Inadequate penetration of District De-addiction Centres (DDAC) under NAPDRR.
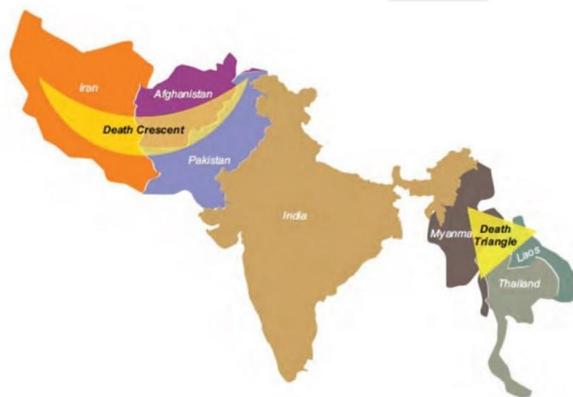
How India is caught between the "Death Crescent" and the "Death Triangle"; (Source: NCB, India)

Way Forward
- Periodic surveys on drug abuse situations by the National Drug Dependence Treatment Centre (NDDTC) establish an impact assessment mechanism for the NAPDRR.
- **Awareness programme and District action plans** in all districts in collaboration with security agencies, civil society and citizens to counter drug trafficking.
- A conducive legal and policy environment is needed to help control drug problems.
- Use modern technology to detect and prevent drug trafficking Regular meetings and reviews of the Apex Committee of the Narcotics Coordination Centre.

3.2 HEALTH FACILITIES FOR TRIBAL WOMEN

Latest Context
- On 8 August,2023 the Standing Committee on Empowerment of Women submitted a report in Lower House titled **"Health Facilities for Tribal Women".**

Major Findings
- Child marriage, early motherhood, low body mass index and high incidence of anaemia cause "**High Mortality Among Tribal Women**".
- **Inadequate data on tribal health care and welfare**, especially data related to tribal women and girls.
- **Teenage pregnancy** is highest among scheduled tribes (STs) in all social groups.
- Tribal people, carry a triple burden of diseases that are communicable, Nutritional, and Non-communicable diseases.

Tribals in India
- **Article 342** defines, ST as the tribes or tribal communities or parts of or groups within tribal communities which the President may specify by public notification.
- As per Census of India 2011, ST population in India is 8.6%.
  - Lakshadweep (94.8%), followed by Mizoram (94.4%), has the highest percentage of ST population.
  - In absolute numbers, Madhya Pradesh has the highest ST population.
- **Ministry of Tribal Affairs** is Nodal Ministry.

Importance of health for Tribal Women

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                    │ For Economic     │   │ Recognising their│
                    │ stability as     │   │ health rights    │
                    │ tribal women's   │   │ under UN         │
                    │ livelihood is    │   │ Declaration on   │
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  │ they are most    │         │   for Tribal   │             │ health.          │
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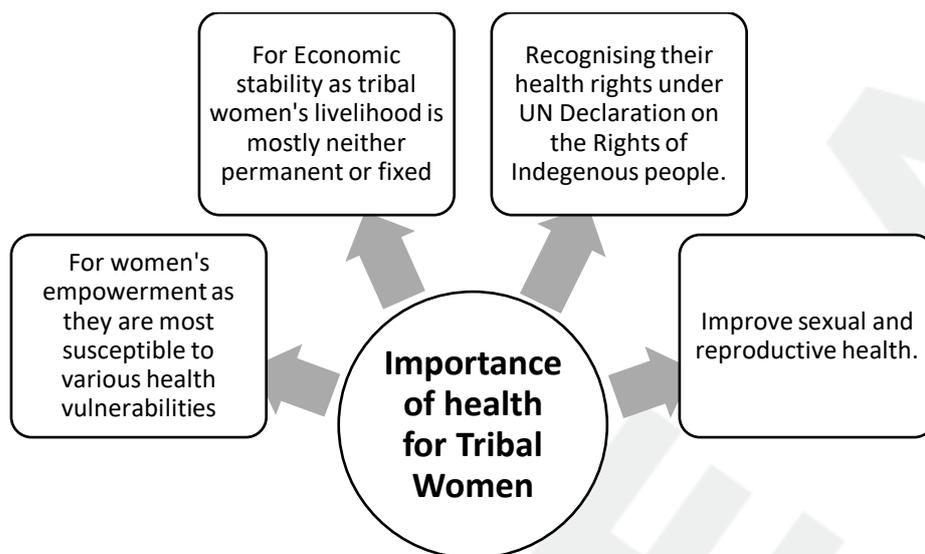
Tribal health challenges faced by health care system

- **Language and cultural barriers** hinder effective communication between healthcare providers and Aboriginal patients, leading to misunderstandings.
- Failing to acknowledge and integrate their indigenous healing practices has created a distrust among the tribal population to receive health care from modern facilities.
- **Geographical remoteness,** Tribal communities are often located in remote and inaccessible areas, such as mountainous with inadequate transportation infrastructure.
- **Insufficient availability of skilled healthcare** leads to delayed diagnoses, inappropriate treatment, and limited access to specialised medical care.
- Tribal healthcare is incorporated into rural healthcare under the assumption that tribal people have similar health problems and needs.

Way forward

- **Suggestion by Parliamentary panel**
- Creation of a separate database on all aspects of tribal health care
- Better infrastructure, like building all-weather roads, etc.
- Organising special drives and educate women and their respective husbands about the proper use and benefits of modern contraceptives.
- **Separate plan for tribal population**: Delineate the tribal and rural populations and promote behaviours and practices that do not directly challenge the norms and customs.

> **INITIATIVE UNDER NATIONAL HEALTH MISSION FOR BENEFICIARIES IN TRIBAL AREAS**
>
> - NHM envisages the achievement of universal access to equitable, affordable and quality health services that are accountable and responsive to the needs of the people.
> - **Ayushman Bharat- Health and Wellness Centres (HWCs)** established by transforming the Sub-Health Centres (SHCs) and Primary Health Centres (PHCs), as part of the Ayushman Bharat.
> - States/UTs have been given the flexibility to deploy Mobile Medical Units (MMUs) to provide a range of healthcare services.
> - To minimize the Out-of-Pocket Expenditure incurred on health services, **National Free Drugs Service Initiative and the National Free Diagnostic Service Initiative** have been rolled out.
> - All tribal dominated districts whose overall health index is below the state average are identified as High Priority Districts (HPDs) and receive more resources per capita.

- **Integration of traditional medicine**: The Ministry of Tribal Affairs should coordinate with the Ayush Ministry to integrate traditional healers and promote modern medicine.

3.3   AYUSHMAN BHARAT - PRADHAN MANTRI JAN AROGYA YOJANA

Latest Context

In August,2023 the Comptroller and Auditor General of India (CAG) presented a report on Performance Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).

Key Facts
- The report was submitted to the President of India under Article 151 of the Constitution.
- The audit noted that the PMJAY Scheme positively impacts the economically weaker sections of society who need healthcare facilities.
- However, it also highlighted that the implementation of the scheme needs improvement.

Type	**Aim**	**Background**	**Components**
Centrally Sposored Scheme	To achieve the vision of Universal Health Coverage	Recommended by the National Health Policy 2017	Health and Wellness centre (HWCs)
Ministry of Health and Family welfare			PM Jan Arogya Yojana(PM-JAY)

Challenges in the Report
- **Insufficient registration**
  - Only 73% (7.87 crore) of the targeted households of 10.74 crore were registered.
  - The ministry has now increased the beneficiaries to 12 crore families.
- **Identity irregularities**
  - Less than 30% of the total registered beneficiaries were identified from the SECC-2011 database.
    - SECC database does not account for economic development and employment opportunities since then.
  - Additionally, there were errors in the beneficiary database, such as invalid names and dates of birth, duplicate PMJAY IDs, etc.
- **Empanelled Health Care Providers (EHCPs)**
  - Many EHCPs did not meet the minimum standards and quality of support systems and infrastructure.
  - Many beneficiaries were charged fees for their treatment.
- **Financial irregularities**
  - Many states did not maintain a separate escrow account for PMJAY.
  - National Health Authority (NHA) and State Health Agencies (SHAs) did not fully comply with the direction of tracking the expenditure flow through the Public Financial Management System (PFMS).
  - Other issues include the release of grants by NHA before the implementation of the scheme or without ensuring the release of upfront shares by the respective States.
- **Claim management**
  - Inadequate validation checks like admission before pre-authorisation, delay in payment, inadmissible payments and payment without penalty to erring EHCPs, etc.
  - More than half of the payment went to only six States, these are Andhra Pradesh, Arunachal Pradesh, Rajasthan, Karnataka, Maharashtra and Tamil Nadu.
- **Monitoring and Grievance Redressal**
  - Many states have not adopted a whistleblower policy to receive complaints related to allegations of corruption, fraud etc.
  - Absence of Anti-Fraud cells, Claim Review Committees etc. in many States/UTs.
  - Less than 10% of complaints resolved within 15 days-time.

Major Recommendations

Recommendations	Description
Registration	• Devise appropriate mechanisms to ensure coverage of intended beneficiaries and to avoid delay in the registration. • Set up a designated IEC cell to maximise the reach of the scheme.
Weed out ineligible beneficiaries	• Establish a suitable mechanism for identification and verification of beneficiaries' data to enhance the accuracy and reliability of the data
Hospital Empanelment and Management	• Ensure mandatory physical verification for the empanelment of hospitals to prevent the empanelment of a de-empanelled hospital.
Financial management	• Ensure that SHAs has designated escrow accounts for PMJAY to receive its advance share without any delay. • Have a mechanism to map and identify PMJAY beneficiaries to avoid overlap of PMJAY and state-specific schemes. • Also, implement PFMS on priority to track the flow of expenditure.
Claims Management	• Timely payment of the claims after ensuring necessary scrutiny by SHA. • Ensure the claim amount is utilised for improving the infrastructure, functioning of the hospital, quality of services, etc
Monitoring and Grievance Redressal	• Initiate Anti-fraud activities on an urgent basis and penalise defaulters in a timely manner. • Ensure that District Implementing Units are formed in every District. • Ensured effective redressal of grievances and implementation of corrective measures for improving the working of the Scheme.

3.4 GLOBAL TOBACCO EPIDEMIC, 2023

Latest Context
- On 31 July, 2023 ninth report on the Global Tobacco Epidemic, 2023 released by World Health Organization.
- The theme of this report: '**protect people from tobacco smoke'.**
- This report tracks the progress made by countries in tobacco control since 2008.

Major Findings
- In 2022, 5.6 billion people-71% of the world population- is now protected by at least one MPOWER measure at the highest level of achievement.
- 2 billion people are still unprotected by any regulatory restrictions on Electronic Nicotine Delivery Systems (ENDS).
- 1.3 million of the 8.7 million tobacco-related deaths each year are among non-smokers exposed to second-hand smoke (SHS) – almost equivalent to the number of people that die in road traffic crashes every year.

MPOWER

M= monitor tobacco use and prevention policies

P= protect people from tobacco smoke

O= offer help to quit tobacco smoking

W= warn about the dangers of tobacco

E= enforce bans on tobacco advertising, promotion and sponsorship

R= raise taxes on tobacco

WHO introduced the MPOWER measures to assist the country-level implementation of effective interventions to reduce the demand for tobacco, as contained in the WHO's Framework Convention on Tobacco Control (FCTC)

- o FCTC is the first international treaty negotiated to control the tobacco.
- o It is a legally binding treaty and the member countries recognize that tobacco use is a major public health concern.
- o India ratified the convention in 2004.

Indian perspective

- India excels in placing warning labels on tobacco products and tobacco dependence treatments.
- Since 2017, the Karnataka state capital Bengaluru has worked to reduce smoking in public places across the city, with support from the Partnership for Healthy Cities.
- 27% reduction of smoking in public places (down from a rate of 18% in 2017 to 13% in 2021) and a 225% increase in the display of "No Smoking" signages in public venues (from a rate of 23% in 2017 to 75% in 2021).
- In March 2023, Bengaluru received an international award for its efforts to reduce smoking in public places and improve compliance with existing smoke-free laws.
    - o And as a city, Bengaluru will continue to work towards becoming 100% smoke-free by 2025

Tobacco in India

- It is a drought-tolerant, resistant and short duration crop that can be grown on soils where other crops cannot be cultivated profitably.
- There are 10 different types of tobacco are grown in approximately 15 states, which include cigarette (flue-cured Virginia (FCV), burley, oriental) and non-cigarette types (bidi, chew, hookah, natu, cheroot, cigar, and HDBRG).
- 0.31% of the net cultivated area in India is used for tobacco cultivation.
- 2nd in tobacco production and exports in the world.
- 2nd largest consumer in the world after China.
- 26.7 crore Indians use tobacco in some form.
- As per the Global Adult Tobacco Survey-2 (GATS-2) of 2016-17:
    - Tobacco usage in rural areas is higher than in urban areas (19.9 Crore and 6.8 Crore respectively).
    - The usage of smokeless tobacco is higher than that of smoking ones.

Government initiatives to reduce tobacco usage

- **Cigarette and Other Tobacco Products Act (COTPA) 2003:**
    - o This Act regulates advertising, promotion and sponsorship of tobacco products.
    - o It prohibits smoking in public places.
    - o The use of pictorial health warnings on tobacco products has been made mandatory, with the size of graphic depictions of health warnings being increased to 85% of the box from April 2016.
    - o It also sets rules for the sale of tobacco products to minors.
- **National Health Policy 2017:**
    - o It aims to reduce tobacco usage in the country to 30% by 2025.
- **The Prohibition of Electronic Cigarettes Act, 2019:**
    - o It bans/prohibits the Production, Manufacture, Import-Export, Transport, Sale, Distribution, Storage and Advertisement of E-Cigarettes in the country.
    - o The report ranks the implementation of the e-cigarette ban an 8 out of 10 in healthcare facilities, 6 in schools, and 5 in universities.
- **Anti-Tobacco health warning**: The government has made it mandatory for the OTT platforms to display a prominent static message at the bottom of the screen during the scenes containing tobacco usage.

3.5 ANUSANDHAN NATIONAL RESEARCH FOUNDATION BILL 2023

Latest Context
- **Purpose:** Anusandhan NRF would be established to advance R&D and create an innovative culture across all Indian universities, colleges, research institutions, and R&D labs.
- The administrative division of NRF will be the Department of Science and Technology (DST). The NRF will be run by a Governing Board made up of renowned academics and industry experts from many fields.
- Ex-officio Vice-Presidents of the Board will be the Union Ministers of Science and Technology and Education. The Prime Minister will serve as the Board's ex-officio President.

National Research Foundation (NRF)
- The National Research Foundation (NRF) is an organisation that is being considered to take the place of the Science and Engineering Research Board of India (SERB) and to catalyse and direct interdisciplinary research for advancing India's ambitious development agenda through effective knowledge creation and translation.

NRF Goals
- Encourage interdisciplinary study that will deal with India's most important development issues.
- It will reduce the amount of research that is done twice.
- Encourage the conversion of research into actionable policy and practice.

Expectations from NRF
- By 2030, India should increase its R&D spending from 0.7 percent of GDP to 2 percent of GDP.
- Increasing India's contribution to global scientific publications from around 5% to 7% by 2030
- Building a talent pool of scholars from many fields and industries
- Finding creative answers to India's development problems
- Converting scientific understanding into advantages for society and the economy.

NRF Need
- **Declining Investment:** When compared to other major economies, India's research and development (R&D) expenditure-to-GDP ratio of 0.7 percent is extremely low and falls well below the global average of 1.8 percent, while it was significantly higher in nations like the US (2.8 percent), China (2.1 percent), Israel (4.3 percent), and South Africa (4.2 percent).
- **Low Research Output and Impact:** In terms of the production of patents and publications, India lags behind. WIPO reports that the US submitted 605,571 patent applications, 1.538 million from China (with just 10% from non-resident Chinese), and 45,057 from India, with more than 70% coming from non-resident Indians.
- **Limited Research Opportunities:** Research funding is frequently only available to eminent institutions and researchers, excluding individuals who live in underserved areas. For instance, according to DST officials, just 11% of SERB monies went to public colleges and approximately 65% went to the IITs.
- **Fragmentation of the research:** The majority of research in India is carried out in isolation by several institutions, which wastes resources and double-uses them.
- **Lower Private Sector Involvement:** The government accounts for about 56 percent of R&D spending while the private sector accounts for 35 percent. In contrast, the private sector dominates R&D in nations with superior technology, contributing as much as 88 percent in Israel.
- **Lack of Focus on Social Sciences and Humanities:** While social sciences and humanities are sometimes overlooked, natural sciences and engineering receive the majority of research funding.

How would NRF Encourage Multidisciplinary and Solving Research?

Provides Platform:
- The NRF will act as a coordinating platform for multidisciplinary and multi-institutional collaborative research that may handle difficult problems that call for responses from various fields and industries.
- Examples of areas in need of inter- and trans-disciplinary research that can offer answers that are evidence-based, context-relevant, resource-optimizing, culturally compatible, and equity-promoting include public health policy, child nutrition, air pollution, and climate change.
- In areas of India's growth that have been prioritised, the NRF will support both task force-commissioned research and investigator-initiated collaborative research.
- By asking young researchers from various fields of expertise to work together on problem-solving research, the NRF will help foster mindsets for engaging in multidisciplinary research early in scientific careers.

Foster Collaboration:
- The NRF will work to include a variety of interested parties in the scientific process, including the commercial sector, state governments, state-level institutions, and civil society organisations.
- The private sector is seen as a crucial partner, bringing new ideas and encouraging innovation, as well as corporate and charitable money that can supplement the government's own pledged contribution.
- India's capacity to conduct locally relevant scientific research must be strengthened, and this requires the support of state governments and state level organisations.
- Community involvement is crucial for selecting people-relevant research goals, conducting participatory research, assessing implementation and its effects, and assisting implementation through community mobilisation.
- The scientific endeavour can only then develop into a "Jan Andolon," or people's movement.

3.6 NATIONAL SOCIAL ASSISTANCE PROGRAMME (NSAP)

Latest Context

The planning, financial management, implementation, and monitoring of the welfare programme NSAP have all been found to have several flaws, according to a recent report by the Comptroller and Auditor General of India (CAG) on the performance audit of the National Social Assistance Programme (NSAP) from 2017–18 to 2020–21.

Key Highlights of the Report
- **Misuse of Pension Funds for Publicity:**
    - Funds designated for the National Social Assistance Programme (NSAP), which are intended for pension payments, were diverted by the Ministry of Rural Development (MoRD) to promote other ministry programmes.
    - The NSAP was given cash for administrative costs and pension disbursal, with 3% set aside for the latter.
    - Both at the state/UT level and the ministry level, instances of financial misappropriation were discovered.
    - Hoardings were used by the MoRD to launch a marketing campaign in 2017 to advertise several ministry initiatives.
    - Hoardings were allowed for Rs 39.15 lakh, while campaigns in other states were approved for Rs 2.44 crore.
    - The campaign's funding came from NSAP programmes instead of the National Rural Employment Guarantee Scheme, as anticipated.
- **Advertisement Discrepancies:** The CAG discovered that NSAP schemes were not mentioned in the advertisement work orders, which instead focused on programmes like the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) and Pradhan Mantri Awaas Yojana - Gramin (PMAY-G).
- **States Implicated in Fund Diversion**: It was discovered that six states—Rajasthan, Chhattisgarh, Jammu & Kashmir, Odisha, Goa, and Bihar—had misappropriated money intended for pension plans.
- **Implications and Beneficiary Impact:** The financial diversion had a negative impact on the information, education, and communication (IEC) initiatives that were planned under the NSAP. 2.83 crore in funds that were originally designated for NSAP IEC were instead used to promote other ministry initiatives.

Facts about National Social Assistance Programme (NSAP)
- NSAP was introduced as a centrally sponsored scheme on August 15, 1995.
- The NSAP is an important step in achieving the Directive Principles outlined in Articles 41 and 42 of the Indian Constitution.
- NSAP strives to aid elderly people, widows, disabled people, and bereaved families from below-poverty-line homes who have lost their major breadwinner.
- **Components: NSAP has Five Sub-Schemes:**
    - **Indira Gandhi National Old Age Pension Scheme (IGNOAPS):** According to the plan, BPL individuals 60 years of age or older are eligible for a monthly pension of Rs. 200 up to 79 years of age and Rs. 500 after that.
    - **Indira Gandhi National Widow Pension Scheme (IGNWPS):** BPL widows between the ages of 40 and 59 are eligible for a monthly stipend of Rs. 200.
    - **Indira Gandhi National Disability Pension Scheme (IGNDPS):** BPL individuals between the ages of 18 and 59 who have severe and multiple impairments are entitled to a Rs. 200 monthly pensions.

- o **National Family Benefit Scheme (NFBS):** In accordance with the programme, a BPL household is entitled to a lump sum payment upon the passing of the principal earner who was between the ages of 18 and 64. The aid is worth Rs. 10,000.
- o **Annapurna:** The programme offers 10 kg of food grains for free each month to older citizens who are qualified but were not covered by NOAPS.
- **Implementation:**
  - o The Ministry of Rural Development works with the state/UT administrations to execute NSAP.
  - o To transmit money to recipients' bank accounts or postal accounts, NSAP uses the Direct Benefit transmit (DBT) mechanism.
  - o Information on guidelines, reports, circulars, grievance redressal, etc. is available on the NSAP website.
- **Impact:**
  - o The NSAP has aided in lowering poverty, raising living conditions, and boosting the recipients' sense of dignity and empowerment.
  - o The Sustainable Development Goals (SDGs) pertaining to poverty eradication, social protection, and inclusion have all been advanced thanks in part to NSAP.
  - o Between 2017 and 21 around 4.65 crore recipients relied on old age, widow, disability, and family payments per year.

COMPTROLLER AND AUDITOR GENERAL OF INDIA (CAG)

CAG is an independent authority under the Constitution of India.

He is the head of the Indian audit & account department and chief Guardian of public purse.

It is the institution through which the accountability of the government and other public authorities (all those who spend public funds) to Parliament and State Legislatures and through them to the people is ensured.

The Comptroller and Auditor-General shall not be eligible for further office either under the Government of India or under the Government of any State after he has ceased to hold his office.

Article 148 provides for an independent office of the CAG.

Other Provisions Related to CAG include: Articles 149-151 (Duties & Powers, Form of Accounts of the Union and the States and Audit Reports), Article 279 (calculation of net proceeds, etc.) and Third Schedule (Oath or Affirmation) and Sixth Schedule (Administration of Tribal Areas in the States of Assam, Meghalaya, Tripura and Mizoram).

3.7 NATIONAL CURRICULUM FRAMEWORK FOR SCHOOL EDUCATION (NCFSE)

Latest Context
The National Council of Educational Research and Training (NCERT) just launched NCF-SE, which was created by the Ministry of Education.

Facts about the National Curriculum Framework for School Education (NCF-SE)
- By making constructive improvements to the curriculum, including pedagogy, NCF-SE seeks to positively transform India's schooling system.
- Pedagogy is the teaching strategy and practise that teachers employ in classrooms to aid pupils in learning.
- It serves as the curriculum framework for the 5+3+3+4 educational model that the National Education Policy 2020 (NEP 2020) has suggested.
- The NCF-SE was last amended in 2005, and it was used to create the current sets of NCERT textbooks.
- The National Steering Committee was established to develop a curriculum that would be in line with NEP 2020, and Prof. K Kasturirangan served as its head.
- The creation of a brand-new, comprehensive NCF-SE and State Curriculum Frameworks (SCFs) was advised by NEP 2020.

Key Highlights of NCF-SE

- **Framework for the curriculum:** NCF-SE replaced the current structure of four phases in education with a 5+3+3+4 (age-based) system.
- **based on age categories, there are four stages in use:** Ages 3 to 8, 8 to 11, 11 to 14, and 14 to 18, respectively, make up the Foundational Stage, Preparatory Stage, Middle Stage, and Secondary Stage.
- **Board exams:** All students in Grades 10 and 12 are permitted to sit for Board exams at least twice in any given school year, with only the highest score being kept in mind.
- Studying should switch to a semester structure rather than an annual test.
- All students must be multilingual and be fluent in at least three languages, at least two of which must be indigenous to India.
- **Choice and Flexibility in the Secondary Stage:** There are no definite boundaries between academic and vocational disciplines, or between science, social science, the arts, and physical education.
- For their school-leaving certificates, students can select intriguing subject combinations.
- Work with living things (agricultural, animal husbandry), work with materials and machines, and work in human services are the three types of job that vocational education encourages.
- **Rooted in India:** The curricular objectives of all school subjects have been interwoven with contributions made to knowledge in all fields by Indians from ancient to modern times.
- **Capabilities for Scientific Inquiry:** Science education places a strong emphasis on the growth of scientific inquiry skills in addition to learning about fundamental ideas, laws, etc.
- **Interdisciplinary Subjects:** In the Secondary Stage, it has been added as a new subject of study.
- All educational levels have a strong emphasis on environmental education, which culminates in a specific topic of study in the secondary stage.

Need of NCF-SE

- Enabling harmony and coherence in school education across Indian states while acknowledging that school education is a state responsibility. Contemporary Framework and National Standard across India.
- **Knowledge-based approach:** Rather than promoting a knowledge-based approach, the existing educational system is concentrated on developing exam-focused persons.
- **Enhancing Teacher Quality:** The Integrated Teacher Education Programme (ITEP)'s specialism curricula are based on the NCF's curricula and pedagogy in order to enhance teacher quality.
- **Utilising novel methods:** People are increasingly writing and reading on screen-based gadgets.
- Students' holistic development is considered when designing the curriculum for the four phases of schooling, considering aspects of child development, conceptual growth, and the best types of inquiry for each age group.

Concerns with NCF-SE

- **Overly centralised curriculum development:** Because it goes against the federal government's concurrent role in education and the states' responsibility to provide equity and diversity of culture.
- **Logistical issues:** A feasibility and logistics review is necessary for the twice-yearly Board exam.
- Students may experience double the stress because of the board test that year.
- **Manpower shortage:** Government and aided schools are especially affected by the lack of available language teachers.
- **Limitations of Schools:** Not all schools will be able to provide all disciplines in Grades 11 and 12.

Way forward

- Higher education is being updated to align with the new framework to make the transition out of school smoother.
- Stopping discriminatory and exclusionary practises in schools that limit students' freedom to select the subjects they want to study.
- **Ratio of students to teachers improving:** According to the Ministry of Education, the pupil-teacher ratio in primary schools has decreased from 43 in 2010–11 to 26.3 in 2020–21.
- **Public investment rises:** The total amount spent on education in 2020–21 is 4.64%. The NEP 2020 target of 6% of GDP is still unmet, nonetheless.

NATIONAL EDUCATION POLICY 2020

At increasing the public investment to reach 6% of GDP at the earliest.

Increase the GER to 100% in preschool to secondary level by 2030, whereas GER in Higher Education, including vocational education, from 26.3% (2018) to 50% by 2035.

New Curricular and Pedagogical Structure (5+3+3+4)

Ensuring Universal Access at All Levels of schooling from pre-primary school to Grade 12.

Setting up of a new National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development).

A separate Gender Inclusion fund and Special Education Zones for disadvantaged regions and groups.

New Academic Structure

- New pedagogical and curricular structure of school education (5+3+3+4)
- 3 years in Anganwadi/pre-school and 12 years in school

Secondary Stage(4) 4 Years (Class 9 to 12) (Age 14-18)	**Multidisciplinary** study, greater **critical thinking,** flexiblity and student choice of subjects.
Middle Stage(3) 3 Years (Class 6 to 8) (Age 11-14)	**Experimental** learning in the sciences, mathematics, arts, social sciences, and humanities
Preparatory Stage(3) 3 Years (Class 3 to 5) (Age 8-11)	Play, discovery, and **acitvity-based** and **interactive** classroom learning
Foundation Stage(5) 2 years (Class 1 & 2) (Ages 6-8) 3 years (Anganwadi/ pre- school/Balvatika) (Ages 3-6)	Multilevel, play/activity-based learning

3.8 NEWS IN SHORT

3.8.1 MEDICAL TERMINATION OF PREGNANCY (MTP) ACT

- In August, 2023 Supreme Court (SC) allows rape survivor to terminate pregnancy beyond 24 weeks.
- Medical Termination of Pregnancy (MTP) (Amendment Act), 2021, allows rape survivors to terminate their pregnancies up to 24 weeks.
  - o Any abortion that violates the MTP Act is a punishable offense under sections 312 and 313 of the Indian Penal Code (IPC).
- However, keeping in mind that such pregnancy is not voluntary, the Supreme Court allowed the victim to terminate her 27-week pregnancy.

Duration of Pregnancy	Process of termination
Up to 20 weeks	• Available to all women on the advice of one doctor.

20-24 weeks	• Available only in following two situations on the advice of two doctors-
	  i) severe illness or life-threatening threat to the child
	  ii) threat to mental health of women
	• Available to rape survivors, victims of incest and other vulnerable women like differently abled, minors, among others

	• Available to rape victims, incest victims and other vulnerable women like disabled, minors etc. o All women are involved regardless of marital status.
Beyond 24 weeks	• Available only on the basis of fetal abnormalities on the advice of a medical board. • It is mandatory for all States/UTs to constitute a Medical Board which will include gynaecologists, paediatricians, etc.

3.8.2 STATE OF EDUCATION IN RURAL INDIA REPORT

- On 8 August, 2023 Minister of Education has released first 'State of Elementary Education in Rural India' report.
- The report was based on a survey conducted by the Development Intelligence Unit (DIU) in collaboration with NGO Transform Rural India and Sambodhi Research and Communications.
- The survey gathered responses from **6,229 parents of schoolchildren aged 6–16 in rural communities across 21 States.**

Key Findings of Report
- Around 78% of parents in rural India wish to **educate their girls** till graduation and beyond.
- Around 35% of female children **dropped out** of school during primary schooling, compared to 25% of their male counterparts.
- **In the case of girls**, almost 37% of parents says that the need to contribute to the family earnings caused their daughters to drop out of studies.
- Students in class 8th and above had more **access to smartphones** (58.32%) than students in classes I-III (42.1%).

> **Government Initiatives for Education:**
>
> Samagra Shiksha, Mid-Day Meal, RTE Act, Kasturba Gandhi Balika Vidyalaya and PM POSHAN Scheme etc.

Recommendations
- Targeted efforts are needed to enhance the educational environment at home and promote balanced use of smartphones for both entertainment and learning purposes.

Suicide Cases Among Students
- In August, 2023 Rajasthan Government form a committee, headed by Bhawani Singh Detha, to provide suggestions to prevent suicide cases among students.
- This committee was formed amid the increasing number of suicides by students preparing for competitive examinations in Kota district.
- Furthermore, according to the NCRB the number of deaths by suicide by students has been continuously increasing over the last five years and has increased by 4.5% (from 2020) to reach over 13,000 in 2021.

Reasons for Students Suicide

| Academic pressure	High expectations of parents and society can lead to isolation.
New way of life in hostels	Life away from home, cultural shock, dietary adjustments, and imposter syndrome (doubting one's ability).
Ragging	Over the last 5.5 years, at least 25 students committed suicide due to ragging (UGC data).
Other issues	Like difficulties of adolescence phase, mental health issues, Substance abuse, etc

3.8.3   GLOBAL INITIATIVE ON DIGITAL HEALTH

- On 19 August, 2023 the World Health Organization (WHO) and the G20 India presidency announced a new Global Initiative on Digital Health (GIDH).
- The new GIDH initiative (pronounced "guide" for short) will operate as a WHO-managed network and platform to support the implementation of the Global Strategy on Digital Health 2020–2025.

GIDH aims to
- ALIGN efforts to support the Global Strategy on Digital Health 2020–2025.
- SUPPORT quality-assured technical assistance to develop and strengthen standards-based and interoperable systems aligned to global best practices, norms and standards.
- GIDH will address challenges such as duplication of efforts and "products-focused" digital health transformation through a focus on four foundational pillars.

Digital-in-Health: Unlocking the Value for Everyone
- On 19 August, 2023 World Bank released the **"Digital in Health – Unlocking Value for Everyone"** report.
- This report was released during the G20 Health Ministers' meeting in Gandhinagar.
- To embrace a digital-in-health approach, 3 areas are essential for governments as they invest in digital and data: **prioritize**, **connect**, and **scale**:
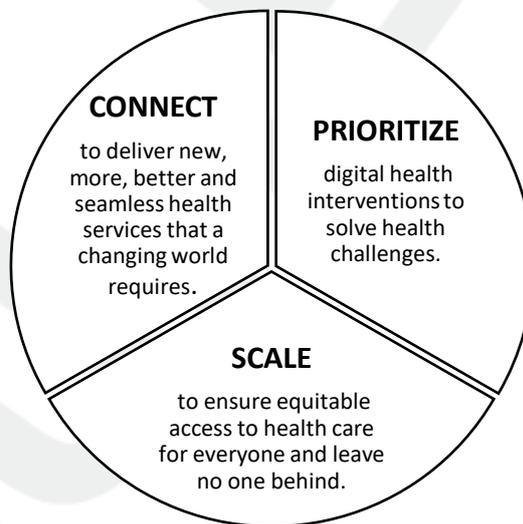
- The World Bank supports countries in their digital-in-health transformation. This is integral to our work to help strengthen health systems.
  - World Bank support in India from 2016 to 2019 enabled over 40% of Anganwadi workers to use digital technology to reduce administrative work and reach more pregnant and lactating women with nutrition services.

4. SCIENCE AND TECHNOLOGY

4.1 LVM3-M4/ CHANDRAYAAN-3 MOON MISSION

Latest Context
- On 23 August, 2023 Chandrayaan-3 lander module accomplished a 'soft landing' on the Moon's south pole.
  - ○ Notable, The Lander Module (LM) of the Indian Space Research Organisation's (ISRO) third lunar mission **Chandrayaan-3,** launched on **14 July, 2023.**
- India, only the fourth country after the erstwhile USSR, the U.S. and China to make a soft landing on the lunar surface.
- With this India also became the **first country to land** near the **Moon's south pole.**

Components of Chandrayaan-3
- Chandrayaan-3 has **three** components: -

i) An indigenous propulsion module	ii) Lander module	ii) Rover

- • Note that, the 'lander and rover' included in it are similar to Chandrayaan-2's Vikram lander and Pragyan rover respectively.

Vikram Lander has four payloads
1) **Radio Anatomy of Moon Bound Hypersensitive ionosphere and Atmosphere (RAMBHA):** It is a Langmuir Probe (an instrument that measures the properties of plasmas).
   - ○ Measures how the local gas and plasma environment changes over time.
2) **Chandra's Surface Thermophysical Experiment (ChaSTE):** Studies the surface's thermal properties.
3) **Instrument for Lunar Seismic Activity (ILSA):** Measures seismic activity at the landing site in order to delineate the subsurface crust and mantle.
4) **LASER Retroreflector Array (LRA):** This is an experiment to understand the dynamics of the lunar system.
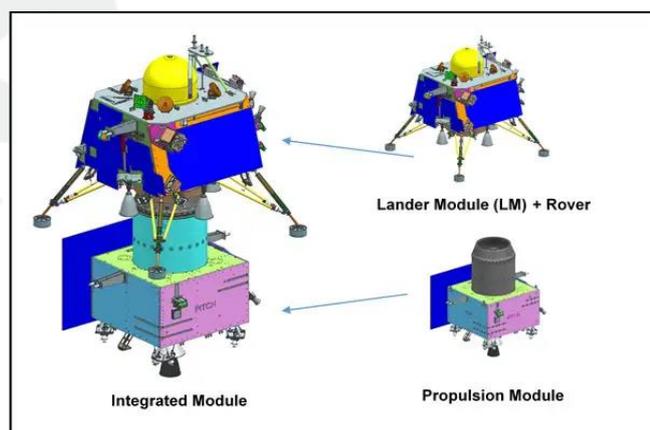
Pragyaan Rover has two payloads
1) **Laser Induced Breakdown Spectroscope (LIBS):** Determines the chemical and mineralogical composition of the surface.
2) **Alpha Particle X-ray Spectrometer (APXS):** Determines the elemental composition of the surface. ISRO specifically mentions magnesium, aluminium, silicon, potassium, calcium, titanium, and iron as elements the rover will hunt.

Key Facts
- The spot where the Chandrayaan-3's Vikram lander made a soft landing would be named **Shiv Shakti Point.**
- The site where the Chandrayaan-2's lander crash-landed on the Moon's surface in 2019 would be known as **Tiranga Point.**
- PM Narendra Modi announced, 23 August would be celebrated as **'National Space Day'** every year.
- **Chandrayaan-3 had three objectives**
  - **Accomplished:**
    - ✓ Demonstration of safe and soft landing on the lunar surface.
    - ✓ Demonstration of Rover roving on the moon.
  - **Underway:**
    - ✓ Conducting in-situ scientific experiments. (The lander and the rover, with a mission life of one Lunar Day (14 Earth days), have scientific payloads to conduct experiments on the lunar surface.)
  - **Chandrayaan-3 successfully underwent a 'Hop experiment':** On command, it fired the engines, elevated itself by about 40 cm as expected and landed safely.

> **Fact:- Jawahar Point** or **Jawahar Sthal** is the site where the Moon Impact Probe (MIP) of the Chandrayaan-1 hard landed on lunar surface on 14 November 2008.

Major findings made by Chandrayaan-3
- **Crater:** Chandrayaan-3 Rover identified a 4-meter diameter crater on the moon's surface.
- **Temperature variation:** ChaSTE measured the temperature profile of the lunar topsoil to understand the thermal behaviour of the Moon's surface.
  - It was believed that the temperature could be around 20 degrees centigrade to 30 degrees centigrade on the surface, but it is 70 degrees centigrade.
- **Elements on the moon:** Pragyan' rover 'unambiguously confirmed' the presence of sulphur on the lunar surface near the south pole.
  - Other elements like- Aluminium (Al), Calcium (Ca), Iron (Fe), Chromium (Cr), Titanium (Ti), Manganese (Mn), Silicon (Si), and Oxygen (O) were also detected.
- **Thin plasma:** The 'Langmuir probe' finds that there is thin plasma on the surface of the moon.

> - Plasma, is the word given to the fourth state of matter (solid, liquid, gas, plasma). A plasma is a gas that is so hot that some or all its constituent atoms are split up into electrons and ions, which **can move independently of each other**.

Conclusion
Chandrayaan-3 represents not only a mission to the Moon, but a huge leap forward for India's space program and its contribution to our understanding of the cosmos. Indian space sector has huge untapped potential which can be realized with adequate policy measures by the government. This will boost the confidence of the private sector and yield best results, which will help the country achieve a top position in the global space industry.

4.2 INDIA'S RACE TO SPACE

Space Race
- The term 'Space Race' was coined in the 20th century when the Cold War was going on between the Soviet Union (USSR) and the United States of America (US).Both the countries fought for space dominance in space flight capability.
- The technological superiority was seen as necessary to place a hold on the national security and finally on ideological superiority.

Latest Context
- With the successful launch of Mars, Moon and solar missions, the Indian Space Research Organization (ISRO) is strengthening India's position as a rising power in space exploration.

India's Recent Successes

Mars Orbiter Mission (MOM) or the Mangalyaan 2013	• India became the 1st nation to reach Martian orbit in its first attempt. • Also, India was the first Asian country to reach the Martian orbit.
104 satellites in one launch	• In 2017, PSLV C-37 created a world record by successfully placing 104 satellites in orbit during a single launch. • India has launched 431 sattelites for 34 countries as of 20 July, 2023.
Chandrayaan-3	• With the successful landing of Chandrayaan-3, India became the first country to land near Moon's south pole.

India's Position in Space Race

- With every country competing to win this space war, India too does not want to be left behind.
- In India, activities were initiated during the early 1960's.
- Subsequently, **ISRO** was established **in 1969**.
- A major milestone was the development of the **first launch vehicle, SLV-3,** which had a successful first flight in 1980.
- During the 1990s, the development and operation of the Polar Satellite Launch Vehicle (PSLV) and the Geo-synchronous Satellite Launch Vehicle (GSLV) were significant achievements.
  - o Noteworthy, In October, 2023 ISRO renames GSLV Mark-III as LVM-3.

Emerging trends in Indian space sector

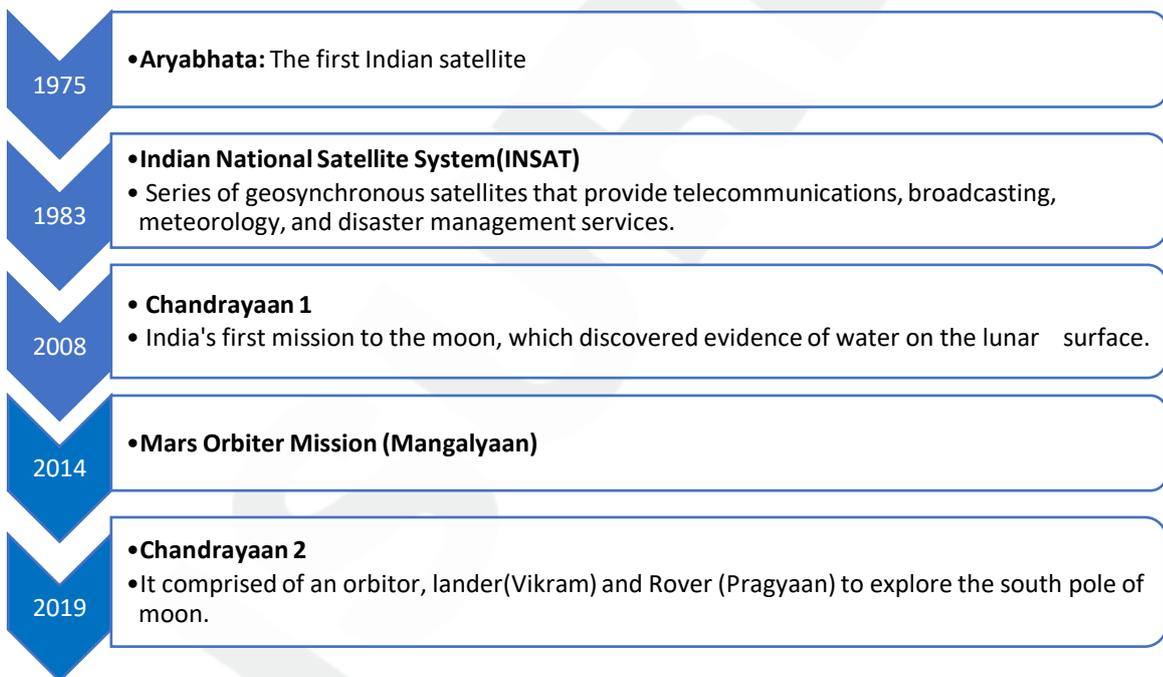| Growing commercialization	• ISRO has been actively promoting Non-Governmental Entities (NGE) to carry out independent space activities. o For example, IN-SPACe has been the single window agency for promoting NGEs and receiving proposals.
Enhancing international cooperation	• ISRO has signed several agreements, including the ARTEMIS accord, a joint lunar mission with Japan, launching SAARC satellites and collaboration with NASA on NISAR (an advanced radar satellite).
Developing new technologies	• ISRO is working on developing new technologies such as reusable launch vehicles and inflatable aerodynamic decelerators (IADs).
Expansion of satellite-based services	• ISRO provides satellite-based services in areas such as remote sensing, satellite-based navigation, and satellite-based meteorology, and is looking to expand these services in the future.

Implications of India's increased role in space exploration

- **Geopolitical importance:** With Russia fading as a space superpower, India's growing capabilities will enable it to become one of the world's leading producers of space technology.
- **Space Start-up Hub:** India has become home to around 150 registered space-technology start-ups which will enable the Indian space program to remain cost-competitive within the global space market.
- **Leading Country in Satellite Launch:** With a success rate of around 95%, India has the necessary provisions, developed infrastructure and young talented minds to master this area of space technology and grow as a global leader in this field.

> **SOME SPACE START-UPS IN INDIA**
>
> - **Skyroot Aerospace**: First Indian start-up to launch a private rocket (Vikram-s) from India.
> - **Agnikul Cosmos:** It has successfully conducted the flight acceptance test for its 3D-printed rocket engine "Agnilet".
> - Agnikul has also unveiled India's first privately designed and operated rocket launchpad and mission control centre.
> - **Pixxels**: Building a constellation of hyperspectral earth imaging satellites and the analytical tools to mine insights from that data.
> - **Dhruva Space**: It offers Satellites coupled with Earth stations and launch services as an integrated solution or individually as a technology solution.

ISRO's Journey and Future Plan

1975
- **Aryabhata:** The first Indian satellite

1983
- **Indian National Satellite System(INSAT)**
- Series of geosynchronous satellites that provide telecommunications, broadcasting, meteorology, and disaster management services.

2008
- **Chandrayaan 1**
- India's first mission to the moon, which discovered evidence of water on the lunar surface.

2014
- **Mars Orbiter Mission (Mangalyaan)**

2019
- **Chandrayaan 2**
- It comprised of an orbitor, lander(Vikram) and Rover (Pragyaan) to explore the south pole of moon.

2023	• **Chandrayaan 3**

2023	• **Aditya- L1** • India's first ever solar mission launched on 3 September.

2024	• **NASA-ISRO SAR (NISAR) Satellite** • Mission to map the entire globe in 12 days

2024	• **Mangalyaan-2**

2024	• **Gaganyaan** • India's first human space mission

2031	• **Sukrayaan 1** • India's first mission to venus.

Conclusion

The Space Race, although driven by competition, resulted in significant advances in science and technology. While India's efforts in space exploration began with collaboration, it has now transformed into a pursuit of innovation. With its pioneering missions, India has demonstrated its capabilities and determination to explore the universe. As India continues to discover and innovate in space research, it stands as an inspiration to the world, showing that the pursuit of knowledge has no limits. Overall, with a focus on cost-effectiveness, self-reliance and international cooperation, the Indian space sector is poised for growth in the coming years.

4.3   SHORT NEWS

4.3.1   INDIA STACK

- In August, 2023 India Signs Memorandum of Understanding (MoU) with Trinidad and Tobago on sharing INDIA STACK.
  - o **India Stack** is a collection of open APIs (Application Program Interface) and digital public goods that aim to facilitate identity, data, and payment services on a large scale.
- An API is a set of defined rules that allow different applications to communicate with each other.
- Since July 2023, India has already signed similar MoU with countries namely Papua New Guinea, Armenia, Sierra Leone, Suriname, and Antigua & Barbuda to share India Stack.
  - o Noteworthy, The UPI which is also a part of India Stack, has been accepted in France, UAE, Singapore and Sri Lanka.
- The **MoU aims** to facilitate the adoption of customized India Stack solutions – Identity, Data and Payment Services for mutual digital advancement.
- **India Stack components are owned and maintained by various agencies**.
  - o **For example:** Aadhaar products are owned by UIDAI; Digilocker by Ministry of Electronics and Information Technology (MeitY); UPI by National Payments Corporation of India; Account Aggregator framework by RBI etc.
- **Significance of India Stack**
  - o It allows governments, businesses, startups, etc. to move towards presence-less, paperless and cashless service delivery.
  - o Allows significant synergies across digital economy and expands access to digital services to all citizens.
  - o Boost innovation and entrepreneurship, particularly in emerging techs like AI and Machine Learning by providing equitable access to data.

4.3.2   FUKUSHIMA WATER RELEASE

- In August,2023 Japan started to pump treated **radioactive water** from the **Fukushima Daiichi nuclear power plant** into the Pacific Ocean.

- **In March, 2011** a magnitude 9.0 **earthquake** and **tsunami** struck Fukushima Daiichi Nuclear Power Plant.

- The Fukushima plant is located on the country's east coast, about 220 kilometres north-east of the capital Tokyo.

- **Cooling systems failed** due to the **tsunami**, causing reactors to **overheat**.

- Nuclear plant's operator TEPCO (Tokyo Electric Power Company), has been designated to execute the plan.
- According to **International Atomic Energy Agency** (IAEA), discharges of the treated water would have a negligible radiological impact to people and the environment.
- Japan claims to have used "**Advanced Liquid Processing System**" (ALPS) to treat the water stored.
    - ALPS is a pumping and filtration system removes most of the radioactive materials from water **except tritium** (radioactive isotope of hydrogen) which is difficult to separate from water.
- **Concerns associated with release of water**
    - Tritiated water can damage DNA if ingested.
    - Exposure to radioactive materials can health problems like leukaemia, anaemia, haemorrhage etc. and destroy nutrients in soil Release of wastewater could pollute the ocean, and drive-up prices of salt and seafood.
        - ✓ China banned seafood imports from Japan including Fukushima and Tokyo.

> **IAEA, established in 1957**, is an intergovernmental organization that seeks to promote the peaceful use of nuclear energy and to inhibit its use for any military purpose, including nuclear weapons.

Notable nuclear power plant disasters:

Year	Nuclear Disaster	Location
1986	Chernobyl Disaster	Chernobyl
1979	Three Mile Island Accident	Pennsylvania, USA
2011	Fukushima Disaster	Fukushima, Japan
2016	Kakrapar Incident	Kakrapar, India

4.3.3   GREEN HYDROGEN STANDARD FOR INDIA

- In August, 2023 Ministry of New and Renewable Energy (MNRE) notified the Green Hydrogen Standard for India under National Green Hydrogen Mission **(NGHM).**
- It outlines the emissions limits that must be met in order for hydrogen produced to be classified as 'green', i.e., from renewable sources.
- **Key Facts**
    - The production of greenhouse gases is made with renewable energy sources such as ionising or biomass conversion.
    - MNRE has decided to define green hydrogen as having a well to gate emission of not more than 2 kg CO2 equivalent kg H2 including water treatment, electrolysis, gas, drying and compression of hydrogen.
    - **Bureau of Energy Efficiency (BEE)** shall be the nodal authority for accreditation of agencies for monitoring, verification and certification of green hydrogen production projects.
- **Aim** of **NGHM is** to make India a Global Hub for producing, utilizing, and exporting Green Hydrogen.
    - **Mission Outcomes of NGHM by 2030:**
        - ✓ GH production capacity of at least 5 MMT per annum.
        - ✓ Reduction of nearly 50 MMT of annual greenhouse gas emissions.
        - ✓ Renewable energy capacity addition of about 125 GW in country.
        - ✓ Over Rs.1 lakh crore cumulative reduction in fossil fuel imports.

4.3.4 GRAPHENE-AURORA PROGRAM

In August 2023, the Graphene-Aurora Program was launched by the Ministry of Electronics & Information Technology (MeitY).

Implementation by Digital University Kerala with joint funding from MeitY, Government of Kerala and industry partners.

Objective of this program is to eliminate the gap between graphene research and commercialization.

Graphene is a single layer of carbon atoms arranged in a hexagonal lattice, forming a two-dimensional structure discovered in 2004.

Properties: Ultimately thin, mechanically very strong, transparent, and flexible.

Application: It can be used in touch screens, light panels, solar cells, fast DNA sequencing, drug delivery, etc.

4.3.5 DIGITAL INDIA RISC-V (DIR-V) PROGRAM

- Recently, The Central Government launched the DIR-V program with the aim of enabling the manufacturing of next generation microprocessors in India.
- It will help ensure partnerships between startups, academia and MNCs to make India a RISC-V talent hub and supplier of RISC-V system of chips.
- **Reduced Instruction Set Computer - V (RISC-V)**
  - It is an open-source instruction set architecture used to develop custom processors for a variety of applications, from embedded designs to supercomputers.
  - Wearable devices, smartphones, Internet of Things (IoT), High-performance computing, data centres, etc.

4.3.6 FIRST LOW-PUNGENT MUSTARD

- Indian researchers developed the first low-pungent mustard using Genome Editing (GE).
- New mustard variety is less pungent as it has lesser quantity of glucosinolate at par with the Canola quality limit (30 parts per million or PPM dry weight).
  - **Glucosinolates**, a group of sulphur and nitrogen-containing compounds that contribute to the distinctive pungency of mustard products.
  - It shields plants from invading pathogens, animals, etc.
  - However, because of the high concentration of glucosinolate, it is unattractive for humans and causes goiter as well as anomalies in cattle's internal organs.
  - Glucosinolate levels in Indian mustard (Brassica juncea) range from 120-130 ppm.
- It is created through gene editing of the high-yielding Indian mustard variety "Varuna" using the CRISPR/Cas9 system.
- **Gene editing**, as opposed to genetically modified organisms (GMOs), involves altering genetics genetic material that already exists.
  - Are are used in genetically modified organisms (GMO) to increase quality.
  - A GM mustard **Transgene (foreign genes)** variety created in India is called **Dhara Mustard Hybrid-11 (DMH-11).**
- **Only the Institutional Bio-Safety Committee (IBSC)** of the relevant institution must approve GE crops.
  - **IBSC** has a nominee from Department of Biotechnology.
    Before genetically modified crops are planted, they have to be approved by the Ministry of Environment, Forests and Climate Change's expert committee on genetic engineering.

4.3.7 EINSTEIN CROSS

- Recently, Astronomers discovered a rare example of an Einstein Cross.
- Einstein Cross is a specific case of Gravitational Lensing.

- This phenomenon occurs when massive objects distort and magnify light from objects behind them (such as a galaxy), acting as cosmic telescopes and making distant galaxies appear brighter.
  - In the case of the Einstein cross, the curvature of space-time around a foreground object divides the light behind it into four parts, like the points of a cross.
  - Another case of gravitational lensing – Einstein Rings - are produced when two galaxies are almost perfectly aligned, one behind the other.
- Einstein's theory of general relativity explains how massive objects bend the fabric of the universe, called space-time.
  - Greater the mass of an object the more extreme the warping of space it causes, so a star warps space-time more than a planet, and a black hole warp it more than a star.
  - Sun, Earth and all other bodies formed similar curvatures around them, which was why smaller objects got pulled towards them.
- Extremely massive celestial bodies also curve the path of light passing through it and simply act as gravitational lenses.

4.3.8   DEBRIS OF ISRO

- In July, 2023 a large object found on the shores of western Australia has been confirmed to be the debris of an Indian Space Research Organisation (ISRO) rocket.
- Space debris encompasses both natural (meteoroid) and artificial (man-made) particles. Meteoroids are in orbit around the sun, while most artificial debris is in orbit around the Earth.

  - Russia, followed by USA, China and France are top contributor to space debris.
  - A large piece of a 25 tonne Chinese rocket fell into the Indian Ocean in 2021.

- **Space Debris Impact**
  - Threat to marine life, and a source of pollution.
  - Thousands of discarded launch vehicles float around in space, risking collision with satellites or space station.
- **Regulations governing Space Debris**
  - The Convention on International Liability for Damage Caused by Space Objects 1972 (Liability Convention) deals with damage caused by space objects to other space properties and objects falling to Earth.
    - ✓ Convention provides for procedures for settlement of claims for damages.
    - ✓ As of 1st January 2023, 98 States (including India) have ratified it.
    - ✓ It was adopted to reinforce the framework set by Outer Space Treaty (OST) 1967.
  - **OST** governs activities of states in peaceful **exploration of outer space, including moon and other celestial bodies.**
- **Initiatives to Deal with Space Debris**
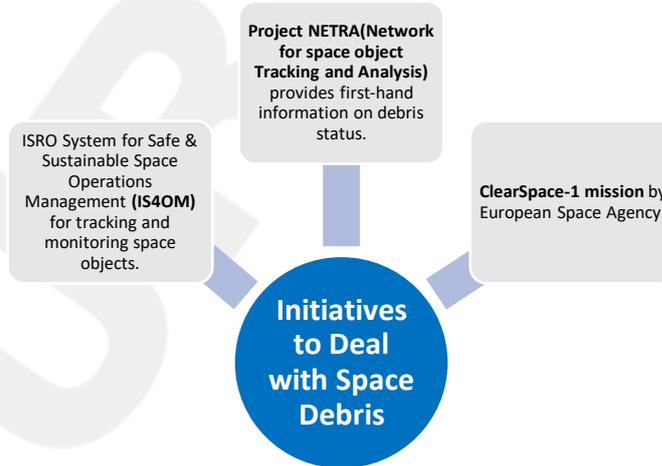
4.3.9　CONSULTATION PAPER ON EARTH OBSERVATION

- Recently, IN-SPACe (Indian National Space Promotion and Authorisation Centre) released Consultation Paper on Earth Observation (EO) Data from Indian Satellites Missions.
- The objective of the paper is to jointly prepare a master plan for EO data to meet future data requirements and to engage Indian non-government entities in manufacturing remote sensing satellites.
- EO refers to the use of remote sensing technologies (including satellites, aircraft, drones and ground-based sensors) to monitor land, marine and atmosphere.
- Application of EO: -
  - Provides a comprehensive understanding of Earth's climate, ocean circulation, albedo, cryosphere, carbon, energy and water cycles, etc.
  - EO satellites are important for national security imagery intelligence, photo reconnaissance, synthetic aperture radar (SAR), and electro optical functions.
  - Also, provide valuable insights and inform policy decisions across multiple government departments such as agriculture, water resources, urban planning, rural development, mineral prospecting, forestry, disaster management, etc.

> ✓ **IN-SPACe** is an independent nodal agency under the **Department of Space** to encourage private investment and innovation in the space industry.

4.3.10　STEREO-A: CROSS THE SUN-EARTH LINE

- On 12 August, 2023 NASA's STEREO-A (Solar TErrestrial RElations Observatory-Ahead) spacecraft passes between Sun and Earth, marking the first Earth flyby of nearly 17-year-old mission.
  - Noteworthy, On 25 October, 2006 spacecraft was launched, from the Cape Canaveral Air Force Station in Florida.
  - STEREO is composed of two almost identical observatories -one is **Ahead** of the Earth in its orbit (STEREO-A), the other **Behind (STEREO-B)**.
- STEREO-A's flyby will help scientists understand how the magnetic field of a coronal mass ejection (CME) evolves on its way to Earth.
- STEREO traces the flow of energy and matter from the Sun to Earth.
  - It provides a unique and revolutionary view of the Sun-Earth system. The mission saw the Sun in 3-D for the first time in 2007.

4.3.11　ESO 300-16: IRREGULAR GALAXY

- Recently Hubble Space Telescope (HST) captured an image of the irregular galaxy ESO 300-16.
  - Located at a distance of 28.7 million light years from the Earth in the southern constellation of Eridanus.
- An irregular galaxy lacks the distinct spiral arms or elliptical shape of some galaxies.
- It's like a cloud, consisting of hundreds of small stars formed into one shape.

- HST, launched in 1990, is a collaboration between NASA and ESA.
  - It was **named after Edwin Hubble,** the foremost American astronomer of the 20th century.
  - It observes the universe in visible, near-infrared light, and ultraviolet light.
  - It orbits above Earth's atmosphere, which gives it a better view of universe than telescopes have at ground level.

4.3.12　NEERAKSHI: FIRST AUV FOR MINE DETECTION

- Recently, India launched its first of its kind Autonomous Underwater Vehicle (AUV) named 'Neerakshi'.
  - **Neerakshi meaning "Eyes in the Water"**
  - It can be used for, mine disposal, underwater surveys, mine detection etc.
  - It is a 2.1-metre-long cylindrical unmanned vehicle about a foot in diameter and weighing around 45 kg.
  - It has a durability of 4 hours and can go up to 300 metres deep.

- It is a **collaboration of** Garden Reach Shipbuilders and Engineers **(GRSE)** Ltd and MSME entity Aerospace Engineering Pvt Ltd **(AEPL).**

4.3.13 MIZORAM: FIRST STATE TO OPERATIONALIZE AN ABDM MICROSITE

- In August, 2023 Mizoram became the first state to operationalize Ayushman Bharat Digital Mission (ABDM) Microsite project.
  - o The microsite is an aggregate of all small and medium scale clinics, nursing homes, hospitals (preferably <10 beds), laboratories, pharmacies and other healthcare facilities that are ABDM enabled and provide digital health to patients.
  - o Notable, **National Health Authority (NHA)** had announced 100 Microsites project for accelerated adoption of Ayushman Bharat Digital Mission (ABDM) across country.
- Apart from Mizoram, other states including Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Maharashtra and Chhattisgarh have also made significant progress with respect to the implementation of ABDM microsites.
- **Types of facilities under a Microsite:**
  - o Private facilities like standalone clinics, polyclinics, etc.
  - o Health Facilities and Health Professionals from all the systems of medicine.
- **Implementation:** by State Mission Directors of ABDM while the financial resources and overall guidance would be provided by NHA.
- Microsites will counter the challenges of ABDM adoption faced by private hospitals like:
  - o Digitisation is seen as an additional cost,
  - o Fear of increased regulatory scrutiny,
  - o issue with data security

> - **About ABDM**
> - o **Launched** in 2021 as a flagship digital health initiative
> - o **Aim** to establish a National Digital Health Ecosystem.
> - o Will create an online platform enabling interoperability of health data.

4.3.14 SOIL TESTING SYSTEM: BHU-VISION

- Recently, **Bhu-Vision**, a revolutionary IoT-based automated soil testing and agronomy advisory platform was officially launched at AICRP (ICAR-IIRR), Hyderabad.
- It is also known as KRISHI-RASTAA **Soil Testing System.**
- It has been jointly **developed by ICAR-IIRR** (Indian Council of Agricultural Research -Indian Institute of Rice Research) **and Krishi Tantra (an Agri-tech start-up).**
- This system seamlessly **conducts 12 key soil parameter** (like pH value, electrical conductivity etc) **tests in just 30 minutes**.

4.3.15 LUNAR CODEX

- The Lunar Codex is a digitized (or miniaturized) collection of contemporary art, poetry, magazines, music, film, podcasts and books by 30,000 artists, writers, musicians and filmmakers from 157 countries.
- It is made up of 4 different time capsules to be launched on Moon.
  - o The Orion Collection (Launched & Returned to Earth in 2022 via NASA Artemis 1, Orion spacecraft)
  - o The Nova Collection
  - o The Peregrine Collection
  - o The Polaris Collection
- Launched via NASA Artemis / Commercial Lunar Payload Services (CLPS) program partners to the Moon.

4.3.16 DEMON PARTICLE

- Researchers claimed to have spotted Demon particle in the metal strontium ruthenate.
- Demon particle was first predicted by physicist David Pines in 1956.

- David Pines believed that electrons would behave strangely when passed through a solid.
  - If adequate energy is provided to the system, the electrons can form composite particles called plasmons.
  - Nevertheless, the energy required to produce plasmons is so high that they cannot be produced at room temperature.
- Pines's demon is an exception to this as it is massless, has no charge and does not interact with light so it would require no extra energy to be formed.

4.3.17 ABRYSVO: FIRST VACCINE THAT PROTECTS NEW-BORNS

- Recently, U.S.A approved the first vaccine "Abrysvo (RSV Vaccine)" that protects new-borns.
  - The vaccine is given to pregnant mothers in the later stages of their pregnancy.
- RSV (RESPIRATORY SYNCYTIAL VIRUS) is a highly contagious virus that causes respiratory infections in individuals of all age groups, especially infants and the elderly.
  - It is the most common cause of lower respiratory tract diseases in infants worldwide.
  - The RSV vaccine is also available for people 60 years of age and older.

4.3.18 G20 PANDEMIC FUND

- Recently, **G20 Pandemic Fund** has approved the $25 million proposal for **"Animal Health Security Strengthening in India for Pandemic Preparedness and Response"**
  - This proposal was submitted by the Department of Animal Husbandry & Dairying, Ministry of Fisheries, Animal Husbandry & Dairying (DAHD).
- $1.4-billion fund was launched in 2022 under G20 Presidency of Indonesia
- **Aims** to finance critical investments to tackle the next global pandemic.
- **Donors:** G20 and non-G20 members, philanthropic organisations. **India is one of the major donors of the fund.**

4.3.19 U.S. ACHIEVE NET ENERGY GAIN

- Recently, the scientists in US achieved **Net Energy Gain (NEG)** for second time in nuclear fusion reaction.
  - Nuclear fusion is the process by which two lighter atomic nuclei combine to form a heavier atom, releasing a large amount of energy.
  - Fusion reactions occur in a state of matter called plasma- hot, charged gas made of positive ions and free-moving electrons.
    - ✓ In fusion two positive nuclei have to come close to each other. However, they repel each other—this phenomenon is called the Coulomb Barrier.
    - ✓ To overcome this barrier, massive energy is required, which is presently more than the energy generated from the fusion reaction.
- NEG, important for commercial fusion energy, implies that researchers can generate more energy than the nuclear fusion process consumes.
  - India is part of the International Thermonuclear Experiment Reactor (ITER) project to demonstrate NEG from fusion reactors.
  - India has also manufactured its indigenous tokamak ADITYA and semi-indigenous Steady State Superconducting Tokamak (SST-1).
- **Importance of Nuclear Fusion**
  - Clean and safe power as it releases no greenhouse gases.
  - 1 kilogram of fusion fuel provides as much energy as 10 million kilograms of fossil fuel.
  - Hydrogen, the raw material for fusion, is available in abundance while fission uses uranium, which is not an infinite resource.

Nuclear Fission   **Nuclear Fusion**
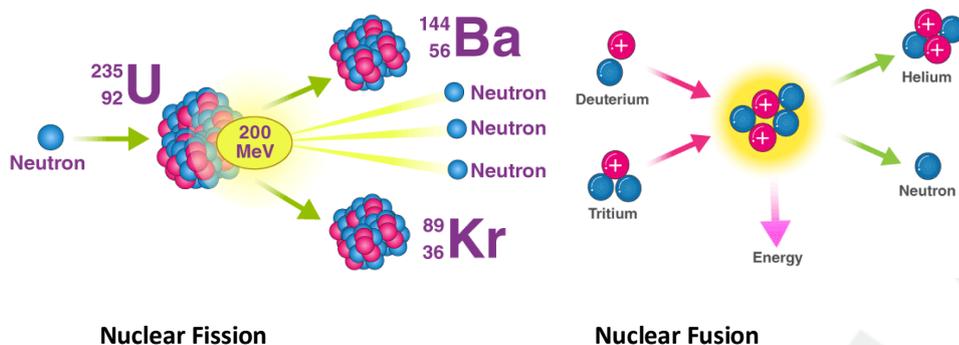
4.3.20 LANCET STUDY: AMR AND AIR POLLUTION

- Lancet study has set up links between fine particulate matter (PM2.5) air pollution and antibiotic resistance.
- Africa and Asia could face the biggest increase in antibiotic resistance.
- This is the first in-depth global analysis which highlights that humans are exposed to antibiotic-resistant elements/compounds when they inhale PM2.5.
- Antibiotic resistance, also known as '**Antimicrobial Resistance'** (AMR).
- It occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medications, making infections harder to treat and increasing risk of disease spread, severe illness and death.
   - With each one percent rise in PM 2.5 pollution, there is an increase in antibiotic resistance between 0.5 and 1.9 percent, depending on pathogen.
   - China and India are most affected by premature deaths due to changes in PM 2.5.
- **Steps taken to control AMR**- National Action Plan on AMR 2017, Red line campaign on Antibiotics 2016, AMR Surveillance network 2013 etc.

4.3.22 MINISTRY OF CHEMICALS AND FERTILIZERS NOTIFIES PRIP

- Recently, Ministry of Chemicals and Fertilizers notifies Scheme for Promotion of Research and Innovation in Pharma MedTech Sector (PRIP).
- **Aim** to promote industry-academia linkage for R&D in priority areas and to inculcate culture of quality research.
- **Duration**: 5 years (2023-24 to 2027-28)
- **Eligibility**: Any company registered in India
- **Project Appraisal and Approval**: A Committee under the chairpersonship of Secretary, Pharmaceuticals.
- **Monitoring and Evaluation**: An Empowered Committee under the chairmanship of CEO NITI Aayog.
- **Two components**
   - **Strengthening research infrastructure**: By setting up Centres of Excellence at the National Institute of Pharmaceutical Education & Research (NIPERs).
      - ✓ 7 NIPERs have been set up as institutes of national importance for higher education and high-end research in pharmaceutics.

Promotion of research in pharma med-tech sector in six priority areas: These include- new chemical/ biological entities and Phyto- pharmaceuticals; complex generics and biosimilars; precision medicine; medical devices; orphan drugs; drug development for AMR.

5.   SECURITY

5.1   3D-PRINTED BOMBS

Key Points
- Recently, Ukraine has resorted to using 3D-printed bombs to overcome a lack of ammunition and maintain their counteroffensive operations.
- Weapons manufacturers in Ukraine are discovering new types of improvised ammunition that are 3D printed both domestically and internationally.
- Before being used on the battlefield, these 3D-printed casings are manufactured and then loaded with C4 explosives and shrapnel.
- They go by the moniker "candy bombs".
- Candy bombs are inexpensive and powerful. Additionally, it is easily made in various sizes, enabling drone operators to maximize the payload capacity of a particular model.

5.2   SPIKE NON-LINE OF SIGHT (NLOS) ANTI-TANK GUIDED MISSILE

Key Points
- Israel has supplied the Indian Air Force with Spike NLOS anti-tank guided missiles.
- The Mi-17V5 helicopter fleet of Russian origin will incorporate Spike NLOS.
- Rafael Advanced Defence Systems, an Israeli corporation, conceived and created it. It is a part of the sixth generation of the Spike missile.
- **Features:**
    o capable of long-range destruction of enemy targets concealed behind mountains.
    o The useful range is 25 kilometres.
    o Electro-optical and fibre optic-based lightweight, fire-and-forget tactical precision guided missiles.

5.3   MILITARY EXERCISES

Key Points
- AUSINDEX-23 is a biannual maritime drill between the Royal Australian Navy and the Indian Navy.
- The biennial multinational tri-service exercise BRIGHT STAR-23 takes place in Egypt. The Indian Air Force is taking part for the first time.
- The United States, Saudi Arabia, Greece, and Qatar are additional participants.

5.4   SWATHI WEAPON LOCATING RADAR MOUNTAINS (WLR-M)

Key Points
- Swathi WLR-M has been introduced by the Indian Army to track down enemy artillery and improve combat efficiency.
- It is a cutting-edge electronically scanned phased array radar that was created especially for use in high-altitude and hilly terrain.
- Bharat Electronics Limited (BEL) in Bengaluru created it.
- There is also a WLR-Plains variant of Swathi radar.
- For more precise artillery strikes, WLR uses cutting-edge signal processing algorithms to identify and monitor mortars, rocket launchers, and fire trajectories.
- Its high mobility and quick deployment qualities provide it the ability to rapidly react to shifting operating requirements.

5.5 ACOUSTIC SIDE-CHANNEL ATTACKS (ASCA)

Key Points
- Because laptop models all have the same keyboard, using AI-enabled deep learning to decode ASCAs is made easier thanks to the widespread use of laptops.
- ASCA is a sort of hack in which artificial intelligence (AI) can be used to crack passwords by listening for keyboard sounds.
- SCAs are a technique for breaking a cryptographic algorithm based on the examination of auxiliary systems (such as electromagnetic waves, power consumption, keyboard, printer, etc.) utilized in the encryption process.

5.6 SHORTS NEWS

5.6.1 MOBILE USER PROTECTION REFORMS

Key Points
- Two changes to mobile user protection were made by the Ministry of Communications, and they will be added to the Sanchar Saathi portal.
- **Reforms:**
  - **Point-of-Sale (POS) Registration Reforms:** Mandatory franchisee, agent, and distributor (PoS) registration by licensees, eradicating rogue PoS who, through dishonest means, issue SIMs to anti-social/anti-national elements.
  - **KYC Reforms:** By scanning the QR code on printed Aadhaar cards, demographic information must be obtained.
- The Sanchar Saathi portal gives mobile users the ability to, among other things, discover which mobile connections are registered in their names, report stolen or lost mobile devices, and disable those devices.

5.6.2 ASTRA MISSILE

Key Points
- Successful test firing of the ASTRA missile from the Tejas light combat aircraft.
- It is an air-to-air missile with a beyond visual range that was created domestically by DRDO.
- **Features:**
  - Range: 80-110 kms for version Mk1 and 160 kms for version Mk2.
  - Altitude: up to 20 km.
  - Max Speed: Mach 4.5

5.7 CENTRAL ARMED POLICE FORCES (CAPF) IN THE SPOTLIGHT

Latest Context:
The Ministry of Home Affairs recently reported that over the past 13 years, approximately 1532 Central Armed Police Forces (CAPF) personnel have tragically taken their own lives.

Data on suicide deaths by the Ministry of Home Affairs (MHA):
- 136 CAPF personnel died by suicide in 2022, 157 in 2021 and 143 in 2020. This year, 71 such deaths were reported.
- The last three years saw the highest numbers of CAPF personnel dying by suicide than in any year over the past decade.

Understanding the CAPF
The Ministry of Home Affairs (MHA) oversees seven distinct Central Armed Police Forces (CAPF) with diverse responsibilities.

Different CAPF Forces and Their Roles:
- **Sashastra Seema Bal (SSB):** Established in 1963, it guards the borders of Bhutan and Nepal.
- **Border Security Force (BSF):** Created in 1965, it secures India's borders with Pakistan and Bangladesh. Additionally, it's involved in anti-Naxal operations, UN peacekeeping missions, disaster management, and border area development.
- **Indo-Tibetan Border Police (ITBP):** Formed in 1962, this force protects India's borders with China.
- **Assam Rifles (AR):** Originating in 1835 as the 'Cachar Levy,' it initially protected British tea estates and was later renamed AR in 1917. It guards the Indo-Myanmar border and operates under the administrative control of the MHA but reports operationally to the Ministry of Defence.
- **Central Reserve Police Force (CRPF):** Established in 1939, its primary mission is to maintain law and order, public order, internal security, and promote social harmony.
- **Central Industrial Security Force (CISF):** Founded in 1969, it provides integrated security for certain sensitive public sector undertakings, government buildings, monuments, airports, nuclear installations, space establishments, and the Delhi Metro.
- **National Security Guard (NSG):** Created in 1986, it serves as a federal contingency force to combat various forms of terrorism across the country, modeled after the SAS of the UK and GSG-9 of Germany.

Challenges Faced by CAPF Personnel
CAPF personnel face several challenges that impact their well-being and effectiveness in maintaining national security:
- **High Vacancies:** A shortage of personnel burdens the existing force and compromises national security.
- **Stress Management:** Inadequate stress management leads to a high rate of suicides and interpersonal conflicts among personnel.
- **Bureaucratization:** Top positions in CAPFs are dominated by IPS officers, leading to demoralization and reduced effectiveness.
- **Grievance Redressal:** An effective in-house grievance redressal mechanism is absent, exacerbating internal issues.
- **Infrastructure Shortcomings:** Poor infrastructure, such as the lack of electricity at border outposts, hampers operational efficiency.
- **Lack of Modern Equipment:** CAPFs lack modern weaponry, clothing, and equipment, with a cumbersome procurement process.
- **State Dependency:** States heavily rely on CAPFs during law-and-order crises.

Strategies for Enhancing CAPF Performance
To enhance the performance and well-being of CAPF personnel, several strategies can be implemented:
- **State Special Forces:** States should develop their specialized forces to manage law and order effectively and augment existing police units with proper training and equipment.
- **Enhanced Training:** Training methods must be updated and tailored to meet contemporary requirements.
- **Increased Female Representation:** Boost the percentage of women in CAPF and provide specialized training for them.
- **Inclusion of Agniveers:** Follow the 10% reservation quota for Agniveers across all CAPFs and conduct targeted recruitment drives to fill vacancies.
- **Efficient Grievance Redressal:** Implement a robust grievance redressal mechanism to address delayed promotions, personnel conflicts, and workplace harassment**.**
- **Stress Reduction:** Introduce scientific stress reduction techniques and provide intermittent training to improve morale and overall well-being.

5.8 COMMITTEE FORMED TO REVAMP DEFENSE RESEARCH ORGANIZATION (DRDO)"

Latest Context:

The Ministry of Defense (MoD) has set up a nine-member team, led by Prof. K VijayaRaghavan, to review and improve the way DRDO functions.

About DRDO

- The Defense Research and Development Organization (DRDO) is a prominent institution in India dedicated to the research and development of advanced technologies and equipment for the nation's defense needs.
- DRDO's primary mission is to develop cutting-edge defense technologies and systems to enhance India's security and sovereignty.
- It encompasses various areas, including missiles, nuclear capabilities, aircraft, naval systems, electronics, cybersecurity, and more.
- The organization's mandate is to provide the Indian armed forces with state-of-the-art weaponry, equipment, and systems to meet evolving security challenges.

Why DRDO Needs a Makeover?

The need for change arises due to several reasons:

- Delays in completing important projects have resulted in increased costs and outdated products.
- A need to modernize administrative, personnel, and financial systems for efficient defense development.
- Issues like lack of coordination, constant requirement changes, and redundant work are causing inefficiencies.
- Bureaucratic procedures have overshadowed the organization's focus on outcomes.
- Limited involvement of the private sector and a lack of competition are hindering progress.

Proposed Solutions for a More Efficient DRDO:

- Establishing a New Defense Techno-Industrial Consortium (DTIC) for integrated defense research and manufacturing.
  Encouraging private sector participation in defense.
  Nurturing innovations for the armed forces through programs like iDEX.
- Forming a Defense R&D council with top military leaders and scientists to focus on capability development plans.
  Collaborating with other national research organizations, academia, and industries for frontier technology research.
- Creating a tri-service division within the Department of Military Affairs for seamless integration of capability development and defense research.
- Emphasizing procedural improvements and prototype modifications to avoid delays.
- Identifying and closing redundant DRDO labs and projects to free up assets for innovation funding.

6. ENVIRONMENT AND ECOLOGY

6.1 AGROFORESTRY

Latest Context

In order to promote agroforestry, the Indian Council of Forestry Research and Education (ICFRE) recently produced a fact sheet.

More about News
- The report provided information on producing 36 particular species, including bamboo, that are appropriate for home gardens and agroforestry systems.
- Leucaena leucocephala, sometimes known as subabul, and several eucalyptus species are among the 36 species.
- According to a database maintained by the International Union for Conservation of Nature (IUCN), subabul is regarded as an invasive species that has been identified as a weed in more than 20 nations.
- Eucalyptus is regarded as requiring a lot of water.
- Eucalyptus is regarded as highly water-intensive.

Facts about Agroforestry
- **Agroforestry** is the practice of both agriculture and forestry simultaneously.
- It focuses on how different aspects of nature interact and are interdependent.
- **Components of agroforestry:** Crops, trees, and livestock.
- **Agroforestry systems:** These are classified based on the type of component:
  o Agri silviculture (crops + trees).
  o Silvopastoral (pasture/livestock + trees).
  o Agrosilvopastoral (crops + pasture + trees).
- **Attributes of the Agroforestry system:**
  o Productivity: Rise in productivity of land and Production of preferred goods.
  o Sustainability: Conserving the production potential.
  o Adoptability: Adoption of the prescribed practice.

Significance of the Agroforestry
- **Farm profitability:** The output of trees, crops, and cattle combined is more than the output of any one component combined per unit area.
- **Resource sustainability:** By lowering pollutants, controlling soil erosion, and creating wildlife habitats, it helps to preserve and safeguard natural resources.
- Reduce input costs by producing bio-pesticides from tree parts and mulch/leaf litter as manure.
- **Conservation of biodiversity:** By combining trees, crops, and cattle, an environment with a wider variety of species can be created.
- Due to the increased diversity and quality of food outputs, food security aids in the improvement of health and nutrition.
- Farmers' incomes are rising as a result of new agroforestry products that give farmers more financial flexibility and create jobs.
- **Carbon sequestration:** Agroforestry is engaged in the long-term storage of atmospheric CO2 and the capture of carbon.

Challenges for Agroforestry
- **Lack of education and training:** Agroforestry is a specialized field that necessitates a particular level of expertise in order to be successful.
- **Benefits over the long term:** Agroforestry will start to turn a profit over time. Profits may temporarily diminish as a result of decreased agricultural area.
- Indian forest rules are quite strict and prohibit landowners from felling trees that are grown on their property without receiving multiple approvals.

- **Food security:** Removing cereal and commercial crops from agricultural land may result in a shortage of food and raw materials for industry.
- **Lack of dedicated agency:** The majority of nations, including India, do not have an agency specifically dedicated to promoting agroforestry.

Government Initiatives to Promote Agroforestry
- **Sub-Mission on Agroforestry (Har Medh par Ped) Scheme:** launched in 2016–17 to promote the planting of trees alongside crops on cropland.
- **Mission for Integrated Development of Horticulture (MIDH):** It has been put into place since 2014–15 for the holistic growth of horticulture, which includes fruits, vegetables, mushrooms, spices, and other products.
- **National Agroforestry Policy, 2014:** to promote and broaden tree planting while integrating it into existing agricultural and livestock practices.
- Many tree species were exempted from the Felling and Transit regulations, and bamboo was taken off of the category of forest produce to allow for industrial-scale cultivation.

Way forward for scaling agroforestry
- creation of fresh agroforestry models for various agro-climatic zones.
- ensuring that farmers and other users may get certified planting material.
- **Research and development:** A study conducted in collaboration with more comprehensive agroforestry models applicable to many agroecological zones.
- Increasing farmers' access to market construction of industries and/or secondary processing units close to agroforestry zones.
- evaluating the influence study of the social and ecological effects of agroforestry adoption.
- **Extension service:** Improve the delivery of technology know-how to the farmers through extension programs involving research institutions and industries.

ICFRE (Indian Council of Forestry Research and Education)

The Indian Council of Forestry Research and Education (ICFRE) is an autonomous council under the Union Environment Ministry.

The council mainly guides, promotes and coordinates forestry research, extension and education at the national level through its nine institutes and five centres located across the country.

The council has 9 Regional Research Institutes and 5 advanced centres to cater to the research needs of different bio-geographical regions

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6.2 COASTAL AQUACULTURE AUTHORITY OR CAA BILL, 2023

Latest Context
The Lok Sabha passed an amendment bill to decriminalize the offenses committed in carrying out coastal aquaculture activities and ensure ease of doing business.

Key Points
- The bill amends the CAA Act of 2005, which created the CAA to regulate coastal aquaculture-related operations.
- Coastal Aquaculture was exempted from the ban under the Coastal Regulatory Zone (CRZ) Notification of 1991 by the CAA Act of 2005.
- The National Green Tribunal ruled in 2022 that coastal aquaculture is not exempt from the CRZ Notifications issued in 2011 and 2019 under the CAA Act of 2005.
- Coastal aquaculture is farming shrimp, prawns, fish, or other aquatic life in saline or brackish water.

Key highlights:
- Under the CRZ, coastal aquaculture and associated activities are allowed. As a result, it will still solely be subject to CAA Act regulation.

- Allows seaweed cultivation in creeks and backwaters inside the CRZ and nucleus breeding in no-development zones.

Additional functions of CAA:
- Set parameters for aquaculture unit inputs and effluent outflow.
- Pharmacologically active chemicals, antibacterial agents, and other drugs that might be harmful to human health should all be banned.
- Secretary-Member of the Authority: been chosen by the central government to serve as the CAA's chief executive officer.
- Decriminalises violations of the law and lowers the fine to one lakh.

Potential in India
- After China, India is the world's second-largest aquaculture nation and the third-largest producer of fish overall.
- The importance of the fishing and aquaculture industries was made clear by India's Blue Revolution.
- The industry is regarded as a sunrise sector and is anticipated to have a big impact on the Indian economy soon.
- Indian fisheries have recently seen a paradigm change from inland to marine-dominated fisheries, with the latter becoming a significant contribution to fish output from 36% in the middle of the 1980s to 70% in the recent past.

Initiatives
- The Government of India approved the Pradhan Mantri Matsya Sampada Yojana (PMMSY) flagship program in May 2020 as part of the Aatmanirbhar Bharat COVID-19 relief package to bring about the Blue Revolution through the sustainable and responsible development of the fisheries sector.
- The Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PMMKSSY) sub-scheme, which was unveiled in the Union Budget for 2023–2024, aims to increase the wages and incomes of fishers, fish dealers, and micro- and small-scale businesses operating in the fisheries industry.

Challenges
- In terms of good infrastructure, technological adoption, and financial inclusion, India is still lagging behind its international competitors.
- Farmers and other interested parties have occasionally expressed concern over subpar exports and a decline in market pricing.

Way Forward
- To solve the problems facing the industry, scientists and aquaculture farmers have proposed a comprehensive strategy including several stakeholders and government agencies.
- For the management of fisheries throughout the nation, scientists emphasize the necessity for comprehensive law and an inter-state structure.
- The answer is a co-management approach that includes fishermen's active engagement.

6.3　REPORT ON COMPRESSED BIO-GAS PLANTS

Latest Context
Recently, the **Parliamentary Standing Committee (PSC)** submitted its report to the parliament regarding the review of the implementation of Compressed Bio-Gas (CBG) plants.
- In 2018, the Ministry of Petroleum and Natural Gas launched the **Sustainable Alternative Towards Affordable Transportation (SATAT) initiative.**
- **SATAT initiative aims** to set up 5000 Compressed Biogas (CBG) plants for the production of at least 15 million Metric Tons (MMT) per annum of CBG by the year 2023-24.

Key highlights of the report
- PSC found that CBG projects are not being implemented at the desired rate, only around 40 CBG plants have been established so far.
- Need to provide financial support for the development of pipeline infrastructure for connecting CBG projects with the City Gas Distribution (CGD) network.

- Need to set up a **"Bio Fuel Infrastructure Fund"** and establish a **"Credit Guarantee Fund"** to improve the availability of credit to CBG projects.
- It is necessary to develop a solid mechanism for coordination with other ministries and agencies.

About Compressed Bio-Gas (CBG)
- CBG also known as **Bio-CNG (Compressed Natural Gas),** is a type of renewable energy that is produced from organic waste materials through a process called **"anaerobic digestion".**
- Anaerobic digestion involves the decomposition of organic matter in the absence of oxygen by bacteria and other microorganisms, leading to the production of biogas.
- Biogas primarily consists of **methane (CH4) and carbon dioxide (CO2),** along with small amounts of other gases.
- It is produced from various organic feedstocks such as agricultural residues, food waste, sewage sludge, and other biodegradable materials.
- To convert biogas into CBG, it undergoes a purification process to remove impurities like CO2, water vapor, hydrogen sulfide, and siloxanes, resulting in a gas that is primarily methane.
- The purified methane gas is then compressed to high pressures, similar to the compression process used for natural gas, which leads to the production of Compressed Bio-Gas (CBG).

Significance of CBG
- responsible waste management, a decrease in pollution and carbon emissions.
- Farmers' additional source of income.
- increase in employment, entrepreneurship, and the rural economy.
- support for national initiatives to combat climate change.
- reduction in the import of crude oil and natural gas.
- Protect against changes in the price of petrol and crude oil.
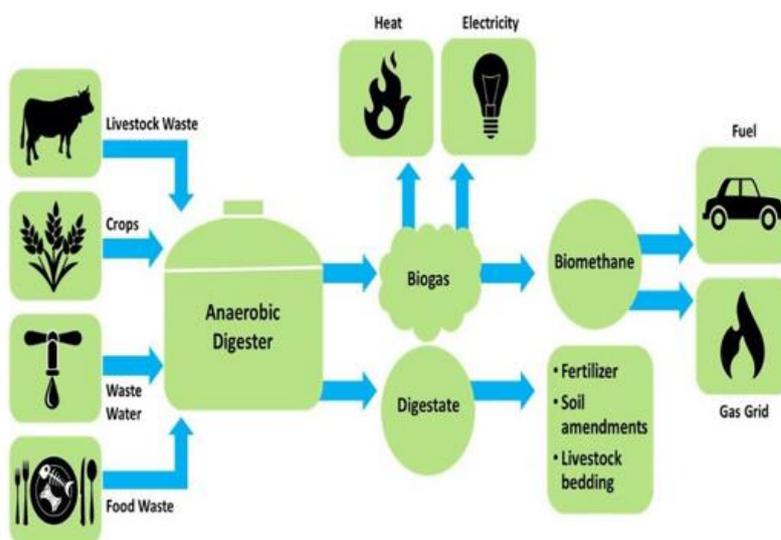
Applications of CBG
- **Transportation:** CBG can be used as a fuel for vehicles, especially in CNG vehicles. It offers a more environmentally friendly and sustainable alternative to fossil fuels, as it reduces greenhouse gas emissions and dependence on fossil fuels.
- **Cooking and Heating:** CBG can be used for cooking and heating purposes, particularly in areas with limited access to traditional energy sources. It provides a cleaner and renewable option compared to traditional fuels like firewood or charcoal.
- **Industrial Applications:** CBG can be used in industrial processes that require heat or fuel, helping industries reduce their carbon footprint and reliance on non-renewable resources.
- **Power Generation:** In addition to being used directly as fuel, CBG can also be used in gas engines to generate electricity, providing a decentralized and cleaner energy source.

About Sustainable Alternative Towards Affordable Transportation (SATAT)
- **Launch**: 2018.
- **Objective:** to establish compressed biogas (CBG) production facilities and make CBG readily available for usage in vehicle fuels on the market.
- Anaerobic decomposition of biomass, such as agricultural waste, municipal solid waste, sugarcane press mud, etc., naturally yields biogas.
- Bio-gas, which has a high methane concentration (>90%) and higher calorific value (47–52 MJ/kg), is purified and compressed to produce CBG.

- CO_2 (4%), hydrogen sulphide (16 ppm), nitrogen (0.5%), oxygen (0.5%), and moisture ($5mg/m^3$) are some of the other components in CBG.
- **Nodal Ministry:** Ministry of Petroleum and Natural Gas (MoPNG).

Target under SATAT
- 5000 CBG plants by 2023.
- 15 MMT of CBG.
- 50 MMT of Bio-manure.

Challenges in Implementation
- **Governance-related issues:** The municipal bodies' limited technical skills are an impediment. Entrepreneurs are hampered by the need for numerous regulatory approvals and the involvement of numerous ministries, such as MoEFCC, MoPNG, and MoNRE. Central Financial Assistance (CFA) for extending funding to new and renewable energy projects has been discontinued from April 2021. Despite having a responsibility to increase domestic natural gas output, oil PSUs in the upstream sector have shown little interest in establishing CBG projects.
- **Unregulated bio-mass supply chain:** agricultural feedstock must be gathered within a 30- to 40-day window, and feedstock prices are unpredictable. Municipal Solid Waste that is not properly separated at the source contaminates the feedstock used to create biogas.
- **Distribution challenge:** The inability of CBG to be coordinated with the City Gas Distribution (CGD) network is a result of the differential tax structures for CNG and CBG.
- **Market:** Fermented organic manure, which accounts for 15-20% of the revenue for CBG enterprises, has no buyers. Due to the scarcity of CNG vehicles in rural regions, there are few customers of bio-CNG. Projects involving compressed biogas (CBG) are not being carried out at the expected rate; only 40 CBG units have been established.

Other initiatives to promote CBG in India
- Integration of **Bio-CNG as a fuel for transportation**
- **National Policy on Biofuels, 2018**: It aims to promote the production of CBG and other bio-fuels.
- **GOBAR-Dhan Scheme:** To support villages in effective management of cattle and bio-degradable wastes.
- **Recognition of CBG projects under the Priority Sector Lending (PSL) scheme** by the RBI to improve access to credit.
- **Fertilizer Control Order for Fermented Organic Manure:** To promote usage of organic fertilizer in agriculture and expand market for solid and liquid by-products of CBG plants.
- **National Bioenergy Programme by MNRE:** For capacity building and research in biogas, solid waste management, and other bioenergy aspects.

Conclusion
Biogas may be shown to be a more environmentally friendly fuel than fossil fuels. It is the perfect source to guarantee rural communities' energy security. By converting methane, it can also aid in the decarbonization of the agricultural industry. New technologies must be funded in order to expand the usage of biogas in urban settings. Long-term, this may aid in attaining the climate change goals.

6.4   GLOBAL BIODIVERSITY FRAMEWORK FUND (GBFF)

Latest Context
The seventh assembly of the Global Environment Facility recently ratified and inaugurated the GBFF.

About GBFF
- **Purpose:** The Kunming-Montreal Global Biodiversity Framework (KMGBF) is intended to be implemented with financial support from GBFF.
- **Governance:** GBFF Council will be open to representation by the following members,
  - 16 from developing countries.
  - 14 from developed countries.
  - 2 Members from the countries of central and eastern Europe and the former Soviet Union.

- o   Decisions of the GBFF Council are to be taken by consensus along the lines of the GEF Instrument.
- **Financial management:** The World Bank will be asked to act as the GBFF Trustee. The GBFF will be created in a similar manner to the Capacity-Building Initiative for Transparency Trust Fund, Least Developed Countries Fund, Special Climate Change Fund, and Nagoya Protocol Implementation Fund.
- **Fund allocations:**
  - o   20% of the fund would go towards supporting indigenous-led programmes to safeguard and conserve biodiversity.
  - o   Prioritise assistance for LDCs and small island developing states, which will collectively receive more than a third of the fund's funding.
  - o   Governments, charities, businesses, private institutions of finance, etc. are examples of funding sources.

Significance of GBFF
- To halt and reverse biodiversity loss by 2030, we need a new source of finance.
- **Promise of including Indigenous people:** 80% of the Earth's biodiversity can be found in the 25% of surface and ocean regions that are managed by indigenous peoples and local communities (IPLCs).
- The GBFF places a strong emphasis on respecting the rights of indigenous communities who have long-protected forests and biodiversity as well as their participation in conservation initiatives.
- Aligned with the UN Sustainable Development Goals, three of which—Goal 13 on climate action, Goal 14 on life below the ocean, and Goal 15 on life on land—directly address the environment and, consequently, biodiversity.

Facts about Global Environment Facility
- **On the eve of the 1992 Rio Earth Summit, the GEF was founded.**
- It is a **group of funds** devoted to addressing issues including pollution, climate change, biodiversity loss, and pressures on land and ocean health.
- An Assembly, a Council, a Secretariat, 18 agencies, a Scientific and Technical Advisory Panel, and an Evaluation Office make up its distinctive governance system.
- **It provides funding for five significant international conventions:**
  - o   The United Nations Convention to Combat Desertification (UNCCD) (adopted in 1994).
  - o   The Minamata Convention on Mercury (signed in 2013 and entered into force in 2017).
  - o   The Stockholm Convention on Persistent Organic Pollutants (POPs) (adopted in 2001 and entered into force in 2004).
  - o   The United Nations Framework Convention on Climate Change (UNFCCC) (signed in 1992 and entered into force in 1994).
  - o   The United Nations Convention on Biological Diversity (UNCBD) (entered into force in 1993).
- There are **184 members**, **including India**.
- **Washington, D.C.** serves as the home of its secretariat.
- **As the GEF Trustee,** the **World Bank** manages the GEF Trust Fund (donor contributions).
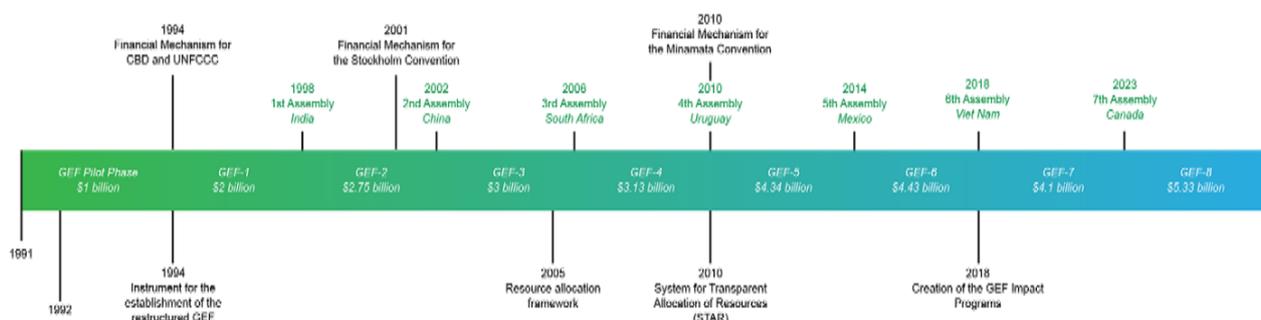
GEF Council
- The **GEF's primary governing body,** the Council, is made up of 32 members elected by GEF member nations (14 from developed, 16 from developing, and 2 from economies in transition).
- **With Bangladesh, Sri Lanka, Bhutan, Nepal, and the Maldives, India has joined the GEF Executive Council as a permanent member.**

- The periods between rotations of council members are set by each constituency.
- The **Council convenes twice a year.**
- The operational policies and programmes for GEF-financed initiatives are developed, adopted, and evaluated by the Council.
- The work programme (projects presented for approval) is also reviewed and approved, with choices reached by consensus.

Conclusion

The GBFF must be immediately and extensively funded by all nations, multilateral development banks, the private sector, and philanthropists in order for it to be fully functioning and assist in achieving the lofty goals stated at Montreal COP 15.

Kunming-Montreal Global Biodiversity Framework (KMGBF)
- KMGBF was **adopted in 2022 at COP 15 (held in Montreal)** to the **UN Convention on Biological Diversity.**
- It replaced the **Aichi Biodiversity Targets** that **expired in 2020.**
- **It is not legally binding.**
- It sets out **4 goals for 2050 and 23 targets for 2030.**

4 overarching goals to be achieved by 2050 focus on	1. To halt human-induced species extinction 2. Equitable sharing of benefits 3. Sustainable use of biodiversity 4. Closing the biodiversity finance gap of $700 billion per year.
23 action-oriented global targets for urgent action over the decade to 2030	**Key targets** • 30% of land, inland water, marine and coastal ecosystems will be protected by 2030 **(30x30 Deal).** • Reducing the rate of introduction of invasive alien species by 2050. • Cutting **global food waste by half.** • Reducing the loss of areas **of high biodiversity importance** to zero. • Reducing by **$500 billion annual harmful government subsidies.** • **Mobilizing investment** close to the biodiversity funding gap by $200 billion in year.

6.5 DHOLPUR-KARAULI: INDIA'S 54TH TIGER RESERVE

Key Points

- The **Dholpur-Karauli Tiger Reserve** in the state of Rajasthan has received clearance from the National Tiger Conservation Authority (NTCA).
- It has established itself as the state of **Rajasthan's fifth tiger reserve,** behind Mukundra Hills, Ramgarh Vishdhari, Ranthambore, and Sariska.
- **Tiger Reserves:**
  - Tiger Reserve is a protected area created specifically for the conservation of tigers and other striped large animals. A tiger reserve, however, could also be a national park or a wildlife refuge.
  - For example: Another national park is the Sariska Tiger Reserve. It is thus because the area was first made into a national park before being used for tiger protection.
  - **According to Section 38V of the Wildlife (Protection) Act, 1972,** Tiger Reserves are declared by State Governments on the recommendation of the National Tiger Conservation Authority.
  - **India currently has 54 Tiger Reserves** in total (the Dholpur-Karauli Tiger Reserve being the newest addition).
  - 75% of the tigers in the world reside in India. The number of tigers in India has increased to 3,167 as of 2022, according to the most recent study on the status of tigers in the country.
  - In order to help tiger states, conserve tigers in designated tiger reserves, the Ministry of Environment, Forests, and Climate Change runs the ongoing centrally financed programme known as **Project Tiger.**

Facts about National Tiger Conservation Authority
- The Wildlife (Protection) Act of 1972, as amended in 2006, established the NTCA as a **statutory body** under the Ministry of Environment, Forests, and Climate Change, with the purpose of enhancing tiger conservation.
- **Objectives:**
  - Granting Project Tiger formal authority to make complying with its instructions legal.
  - By creating a foundation for MoUs with States inside our federal system, we can encourage the Center-State's accountability in the management of Tiger Reserves.
  - Addressing the needs of locals for a living in locations near tiger reserves.

6.6 GEF AND CONSERVATION RELEASED A REPORT ON 'ICI'

Key Points
- The Global Environment Facility (GEF), International Union for Conservation of Nature (ICUN), and Conservation International released a report on the 'Inclusive Conservation Initiative (ICI)'.
- **Highlights of the Report:**
  - As per the report, although Indigenous Peoples and local communities (IPs and LCs) have the potential in improving conservation but donors are presently offering less than 1 per cent of climate change mitigation and adaptation funding to IPs and LCs.
  - Indigenous peoples own 40% of terrestrial protected areas and 37% of ecologically intact landscapes.
  - Indigenous land management has equal or greater impacts on reducing deforestation than state management.
  - Only 7% of the US$ 1.7 billion of funding pledged for ILPC (at the 26th CoP of UNFCCC in 2021) goes directly to them.
- **Inclusive Conservation Initiative (ICI):**
  - GEF Council in December 2019 approved this concept of the Inclusive Conservation Initiative and the project proposal was endorsed by the GEF in January 2022.
  - **Objective:** The Inclusive Conservation Initiative (ICI)' objective is to enhance Indigenous Peoples' and Local Communities' (IPs and LCs) efforts to steward land, waters and natural resources to deliver global environmental benefits.
  - **Functional Mechanism:** There are four focal areas of this initiative.
  - **Local Action to deliver Global Environmental Benefits (GEBs):** It provides direct financial support to IP and LC-led initiatives in priority areas that achieve global environmental benefits through improved large-scale management of IP and LC lands, territories and resources.
  - **Global IPLC Capacity Building:** It establishes the platforms, peer learning networks and knowledge resources for enhanced IP and LC capacity, project and financial management skills, and design of sustainable financing mechanisms.
  - **PLC Leadership in International Environmental Policy:** It enables IP and LC representatives to amplify their voices and influence in the international policy decisions that create either enabling or constraining conditions for on-ground inclusive conservation efforts.
  - **Inclusive Conservation Knowledge to Action:** It supports IP and LC organizations to share knowledge regarding 'inclusive conservation' models to demonstrate large-scale impact and generate support for IP and LC-led conservation.

6.7 EXPORT POLICY OF RED SANDERS WOOD

Key Points
- The Ministry of Commerce and Industry's Directorate General of Foreign Trade **(DGFT)** amended its export policy for red sanders wood sourced from privately cultivated land.
- The Foreign Trade (Development & Regulation) Act of 1992 and Foreign Trade Policy 2023 gave rise to the authority used to issue the changes.
- A recent amendment permits an annual export quota for red sander species that are bred artificially but none for those that are found in the wild.
- Red Sanders' export is restricted while its import is forbidden under the foreign trade policy.

- Prior to 2019, the DGFT updated its export regulations to allow the export of Red Sanders in log form and roots as long as they are only cultivated on private land (including pattaland).

About Red Sanders:
- A certain area of the **Eastern Ghats' forests** is home to endemic plant life.
- a kind of tree that grows very slowly and matures in 25 to 40 years.
- Resistant to droughts.
- **local names include Yerra Chandanam and Rakta Chandanam.**
- Its significant demand for use in cosmetics, medications, and luxury furniture/woodcraft in Asia, especially China, is due to its therapeutic characteristics.
- **Conservation Status:**
  - **IUCN Status:** Endangered
  - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Status:** Appendix II
  - **Wildlife (Protection) Act, 1972, India:** Schedule IV

6.8 IUCN'S INTEGRATED TIGER HABITAT CONSERVATION PROGRAMME (ITHCP) OR TIGER PROGRAM

Key Points
- The Global Tiger Recovery Programme (GTRP), a global endeavour to double the number of tigers in the wild by 2022, is supported in part by the Integrated Tiger Habitat Conservation Programme (ITHCP), a grant-making project that was launched in 2014.
- From about 100,000 individuals in 1910 to 3,200 individuals in 2010, or 7% of their original range, tiger populations have drastically declined.
- Conflict between people and wildlife, habitat destruction, and poaching are to blame.
- For tigers to survive, effective conservation policies and programmes are essential.
- Conservation initiatives will be supported by The German Cooperation through KfW Development Bank through the year 2027.
- The programme, which is divided into four phases, invests in high-quality projects in important landscapes for tiger conservation in nations like Bangladesh, Bhutan, India, Indonesia, Nepal, and Myanmar.
- The programmes' phases II, III, and IV are all going concurrently. Phase IV, in contrast to other phases, will broaden its scope to encompass additional Pantherine species, particularly leopards and clouded leopards.
- Our programme discovered that between 2015 and 2021, the tiger population within project sites increased by 40% on average.

6.9 EARTH OVERSHOOT DAY

Key Points
- In 2023, **August 2** is recognised as Earth Overshoot Day.
- The date on which human demand for ecological resources and services exceeds what the earth can replenish in a given year is known as **Earth Overshoot Day.**
- Since 1971, Global Footprint Network, an international research organization, has measured it annually.
- It is estimated by 365 times the biocapacity of the Earth (the amount of ecological resources Earth can produce annually) and the ecological footprint of humanity (humanity's demand for that year).

6.10 MINAMATA CONVENTION ON MERCURY

Key Points
- The Minamata Convention on Mercury, which was adopted in 2013 in Geneva, is the first international treaty legally binding to safeguard human health and the environment from mercury's harmful effects.
- It is named after the Japanese city that in the 1950s became the epicenter of the neurological condition known as Minamata illness, which is brought on by severe mercury poisoning.

- It became effective in 2017. Currently, it has 128 Signatories and 144 Parties.
- With flexibility for continuing use of mercury-based products and operations containing mercury compounds up until 2025, India ratified it in 2018.
- **Minamata Convention requires that party nations:**
  o Mercury usage and emission from artisanal and small-scale gold mining should be decreased, and if possible, eliminated.
  o Control mercury air emissions from industrial boilers, power plants, etc. that burn coal.
  o phase out or cut back on the use of mercury in items including batteries, lightbulbs, switches, cosmetics, pesticides, and dental amalgam.
  o discusses mercury supply and trade, better storage and disposal, and methods for dealing with affected places.
- A naturally occurring element, mercury can be found in soil, water, and air.
- The brain system, thyroid, kidneys, lungs, immune system, eyes, gums, and skin may all be negatively impacted.
- It is ranked among the top 10 chemicals that pose a serious risk to public health by the WHO.

6.11 DEBT-FOR-NATURE SWAP

Key Points
- A $500 million debt-for-nature exchange agreement for marine conservation has just been unveiled by Gabon.
- **About Debt-for-nature swap:**
  o It is a deal when a creditor agrees to waive some of the debtor's foreign obligations or grant debt relief in return for the debtor's promise to contribute to a particular environmental project.
  o It can be multi-party or bilateral.
- **Significance:** improving adaptation and mitigating the effects of climate change, mainstreaming environmental issues into government policies liberate financial resources for the government.

6.12 FLOODWATCH MOBILE APPLICATION

Key Points
- The mobile application, FloodWatch has been released by the Central Water Commission (CWC).
- Public access to real-time flood information and forecasts is provided through FloodWatch.
- It will provide Flood Forecast by State-wise/Basin-wise.
- To provide precise and timely flood forecasts, the FloodWatch app makes use of advanced technology like satellite data processing, mathematical modelling, and real-time monitoring.

6.13 PLASTIC OVERSHOOT DAY REPORT

Key Points
- The report states that India contributed 16.7 days out of the 157 days that the world experienced plastic overshoot in 2023.
- **Plastic Overshoot Day** is the day when there is more plastic waste than can be successfully managed by waste management systems.
- It is based on the **Mismanaged Waste Index (MWI)** for the nation, which is the ratio of mismanaged waste to total garbage.
- **Other key Findings on India:**
  o Referred to as **"The Waste Sponges"** because of poor consumption and massive plastic contamination.
  o The country has one of the lowest per capita plastic consumption rates in the world at 5.3 kilograms annually.

> **National Mission for Clean Ganga (NMCG)**
>
> - It is being implemented by the National Council for Rejuvenation, Protection and Management of River Ganga also known as the National Ganga Council.
> - This mission was established on 12th August 2011 under the Societies Registration Act,1860 as a registered society.
> - **Objectives:** The mission incorporates rehabilitating and boosting the existing STPs (Sewage Treatment Plants) and instant short-term steps to curb pollution at exit points on the riverfront in order to check the inflow of sewage.

- o   With 98.55% of generated trash being improperly managed, it comes in fourth place in the MWI.
- mostly because collected plastic is dumped in unhygienic landfills and dumpsites.
- Tyre abrasion, textile fiber shedding, paint, and other sources delivered 30 764 tonnes of microplastic into waterways.
- While the nation exported 0.8% of its total waste, 1.33% of it was plastic waste.
- Initiatives by India include the Plastic Waste Management Rule, Mission LiFe, and the goal for 1000 cities to achieve 3-Star garbage-free status by October 2024.

6.14 BELEM DECLARATION

Key Points
- The Belém Declaration was signed in the Brazilian city of Belém by members of the Amazon Cooperation Treaty Organisation (ACTO).
- By ratifying the Amazon Cooperation Treaty, an intergovernmental socioenvironmental bloc known as ACTO was created.
- Its members are Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela.
- The Belém Declaration asks for ensuring Indigenous Peoples' involvement in decision-making.
- Additionally, it promises to start the Amazon Alliance to Fight Deforestation.
- However, member nations were unable to come to an agreement on the need to preserve the Amazon rainforest.

6.15 TIDAL ENERGY

Latest Context
A report on **"Tidal Power Development in India"** was submitted by the Parliamentary Standing Committee on Energy.

More on News
- Ocean energy mostly comes in three forms: wave, tidal, and ocean.
- According to the committee, India has an estimated tidal and wave energy potential of 12455 MW and 41300 MW, respectively.
- **The potential areas with low/medium tidal wave strength are:**
  - o   Gulf of Khambat, Gulf of Kutch & southern regions in Gujarat.
  - o   Palk Bay- Mannar Channel in Tamil Nadu.
  - o   Hoogly river, South Haldia & Sunderbans in West Bengal.
- Until now, there has been no estimation of the ocean's thermal energy potential.

Types of Ocean Energy
- **Waves Energy:** Waves Energy is derived from the transfer of kinetic energy of wind to the upper surface of the ocean.
- **Ocean currents Energy:** Ocean currents Energy is derived from oceanic circulations.
- **Ocean Thermal Energy Conversion:** Ocean Thermal Energy Conversion is derived from temperature differences between upper and lower ocean layers.
- **Salinity gradient (osmotic pressure):** Salinity gradient (osmotic pressure) derived from salinity differences between fresh and ocean waters at river mouths.

What is Tidal Energy?
- Tidal energy is a renewable energy powered by the natural rise and fall of ocean tides and currents. Some of these technologies include turbines and paddles.
- Tidal currents with sufficient energy for harvesting develop when water passes over a restriction that accelerates the water's motion.
- Kinetic energy is used to create the water's intensity when tides rise and fall, and tidal energy is produced when tides and ocean currents move.

- A turbine is propelled by the movement of water in tidal power, a form of gravity hydropower that produces electricity.
- By building a basin or reservoir behind a barrier and directing tidal flows through turbines inside the barrage, tidal energy can be harnessed to produce electricity.

How is Power generated from Tidal Energy?
- Oceanic tides are utilised to produce energy by building floodgate dams across sea/ocean inlets.
- When the gate is closed, water that is entering the inlet during high tide becomes trapped.
- Through a pipe, the water that the floodgate has captured returns to the sea.
- After the tide recedes outside the floodgate, this water then goes through a turbine that produces electricity.
- A sizable tidal wave power project exceeding Rs. 5000 crores is being considered for Gujarat's Gulf of Kutch.

Tidal Energy Potential of India
- The moon's gravitational pull causes the tidal cycle to occur once every twelve hours.
- Potential energy is the term used to describe the difference in water depth between low and high tides.
- High tide must be at least five metres (16 feet) higher than low tide in order to use the maximum potential of the tidal energy.
- There are only about 20 places on planet when the tides are this high, and one of them is India.
- The highest and average tidal ranges in Gujarat's Gulf of Cambay and Gulf of Kutch are 11 metres and 8 metres, respectively.
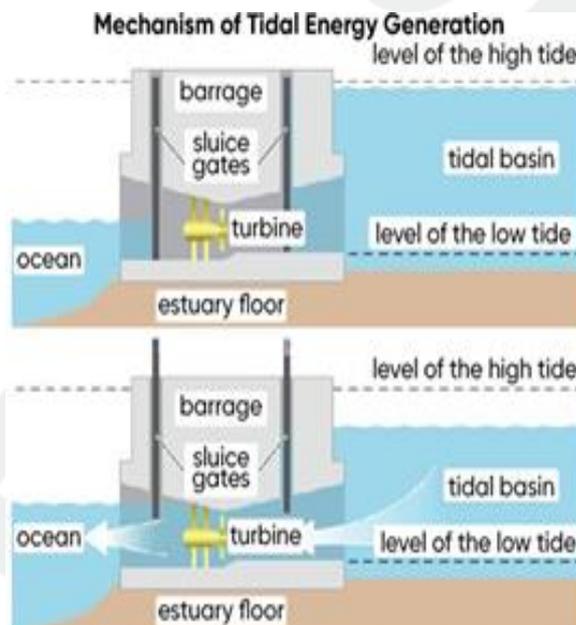
Government's Initiative
- In 2011, the Gujarat government signed an agreement to work with GPCL, Atlantis Resource Corporation (UK), and PMES, Singapore to create a 250 MW tidal power plant in the Gulf of Kutch.
- The first phase of a 50 MW tidal power plant has begun at Mandavi, near Kutch.
- The Ministry of New and Renewable Energy (MNRE) approved a demonstration project in 2008 to build a 3.75 MW tidal power plant at Durgaduani Creek in the Sunderbans, West Bengal, however it was never completed.

Challenges
- Despite making quick progress with other renewable energy sources, India has not made any meaningful headway in the nearly 40 years since it started attempting to evaluate and harness tidal power.
- A legislative panel has now asked the Indian government to reevaluate the country's tidal power potential, look into how much of it can actually be used, carry out more research in the area, and create a tidal power pilot project.
- India started building two tidal power projects in Gujarat and West Bengal in 2007 and 2011, with installed capacity of 3.75 and 50 megawatts, respectively.
- However, both of these projects were put on hold because of their astronomical prices.
- The 3.75 MW Durgaduani tidal power project in West Bengal cost 2.38 billion rupees (238 crore) to complete.
- Per megawatt of power, the 50 MW tidal power facility in Gujarat's Gulf of Kutch was reported to have cost Rs. 7.5 billion (Rs. 750 crore).
- Tidal power plants haven't been established in India for a number of reasons, including prohibitive costs and environmental risks.
- Tidal power is not being pursued globally either due to a number of barriers.

Advantages of Tidal Energy
- The generation of tidal energy is predictable and constant due to gravitational forces.
- Tidal energy will become more available and efficient as technology advances.
- As a result of its stability in a variety of design scenarios, it protects against coastal flooding.
- As a result of its stability in a variety of design scenarios, it protects against coastal flooding.
- Storm surges and waves can be absorbed by tidal lagoons once every 500 years.

- Tidal power equipment and infrastructure can last much longer and be more cheap than those for other renewable energy sources.

Limitations of Tidal Energy
- Construction of tidal power plants is now more expensive due to the high capital requirements.
- The biggest environmental problems are noise from the turbines, altered sedimentation processes, altered habitat, and fish entering the lagoon and getting hit by blades.
- However, each of these effects is particular and doesn't affect the estuary or bay as a whole.
- Equipment maintenance and repair might be difficult.
- There is a meagre need for energy. Strong tides normally only last for 10 hours each day, hence tidal energy storage capacity must be developed.
- It is difficult to provide tide energy to coastal areas since the energy produced by the tides is frequently located distant from where the electricity would be used inland.

Conclusion

India has a long coastline that includes estuaries and gulfs that can be utilized to their fullest extent to capture this energy. Ocean currents and tidal streams are enormous. Unlimited resources can be used to generate vast amounts of electricity with only small environmental impacts. The Ministry of Earth Sciences' National Institute of Ocean Technology in Chennai is in charge of fundamental research and development, but faster understanding and technology development will result from more input from other illustrious universities.

6.16 WATER TRADING

Latest Context

In order to encourage the reuse of treated wastewater, NITI Aayog recently published a document on water trading methods.

About Water Trading Mechanism
- Water Trading is a system for the water market that treats water more like a commodity than a public good. Users can exchange it among themselves based on their requirements.
- **Mechanism:** Instead of developing its own water source, a water company can purchase water from a third party and sell it to the users.
- **Enabling elements for Water Trading:**
  o Ownership of water - should be indisputable.
  o Water entitlements- could be transferred.
  o **Water Reuse Certificates (WRCs):** as tradable permits. Water users from all industries, including municipal/residential, industrial, and agricultural sectors, must register and get personalized targets for water reuse under the WRC trading system. In order to help other water users, meet their wastewater reuse goals, water customers who have WRCs can sell them on the open market.

Need for reuse of treated wastewater through water trading
- **Rising pace of urbanization:** In India, only 40% of urban wastewater is treated, and even that amount is not recycled.
- **Unequal spatial distribution:** Water distribution is subject to large temporal and spatial variations. For instance, India receives more than 80% of its annual rainfall within just four months.
- **Private hand in water management:** The 2002 & 2012 National Water Policy suggested a private sector intervention in water management, with a strong emphasis on public and private partnerships.
- **Rising water pollution:** The main factor contributing to water contamination is wastewater, which includes agricultural runoff. With an estimated 80% of wastewater entering aquatic bodies untreated globally, it is inextricably tied to both human and ecosystem health. (2023 UN World Water Report).
- **Tackling water scarcity:** Around 80% of those who experienced water stress were found in Asia, particularly in northeast China and India. (UN World Water Report 2023).
- **Low water use efficiency in Indian agriculture:** Over 60% of irrigation water is consumed by crops like sugarcane and paddy, which absorb around 89% of the groundwater that is pumped for irrigation. India also exports a significant amount of water virtually because to the export of agricultural goods.

Challenges

- **Pricing:** The costs associated with treating wastewater and distributing it to industrial facilities or farm fields may be too high compared to the price of fresh water. Since fresh water is frequently even free of charge, it is readily available.
- **Storage:** Since the production of wastewater is a continuous activity, so should the process of treating it. However, it's possible that demand will fluctuate over the course of the year. For instance, crops might not need irrigation for a while, and industrial unit demands might change. Either storing treated wastewater or releasing the treated water into other freshwater sources would be necessary in this situation.
- **Identification and generation of demand:** In order to turn treated wastewater and water into a commodity that can be traded, demand must exist.
- **Supply assurance:** Supply interruptions could result from plant maintenance, sewage network disruptions, issues with the quality of treated or intake sewage, distribution network disruptions, etc.
- **Water as a basic human right:** In India, water is not regarded as a good or as having much of an economic value. This is mostly due to the necessity of water being recognized as a fundamental human right.

World's Best Practices in Water Trading

- **Australia:** Water trade is one of the finest ways to use water effectively, as the Murray Darling Basin has demonstrated. Water trading aids farmers in using water more effectively and supports long-term water management.
- **Spain:** The conditions in those areas where water scarcity was most severe were improved by water market exchanges.
- **South Africa:** one of the world's most advanced water frameworks. The system in South Africa allows for the reallocation of existing water rights.

Way forward

- creation of independent regulatory bodies (IRAs) with legal authority to decide on water allocation and treatment wastewater pricing. Currently, 12 Indian states have passed legislation to create IRAs, but most of them only have the authority to control water prices for agricultural purposes.
- the development of a trading platform and the inclusion of all parties. establishing the reuse goal and deciding on the standards for the quality of treated wastewater as well as the credits and worth of Water Reuse certificates (WRCs).
- Locating potential reuse locations for the treated wastewater, including industrial clusters, municipal and residential buildings, agricultural fields, and environmental demands.
- Site-specific plans for reuse may be created using GIS technologies, and social mobilisation through NGOs would be necessary to get beyond the stigma associated with using treated wastewater.
- Establishing consistent monitoring systems and conducting social impact assessments under the guidance of IRAs.
- **Towards water neutrality:** The water neutrality concept proposes that the overall water consumption should remain constant despite the construction of additional developments. Achieving water neutrality can be facilitated by encouraging water reuse.

6.17 UNREGULATED TOURISM IN THE INDIAN HIMALAYAN REGION (IHR)

Latest Context

A recent recommendation from a Parliamentary Standing Committee was made to the government to prepare a practice action plan with precise deadlines to stop damaging actions in IHR.

More on news

- The enormous development in tourism-related activities in IHR was emphasized by the Parliamentary Standing Committee on Science and Technology, Environment, Forest, and Climate Change. This has resulted in an overuse of natural resources and illegal construction.
- This includes encroachments such as homestays, guest houses, resorts, hotels, and eateries.

Specific vulnerabilities of the IHR

- **Geo-physical:** The majority of the deposits in the tectonically active Himalayas are unconsolidated or semi-consolidated. River currents in valleys like the Alaknanda, Bhagirathi, Mandakini, etc. undercutting. Land subsidence, similar to that seen in Joshimath, Uttarakhand earlier this year, was caused by hill washing and water percolation brought on by rain, cloud bursts, and snowmelt.
- **Socio-economic:** Deforestation on hill slopes for construction, grazing, agriculture, etc. causes landslides, avalanches, etc. building of numerous large-scale hydroelectric power projects, such as the Tehri Dam Reservoir in the Tehri Garhwal district, which have obstructed the natural flow of water.
- **Rising Tourism:** IHR reports roughly 100 million tourists annually, and by 2025, that number is projected to rise to 240 million, placing enormous strain on resources. According to Niti Aayog, tourism accounts for more than 10% of the GSDP in various states, including Uttarakhand, West Bengal, Tripura, Assam, etc.

Challenges of unregulated tourism in the IHR

- **Waste generation:** The 2018 Niti Aayog report estimates that 8.395 million tonnes (MT/Y) of solid trash are produced annually in the IHR States as a result of tourism. The issue was made worse by disorganized garbage collection, segregation, disposal, and recycling. Watersheds and water supplies are also harmed by it.
- **Forests and biodiversity:** loss of natural forest cover due to the construction of numerous tourism infrastructures, including lodging, transportation, etc. Ecosystem services and biodiversity are impacted by the loss of natural resources.
- **Landscape:** structures that are unsuitable, unattractive, and unsafe are being used to replace conventional, aesthetically pleasing, and environmentally beneficial infrastructure.
- **Seasonality of tourism:** High seasonal swings in tourism activity cause a variety of issues, including crowding, a shortage of services, etc.
- **Socio-cultural:** Erosion of cultural fabric and social values of collectivism due to mass tourism.

Initiatives undertaken to promote Sustainable Tourism

- **National Strategy for Sustainable Tourism:** to promote a more resilient, inclusive, carbon-neutral, and resource-efficient tourism industry in India by mainstreaming sustainability.

Crop Diversification - For Resolving Water Crisis in Agriculture

It refers to a shift from the regional dominance of one crop to regional production of a number of crops, to meet the increasing demand for cereals, pulses, vegetables, fruits, oilseeds, etc. In addition to water conservation, it aims to improve soil health and to maintain the dynamic equilibrium of the agro-ecosystem.

Various measures taken
The Crop Diversification Programme, a sub-scheme of Rashtriya Krishi Vikas Yojana is being implemented in Original Green Revolution States to divert the area of paddy crops to alternate crops.

The government is using MSP as a signal to encourage crop diversification towards the production of oilseed. (Economic Survey 2022)

State-specific schemes to pay farmers for leaving their fields uncultivated or switching from paddy to other crops. Financial incentive for farmers who adopt direct-seeded rice (DSR) - a method that consumes less water than the traditional way of transplanting paddy seedlings.

Significance
In Haryana, these initiatives saved 31,500 crore liters of water and brought 72,000 acres of land under DSR in 2022 during the Kharif season.

Paddy is not a natural crop in Haryana, Punjab etc.

Mono cropping pattern reduces resource use efficiency.

Concerns
Can harm farmers' income & and India's food security.

Net return to a farmer favors the cultivation of paddy over maize in the Green Revolution belt.

Lack of awareness among farmers about the benefits of crop diversification.

- **Swadesh Darshan 2.0:** includes a vision of sustainable and responsible tourism across numerous projects.
- **Swachh Paryatan Mobile Application:** To allow people to report any hygiene issues at tourist places.

Way Forward
- **Planning, implementation, and monitoring:** It is important to have a multi-year plan for sustainable tourism that addresses problems with the economy, society, health, and safety. It ought to be carried out in the spirit of regional community collaborations.
- **Policy and regulations:** By enforcing the 2016 Solid Waste Management Rules and 2016 Plastic Waste Management Rules, zero waste destinations can be promoted. Tourism service providers' environmental performance, carbon emissions, and certification are audited. Pollution can be decreased with the use of standard certification programmes and eco-labeling for tourism businesses that adhere to environmental standards. Clear landscape zoning (a Land Use Plan based on stakeholder interests and maps) will help with monitoring and direct site-specific interventions as needed.
- **Institutions and Processes:** integration of destination and infrastructure planning and implementation across departments. Environmental, economic, social, and tourism strategies, milestones, and problems are actively monitored and reported to the public in accordance with SDG Targets and Indicators. Creating climate-smart infrastructure to divert funds away from high-risk regions, evaluating projects and policies through strategic environmental assessments, disclosing climate risk, etc.
- **Finance and market:** Introducing 'Green Cess', Payment for Environmental Services based on eco-certification, etc. Explore new tourism circuits and packages to offer diversified destinations and for de-congestion of mass tourism sites. On the pattern of smart cities, "smart mountain tourism destination" business plans could be prepared.
- **Technology:** for effective planning, creating tourism satellite accounts of IHR, multi-hazard zoning, geomorphological mapping along significant river valleys, etc.
- **Capacity building:** Create and conduct an awareness-raising program particular to IHR using proactive media campaigns and visitor information centres.

6.18 SHORTS NEWS

6.18.1 URBAN RIVER MANAGEMENT PLANS (URMPS)

Key Points
- The proposal for creating URMPs for 60 cities has received approval from the National Mission for Clean Ganga (NMCG) Committee.
- Project is a part of Namami Gange's River-Cities Alliance (RCA).
- A collaborative project of the Ministries of Housing and Urban Affairs (MoHUA) and Jal Shakti (MoJS), RCA was launched in 2021 with the goal of connecting river cities and putting a strong emphasis on river-centric development.
- There will be two phases to the project. 25 cities from the five main stem Ganga basin states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal would be included in the first phase.
- The main stem, into which other, smaller streams or rivers flow, is the main waterway of a drainage system.
- The World Bank will pay for it.
- **Need for Urban River Management:**
  o Make sure that the floodplain is effectively regulated for operations.
  o Grey water and sewage drainage, erosion brought on by deforestation, and other factors all contribute to water pollution.
  o Absence of a defined "River Regulation/Riparian Zone" in either legislation or a designated land-use category.
  o religious customs like cremation, mass bathing, and idol immersion.
- **Interventions by URMPs:**
  o fostering a culture of river sensitivity among the populace.
  o Create eco-friendly riverfront initiatives.
  o Rejuvenate the city's wetlands and waterways.
  o Make sure the river receives the most high-quality return flow possible from the city.

o   Utilise the river's economic potential.

6.18.2   THAROSAURUS INDICUS

Key Points

- In a report just released, researchers from IIT Roorkee described Middle Jurassic dinosaur bones discovered by the Indian Geological Survey in the Thar desert close to the Jaisalmer Basin.
- **About Tharosaurus indicus:**
    o   It is a member of the subfamily Diplodocoidea and the family Dicraeosauridae.
    o   The dicraeosaurid sauropod fossils discovered in India are unique.
    o   It is the oldest known diplodocoid fossil in the world at 167 million years old.
    o   The dinosaur was given the name Tharosaurus indicus by experts, with Tharo coming from India and Saurus from the Greek word "sauros," which means "lizard."
    o   The members of this family were different from the other long-necked sauropods in that they were smaller and had shorter necks and tails.
    o   Around 200 million years ago, during the Jurassic period, sauropods first arrived on Earth.
    o   When the dinosaurs became extinct 65 million years ago during the late Cretaceous period, they were one of the most dominating clades of dinosaurs.
    o   Dicraeosaurid dinosaur fossils, according to scientists, have previously been discovered in North and South Americas, Africa, and China, but such fossils were unknown from India.

6.18.3   TURTLES AND TORTOISES

Key Points

- Turtle Survival Alliance (NGO) and Pilibhit Tiger Reserve (Uttar Pradesh) collaborated on turtle and tortoise conservation.
- Reptiles include both turtles and tortoises.

Turtle	Tortoise
Most turtles are primarily water-dwelling reptiles	Tortoises are land-dwelling reptiles
Turtles are usually omnivores	Tortoises are primarily herbivores
Turtles generally have lighter shells on their backs	Tortoises have much heavier and robust shells
Not all turtles are Tortoises	All tortoises are turtles, as they belong to the order Testudines
Turtles usually have a shorter life span from 20-40 years	Tortoises usually have a long life from 80-150 years

6.18.4   METHYLOTUVIMICROBIUM BURYATENSE 5GB1C

Key Points

- According to a recent study, Methylotuvimicrobium Buryatense 5GB1C may be able to absorb methane from significant emission sources such oil and gas wells, landfills, and paddy fields.
- Methane, which is almost 85 times more potent than carbon dioxide (CO_2) on a 20-year timeline and contributes to nearly 30% of all global warming, is consumed by the bacterial strain Methylotuvimicrobium buryatense 5GB1C.
- By 2050, the atmosphere could be spared 240 million tonnes of methane thanks to widespread use of these bacteria.

- By 2050, it is possible to limit the rise in average global temperature by 0.21–0.22 degrees Celsius by removing 0.31–1. ptragrams of methane.
- **Pentagram:** A unit of mass equal to 10^15 grams.
- **Methanotrophs:**
  - Methanotrophs, commonly referred to as methane-eating bacteria, are a class of microbes that have the unusual capacity to use methane as their main source of carbon and energy.
  - By turning methane into carbon dioxide (CO_2), a less potent greenhouse gas, they are essential in reducing the effects of methane emissions.
  - **Habitat:** Methanotrophs can be found in a variety of habitats, such as marshes, soils, oceans, and even some animals' digestive tracts.

6.18.5 FUJIWHARA EFFECT

Key Points
- Hurricane Hilary, which just hit the western coast of the US before becoming a subtropical storm, made landfall there.
- As a result of this circumstance, the National Hurricane Centre (NHC) issued its first tropical storm watch for parts of Southern California.
- California experienced an unusually wet winter with numerous "atmospheric river" storms. During one of these storms, the region also witnessed the fascinating "Fujiwhara effect," in which two low-pressure zones interacted in an unexpected way.
- the "Fujiwhara effect," whereby two cyclones (or storms) spinning in the same direction interact in a way akin to dancing around a central point. One cyclone can absorb another if it is stronger.
- Similar in strength, they may combine or revolve around one another. Rarely, the two cyclones can combine to form a megacyclone with a high potential for destruction.
- Sakuhei Fujiwhara, a Japanese meteorologist, originally reported the Fujiwhara effect in 1921.

6.18.6 STATE OF INDIA'S BIRDS 2023 REPORT

Key Points
- The greatest notable losses in population have been seen in raptors, migratory shorebirds, and ducks.
- Nevertheless, a number of species, like the Indian Peafowl, Rock Pigeon, Asian Koel, and House Crow, are thriving and expanding in number and range.
- The analyses, which are based on information from almost 30,000 birdwatchers, show that 36 species have increased while 60% of the 338 species with discernible long-term trends have decreased.
- Specialist bird species that live in particular ecosystems, such as wetlands and rainforests, are experiencing significant reductions, whereas generalist species that can adapt to a variety of habitats are doing better.
- While resident species continue to be more stable, long-distance migratory birds, such as those from Eurasia and the Arctic, have experienced considerable reductions.
- It's possible that the toxic chemicals found in these food sources are to blame for the noticeable decreases in birds whose diets primarily consist of vertebrates and carrion.
- The decrease of species native to Sri Lanka's biodiversity hotspots and the Western Ghats is highlighted in the report.
- **main threats to birdlife in India:** Climate Change, Monocultures, Urbanization, and Energy Infrastructure.

1 Storms that come within 900 miles can be influenced by each other's spin. Like two dancing skaters, storms can rotate around a central point, even as the central point moves in a single direction.

Central point

900 miles

2 If one storm is much stronger than the other, it can absorb the weaker one into its circulation.

Sources: National Hurricane Center, University Corporation for Atmospheric Research

7.   ETHICS

7.1   MEDIA ETHICS AND SELF-REGULATION

Context
- In August 2023, the Supreme Court expressed concerns that the mechanism established for self-regulation of television channels in India by the News Broadcasting and Digital Standards Authority (NBSA) is not strict enough to ensure that television channels will abide by it.
- This emphasizes the value of upholding media ethics in the present day, in which violations are expanding.

SC's Observations
- **Need of avoiding pre- or post-censorship by the government:** The court applauded the concept of self-regulation by media outlets but underlined that such mechanisms should be more successful in preventing unethical behavior.
- **Notice Issued to Strengthen Regulatory Framework:** The court stressed the importance of determining whether additional efforts should be taken to improve the self-regulatory mechanisms now in place, both in terms of their scope of application and the ultimate penalties for violations.
- **Concerns Over Media coverage:** The supreme court highlighted that rather than actively influencing public opinion, the media should support the presumption of innocence unless proven guilty.
- **Proposals to Enhance Fines and Guidelines:** The court suggested that fines should be proportionate to the revenues made by the entire event and questioned the appropriateness of the current Rs 1 lakh fine imposed for violations.

> **News Broadcasting & Digital Standards Authority (NBDSA)**
> - **About**: It is an independent body set up by the News Broadcasters & Digital Association.
>   - In August 2021, News Broadcasters Association was renamed as News Broadcasters & Digital Association after inclusion of digital media news broadcasters in the association.
> - **Objectives**: It was created to consider and adjudicate complaints about broadcasts.
> - **Members**: 27 leading news and current affairs broadcasters (comprising 125 news and current affairs channels).
>
> **Media Ethics**
> - **About**: It is a branch of ethics that addresses moral issues arising in connection with the acquisition, preparation, storage, presentation, dissemination, and reception of information through the means of mass media.
> - **Key stakeholders in Media Ethics**: Media actors, Government, General Public and Police.

Regulation of media in India
- **Print media:** The Press and Registration of Books Act of 1867, which allows for the registration, regulation, and preservation of every copy of books and newspapers printed in India, and the Press Council Act of 1978 constitute the two main Acts that primarily govern it.
- **Cinema:** The Cinematographic Act of 1952 regulates it and also creates the Central Board of Film Certification as a regulatory authority to accredit cinematograph films, screenings of movies, and oversee those screenings.
- **Telecommunication sector:** The Telecom Regulatory Authority of India Act, 1997 governs it.
  - The Telecom Regulatory Authority of India is responsible for enforcing this Act's regulations, arbitrating disputes, deciding appeals, and defending the interests of service providers and customers.
- **Digital media (includes websites, blogs, video platforms like YouTube, and social media sites)**: These are governed by the Information Technology Act of 2000's provisions and the rules outlined in section 69 of that act, referred to as the Information Technology (Intermediary Guidelines and Digital Media Ethics Code), Rules 2021 (hence, IT Rules, 2021).
  - These platforms are referred to as "intermediaries" under the governing law since they serve as an intermediary for communication between two or more parties.

Principles of media ethics
- **Aristotle's golden mean theory**: This approach focuses on the middle ground between two extremes which could be applied to media ethics when removing identities from sensitive articles or obscuring the faces of criminal victims.

- **Harm Limitation Principle:** It states that in order to avoid hurting particular groups of people, journalists and reporters have to convey an incident to the wider public while using the utmost caution.
- **Principle of utilitarianism:** According to the theory, if surrendering a few people's privacy would help the wider public have more access to information, utilitarianism can be used as justification.
- **Deontology**: Focuses on a person's duty as a way to decide what course of action is suitable, and it is the responsibility of the media to serve the public by disseminating information that is neutral and that encourages knowledge and reason.

Issues and Concerns
- **Conflicts of Interests:** One of the cornerstones of media ethics is objectivity. However, a problem arises when a person is asked to cover a story concerning someone with whom they already have a personal relationship.
- **Confidentiality and Integrity**: When reporters used information about a person's private behavior to inform special stories, grave ethical problems have been raised.
- **Bias and subjectivity:** News reports are frequently reported and biased in a way that raises questions about the goals and objectives of the news media.
- **Cross-media ownership by big corporate companies:** The likelihood that the media will compromise regulatory goals to its own business ambitions increases when regulation is left to the media itself.
- **Media and market pressure**: Excellence in journalism has suffered from and continues to suffer from business imperatives to increase income.
- **Inadequate penalty**: Currently, a fine of Rs. 1 lakh is ineffective since it is out of proportion to the revenue the guilty channel made from the similar program.
- **Absence of journalistic ethics:** It is reflected in inaccurate news being broadcasted.
  - **For example:** Actor Sushant Singh Rajput's Death coverage by the media.
    - One of the National TV News channels showed fake tweets as Sushant Singh Rajput's last words.

Way Forward
- **Self-regulation in the broadcast media:** It might be the most effective method for achieving an agreement between the media's responsibility to strengthen the public's engagement in participatory governance and the necessary limitations that prevent misuse of its tremendous power.
- **Need for a universal code of ethics**: The following rules are specified for journalists:
  - Accept accountability for the truthfulness of their work.
  - Never purposefully misrepresent context, facts, or visual data.
  - acknowledge a special responsibility to watch over politics and the general good.
  - In order to eliminate bias while looking for the truth, objectivity is a crucial method.
- **Need for media training**: Media organizations may start it as a part of journalistic training programs. Reporters must now focus on understanding the sensibilities of their viewers.

<table>
<tr><td></td><td>**8.**</td><td>**SCHEMES**</td></tr>
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8.1   DIGITAL INDIA PROGRAMME

Context
- In August 2023, the Union Cabinet, chaired by the Prime Minister, approved the expansion of the Digital India programme which was launched on 1st July, 2015 to enable digital delivery of services to citizens.

Initiatives will be taken
- **Future Skills Prime Programme**: More than 6 lakh IT professionals will be re-skilled and up-skilled under this programme.
  - **Future Skills PRIME (Programme for Reskilling / Upskilling of IT Manpower for Employability) programme:** It is jointly conceived by the Ministry of Electronics and Information & NASSCOM that aims to reskill 2 million professionals, future workers, and students over the course of five years.
- **Information Security & Education Awareness Phase (ISEA) Programme:** More than 2 lakh persons will be trained in information security under this programme.
- **ISEA Programme**: It is a MeitY-funded project for building information security capacity to address the nation's need for human resources through training of government employees, raising general awareness of information security, and developing a national repository of information security courses to develop defenses against various types of attacks.
- **UMANG App**: 540 additional services will be available under the Unified Mobile Application for New-age Governance (UMANG) app/ platform. Presently, over 1,700 services are already available on UMANG.
  - **UMANG (Unified Mobile Application for New-age Governance)**: It is a mobile application to provide secured access to the citizens to multiple government services at one platform.
- **National Super Computer Mission**: 9 more supercomputers will be added under this mission which is in addition to 18 supercomputers already deployed.
  - **National Super Computer Mission**: It was launched in 2015 to enhance the research capacities and capabilities in the country by connecting them to form a Supercomputing grid, with National Knowledge Network (NKN) as the backbone.
- **Bhashini**: It is an AI-enabled multi-language translation tool (currently available in 10 languages) and will be rolled out in all 22 languages (mentioned in the 8th Schedule to the Constitution of India).
- **National Knowledge Network (NKN):** Modernization of the NKN which connects 1,787 educational institutions.
  - A multi-gigabit pan-India network called NKN promotes research, develops cutting-edge applications and services, and makes it easier for India's communications infrastructure to grow.
- **Digi Locker**: Digital document verification facility under Digi Locker will now be available to MSMEs and other organizations.
  - **Digi Locker**: It is a flagship initiative of MeitY under 'Digital India' programme to create an electronic version of documents, which can be easily verified and stored in printable format.
- **Startups**: 1,200 startups will be supported in Tier 2/3 cities.
  - The term startup refers to a company in the first stages of operations which are founded by one or more entrepreneurs who want to develop a product or service for which they believe there is demand.
- **3 Centers of Excellence** in Artificial Intelligence on health, agriculture and sustainable cities will be set up.
- **Center of Excellence (CoE)**: It is a body, under the Ministry of Skill Development and Entrepreneurship, that provides leadership, best practices, research, support, training of trainers and skill training for a specific sector.
- **Cyber-awareness courses**: for 12 crores college students.
- **National Cyber Coordination Centre (NCCC)**: New initiatives in the area of cyber security including development of tools and integration of more than 200 sites with the NCCC.
  - **NCCC**: It is a multi-stakeholder cyber-security and e-surveillance agency implemented by Indian Computer Emergency Response Team (CERT-In), Union Ministry of Electronics and Information Technology.

Digital India Programme
- **About**: It is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy.
- **3 Vision Areas of the Programme:**
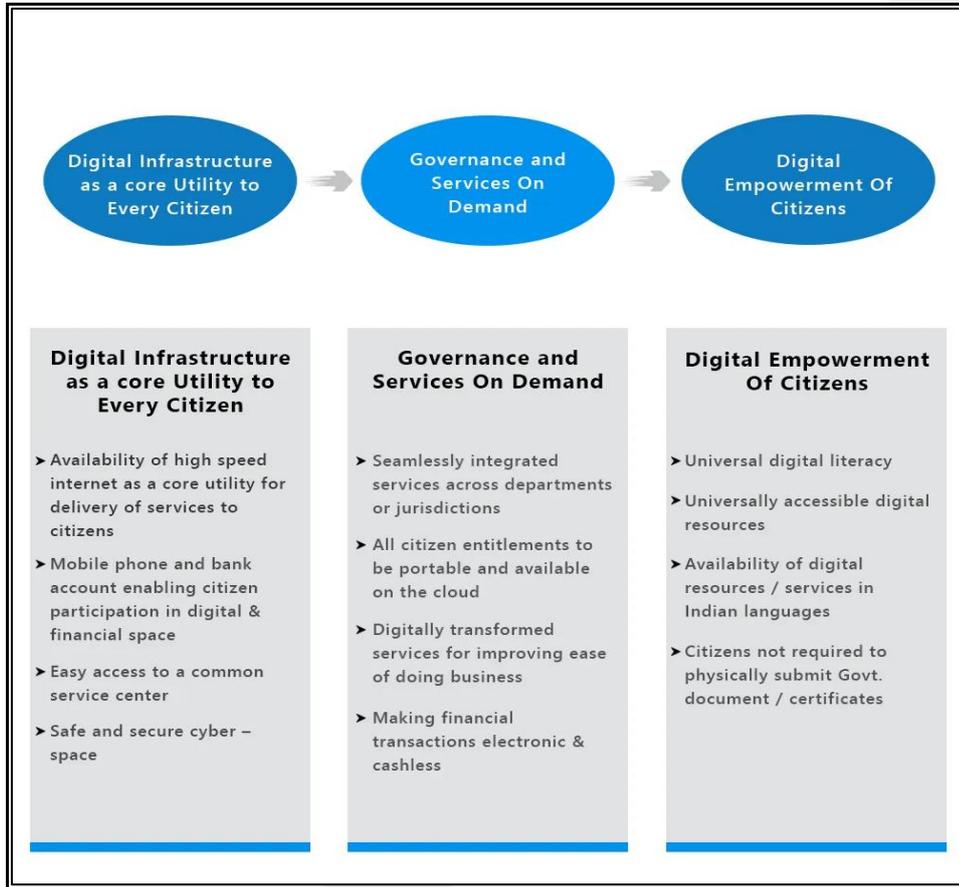
- **9 Pillars of the programme:**
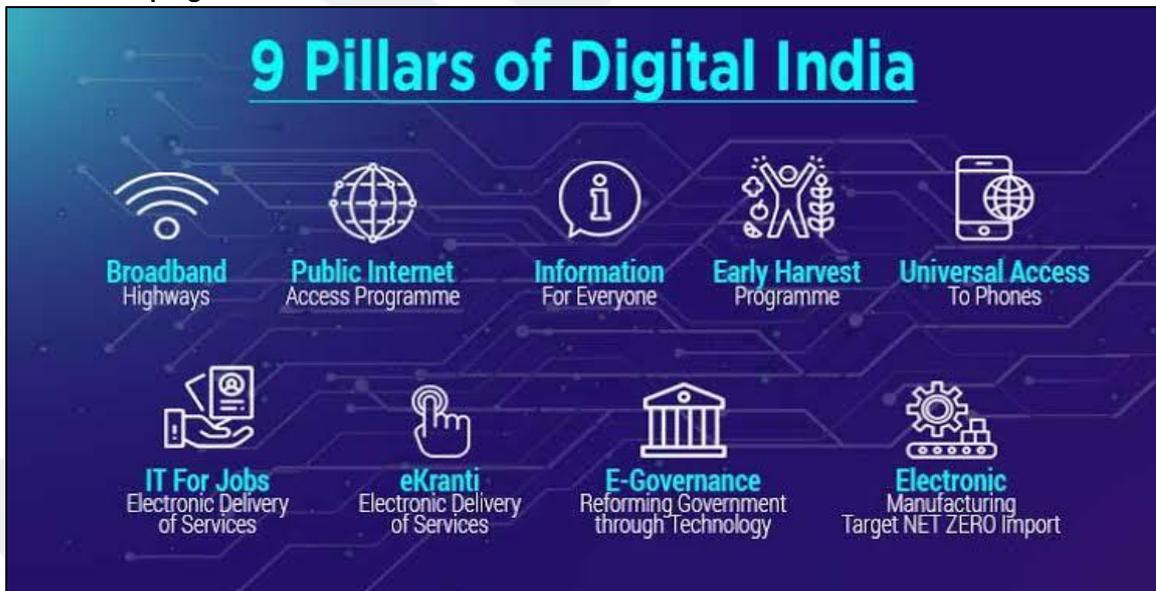
- **Key Initiatives:** Aadhar, Common Service Centres (CSCs), Digi Locker, Digi Sevak, Bharat Broadband Network Limited, CERT-In, Centre of Excellence for IoT, Cyber Swachhta Kendra etc.
- **Key Achievements:**
  o **During COVID:** Technology was essential in the pandemic for maintaining access to healthcare, education, and other public services.
    ▪ Contact tracing app, Aarogya Setu, has played a key role in containing the spread of Covid in the country.
  o **Digital Education:** Students all around the country have access to affordable tablets and digital devices.
  o **Production-linked subsidies:** Given to electronic companies to realize this goal.
  o **MyGov**: A citizen engagement platform that is developed to facilitate participatory governance.

- More than 2 crores users are registered with MyGov, participating in various activities hosted on MyGov platform.
  - o **Digital Village**: MeitY has also initiated the 'Digital Village Pilot Project" in October, 2018.
    - 700 Gram Panchayats (GPs)/Village with at least one Gram Panchayat/Village per District per State/UT are being covered under the project.
  - o **Offering Digital Services**: Such as Digital Health Services, Education Service, Financial Services, Skill Development, Solar panel powered street lights including Government to Citizens Services (G2C), Business to Citizen (B2C) Services.

8.2　SVAMITVA SCHEME

Context
- **SVAMITVA (Survey of Villages Abadi and Mapping with Improvised Technology in Village Areas) Scheme** has been conferred with the National Award for e-Governance 2023 for Application of Emerging Technologies for Providing Citizen Centric Services.

SVAMITVA Scheme

	National Award for e-Governance
	• **About**: Presented every year for exemplary implementation of e-Governance initiatives to recognize and promote excellence in implementation of e-Governance initiatives.
	• **Nodal Agency**: Presented by the Department of Administrative Reforms and Public Grievances (DARPG), ministry of Personnel, Public Grievances and Pensions.
	o It is presented during the National conference on e-Governance.
	• **Theme for National conference on e-Governance 2023:** " Viksit Bharat - Empowering Citizens "
	• **Awards**: Comprises a trophy, certificate, and cash prize of Rs. 1 lakh.

About	• An initiative to provide rural people with the right to document their residential properties so that they can use their property for economic purposes. • The land parcels in rural inhabited areas of all the villages are surveyed using drone technology.
Benefits	
Nodal Ministry	• Ministry of Panchayati Raj.

| **Type**	• **Central Sector Scheme (CSS):** Schemes that are fully funded and implemented by the central government.
Main activities under the Scheme	• Large Scale mapping using Drones • SVAMITVA Dashboard for real time progress monitoring of scheme implementation • Gram Manchitra for the Enhancement of the Spatial Planning Application 'Gram Manchitra' and Central Infrastructure. • Information, Education, and Communication (IEC) activities to spread awareness of the scheme.
Implementing Agency	• Ministry of Panchayati Raj, Survey of India (SoI), State Revenue Department, State Panchayati Raj Department and National Informatics Centre.
Target	• Coverage of more than 6 lakh villages in the country from 2020-21 to 2024-25.

9.   CULTURE

9.1   150TH BIRTH ANNIVERSARY OF SRI AUROBINDO GHOSH

Latest Context:

On 15th August, the year-long celebration of the 150th Birth Anniversary of Sri Aurobindo concluded at Auroville, Puducherry.

He who chooses the infinite has been chosen by the infinite.
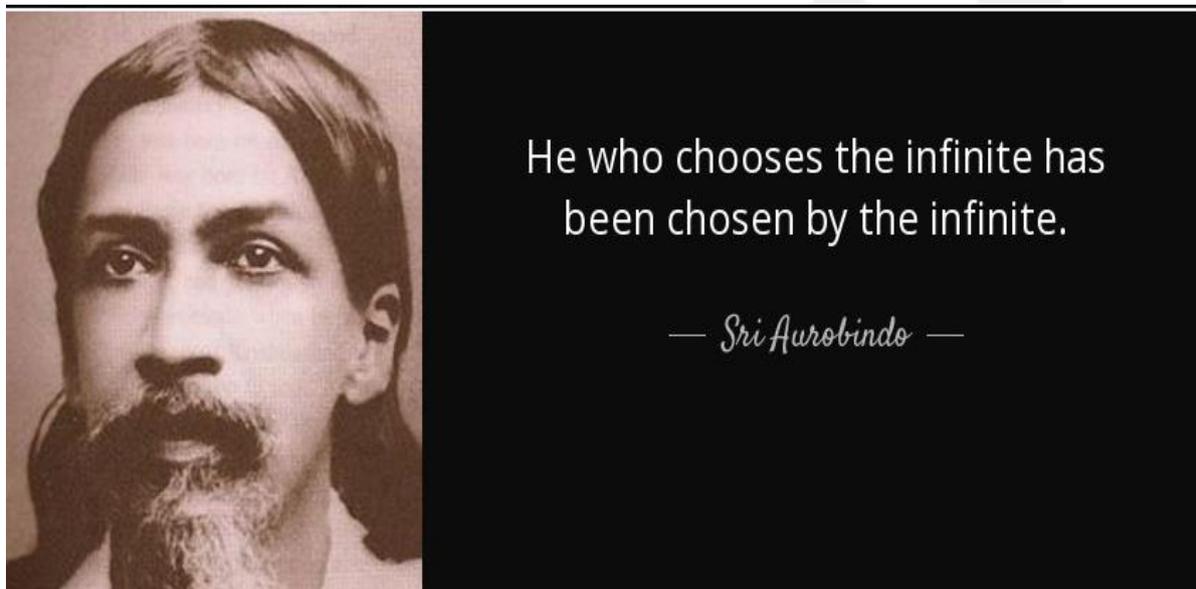
— Sri Aurobindo —

About Sri Aurobindo Ghosh

- **15th August, 1872:** Sri Aurobindo was born in Calcutta, to a Bengali family.
- **1879-1884:** He studied at Loreto Convent School and then at St. Paul's School in London, where he tops in academics and learned English, French, and Latin.
- **1890:** Sri Aurobindo returned to India and joins the Presidency College in Calcutta. He develops an interest in Indian culture, literature, and spirituality.
- **1893:** He passes the Indian Civil Service (ICS) examination but decides not to take up the job and instead chooses to work for the upliftment of the people of India.
- **1905:** Sri Aurobindo becomes actively involved in the Indian freedom struggle against British colonial rule, advocating for complete independence.
- **1906:** He joined the leadership of the extremist faction of the Indian National Congress and becomes a prominent nationalist leader.
- **1908:** Aurobindo Ghosh was arrested in connection with the Alipore Bomb Case but got released after a year in prison.
- **1910:** He retires from politics and goes into isolation, moving to Pondicherry, which was then a French colony, to dedicate himself to spiritual activities.
- **1914:** Sri Aurobindo's spiritual transformation deepens, and he begins to promote his integral yoga philosophy and the idea of human evolution towards a higher consciousness.
- **1926:** He collaborates with Mirra Alfassa (The Mother) in developing the Sri Aurobindo Ashram in Pondicherry as a center for spiritual practice and growth.
- **1938:** Sri Aurobindo withdraws from public appearances and focuses on his writings and spiritual work.
- **1947:** India gains independence from British rule, fulfilling Sri Aurobindo's lifelong dream of a free India.
- **1950:** On December 5, Sri Aurobindo passes away in Pondicherry, leaving behind a legacy of spiritual teachings, writings, and a great ashram that continues to attract followers from around the world.

Sri Aurobindo's contribution in the national movement

- **Philosophical Foundation:** His early writings and speeches provided a strong philosophical and intellectual foundation for the Indian nationalist movement. He emphasized the importance of India's spiritual heritage and called for a revival of its cultural and values as a means of achieving political and social freedom.

- **Prominent Leader:** In early 20ᵗʰ century, Aurobindo Ghosh emerged as a prominent leader within the Indian National Congress and the broader nationalist movement. He played a key role in the extremist faction of the Congress, advocating for more radical and militant approaches to achieving independence.
- **Editorial Work:** Aurobindo was the editor of several nationalist publications, including "Bande Mataram" and "Karmayogin," where he used his writing to promote the cause of Indian independence and to inspire and mobilize the masses.
- **Swaraj and Self-Reliance:** Aurobindo emphasized the importance of self-reliance and self-governance (Swaraj) for India. His writings and speeches promoted the need for India to free itself from British colonial rule and to govern its own affairs.
- **Political Activism:** He actively participated in various political activities and agitations, including the Swadeshi Movement and the boycott of British goods. He believed that economic self-sufficiency was essential for India's political independence.
- **Advocacy for Militancy:** Aurobindo did not shy away from advocating militant resistance, when he believed it was necessary. He famously declared, "I say, Beware of Bhawani who talks of peace," expressing the need for a strong and determined struggle for freedom.
- **Intellectual Legacy:** Even after his withdrawal from active politics, Aurobindo continued to inspire and guide the nationalist movement through his writings and philosophical works, emphasizing the spiritual and cultural dimensions of India's demand for independence.

Conclusion:

Sri Aurobindo's life is a journey of transformation from a nationalist leader to a spiritual philosopher and yogi. His teachings on yoga, spirituality, and human evolution continue to influence people seeking a deeper understanding of life and consciousness.

9.2   CHESS WORLD CUP 2023

Latest Context

In August, 2023 Indian Grandmaster Rameshbabu Praggnanandhan achieved second place in the final of the International Chess Federation (FIDE) World Cup 2023.

About FIDE World Cup

FIDE World Cup 2023: The World Cup is a major chess event organized by the international governing body FIDE.

- The players finishing 1st, 2nd and 3rd in the FIDE World Cup qualify to participate in the FIDE Candidates Tournament 2024.
- FIDE Candidates Tournament 2024: This tournament is between 8 players, selected through different criteria and tournaments in the following manner-
    - 3 spots – FIDE World Cup 2023, three players who finished first, second (Praggananand) and third.
    - 2 spots – FIDE Grand Swiss Tournament 2023, two players who finish 1st and 2nd.
    - 1 spot – FIDE World Championship Match 2023, Runner-up.
    - 1 spot – High-Level International Tournaments (HIT), the player with the best results during one year (2023).
    - 1 spot – The highest-rated player by standard rating in the January 2024 rating list provided that the player has played at least four standard-eligible tournaments.

FIDE World Chess Championship: It is held between the Reigning Champion and the Winner of the Candidates Tournament (the Challenger). This match determines the actual World Chess Champion.

- Ding Liren (China) is the current Champion, and he will be challenged by the Winner of the Candidates Tournament to be held in 2024.

VARIOUS CHESS TITLES

Titles	Ratings required
Grandmaster (GM)	2300
International Master (IM)	2200
FIDE Master (FM)	2100
Candidate Master (CM)	2000
Woman Grandmaster (WGM)	2100
Woman International Master (WIM)	2000
Woman FIDE Master (WFM)	1900
Woman Candidate Master (WCM)	1800

About Chess Titles
- The most prestigious chess titles have been awarded by the FIDE based on player ratings.
- These titles are retained for life as soon as they have been earned.
- Chess titles indicate the strength of the best players.
- Chess titles are also awarded by some national federations.
- Viswanathan Anand is a five-time world champion and India's first grandmaster.
- India has around 83 grandmasters now. Two of them are women, including Koneru Humpy and Harika Dronavalli.

Conclusion

With younger players like Rameshbabu Praggnanandhaa D Gukesh, Arjun Erigaisi, and Nihal Sarin making a mark, it also signals a generational shift in the game itself, and that shift is likely to favour India heavily.

Rameshbabu Praggnanandhaa

Born	10 August 2005 (age 18) Chennai, Tamil Nadu, India
Title	Grandmaster (2018)
FIDE rating	2727 (September 2023)
Peak rating	2727 (September 2023)
Ranking	No. 19 (September 2023)
Peak ranking	No. 19 (September 2023)

9.3 GEOGRAPHICAL INDICATION (GI) TAGS

Latest Contest:
Recently in August, various products were given the Geographical Indication (GI) tag by the Geographical Indications Registry (Chennai).

About the Geographical Indication (GI) tag
- It is a **form of protection that is granted to products that originate from a specific geographical region and possess qualities, reputation, or other characteristics that are just because of that location.**
- GI tag is given **to protect the rights of producers** and prevent others from using the name of the product to market inferior products.
- It also helps consumers **identify and purchase products that are genuine and associated with specific geographic regions** known for their quality, heritage, or traditional production methods.
- The authority responsible for granting the GI tag usually monitors and enforces rules to maintain the integrity and reputation of the geographical indication.
- In India, the Geographical Indication (GI) tag is governed by the **Geographical Indications of Goods (Registration and Protection) Act, 1999.**
- The **Act provides for the registration and protection of GIs for goods that have a specific geographical origin within India** and possess certain qualities, reputation, or characteristics attributable to that origin.
- Some examples of products in India that have received GI tags include **Darjeeling tea, Kashmir Pashmina, Kanchipuram silk sarees, Alphonso mangoes, Nagpur oranges,** and many more.
- Initially, the GI Tag is **valid for 10 years**, after which it can be renewed for another 10 years.

Background of GI tags in India
- **1959:** The idea of Geographical Indications was introduced in India under the Trade and Merchandise Marks Act, 1958. However, there were no specific provisions for GI protection at this time.
- **1999:** India became a member of the World Trade Organization (WTO) in January, 1995. In compliance with the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), India introduced the Geographical Indications of Goods (Registration and Protection) Act in 1999.

- **2003:** The Geographical Indications of Goods (Registration and Protection) Act, 1999 came into force in 2003, and the Geographical Indications Registry was established in Chennai, Tamil Nadu, to administer GI registrations.
- **2004:** Darjeeling tea became the first Indian product to receive a GI tag. This marked the beginning of a trend where various Indian products started receiving GI protection to prevent unauthorized use of their names and to protect their unique qualities associated with their geographic origin.
- **2006:** The Indian government announced a comprehensive Geographical Indications Plan to promote and protect GIs in India. This plan aimed to promote rural artisans and communities by providing legal protection to their traditional knowledge and products.
- **2012:** The GI tag for "Darjeeling Tea" was upgraded to the "Darjeeling" logo, which provided more robust protection against misuse.
- **2015:** The Geographical Indications of Goods (Registration and Protection) (Amendment) Rules, 2015 came into effect, simplifying the GI registration process and making it more accessible to producers of GIs.
- **2023 (Current year):** GI tags continue to be an essential aspect of preserving and promoting India's rich cultural and agricultural heritage, with more products likely to be added to the list in the upcoming days.

Products that got GI tag recently are:
- **Mankurad Mango (Goa):** Basically, it was named by the Portuguese as malcorada (means 'poor coloured'). It has a uniform yellow colour, less fibre and balanced sugar.
- **Matti Banana (Kanyakumari, Tamil Nadu)**: It is commonly known as 'Baby Banana' and is known for its distinct fragrance and honeylike taste. Unlike typical banana bunches that grow straight, the Matti's has a distinct windblown appearance.
- **Udaipur Koftgari Metal Craft (Rajasthan):** The art of decorating arms and weaponry is known as Koftgiri.
- **Bikaner Kashidakari Craft (Rajasthan):** This involves fine stitching and mirrorwork on cotton, silk, or velvet, mostly for objects related to weddings and gift items. This craft was traditionally done by the Meghwal community in Bikaner and the nearby districts.
- **Jodhpur Bandhej Craft (Rajasthan):** It is the Rajasthani art of tying and dyeing. The fabrics used for Bandhej are muslin, silk and voile. Cotton thread is used for tying the fabric.
- **Bikaner Usta Kala Craft (Rajasthan):** It is also known as gold nakashi or gold manauti work. It was done on walls, ceilings, glass, wood, marble and artefacts made of camel leather. The art form is named after the Ustas, or master craftsmen, who developed it.
- **Goan Bebinca (Goa)**: It is a traditional Indo-Portuguese pudding. Also referred to as the queen of Goan desserts.
- **Jalesar Metal Craft (Uttar Pradesh):** It is known for decorative metal crafts and brassware (like anklets, bells). The Thatheras community, which resides in a mohalla (locality) named Hathuras, makes these products.