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# "You are as strong as your Foundation"

## FOUNDATION COURSE GENERAL STUDIES PRELIMS CUM MAINS

Approach is to build fundamental concepts and analytical ability in students to enable them to answer questions of Preliminary as well as Mains Exam

### 2024 & 2025

- Includes comprehensive coverage of all the topics for all the four papers of GS Mains, GS Prelims & Essay
- Access to LIVE as well as Recorded Classes on your personal student platform
- Includes All India GS Mains, GS Prelims, CSAT & Essay Test Series
- Our Comprehensive Current Affairs classes of PT 365 and Mains 365 of year 2024 & 2025

#### ONLINE Students

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

### GS 2024

<b>DELHI:</b> 1 SEPT 5 PM	15 SEPT 9 AM	30 SEPT 5 PM
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**AHMEDABAD:** 10 July | **SIKAR:** 4 September | **PUNE:** 3 July  
**CHANDIGARH:** 7 August | **BHOPAL:** 17 August | **LUCKNOW:** 7 August  
**HYDERABAD:** 4 Sept | **JODHPUR:** 21 August & 11 September  
**JAIPUR:** 1 September

### GS 2025

<b>DELHI</b> 22 SEPT 9 AM	<b>CHANDIGARH</b> 21 NOV 9 AM	<b>LUCKNOW</b> 20 OCT 5 PM	<b>BHOPAL</b> 20 OCT 5 PM
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<b>HYDERABAD</b> 10 OCT	<b>PUNE</b> 20 NOV	<b>JAIPUR</b> 21 SEPT
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## VISION IAS DAKSHA MAINS MENTORING PROGRAM 2024

# DAKSHA MAINS MENTORING PROGRAM 2024

(A Strategic Revision, Practice, and Enrichment Mentoring Program for Mains Examination 2024)

**DATE**  
14<sup>th</sup>  
September

**DURATION**  
5 Months

#### HIGHLIGHTS OF THE PROGRAMME



Highly experienced and qualified team of mentors



Scheduled group sessions for strategy discussions, live practice, and peer interaction



Well-structured revision and practice plan for GS Mains, Essay & Ethics



Access to Daksha Mains Practice Tests



Emphasis on score maximization and performance improvement



Personalized one-to-one sessions with mentors



Subject-wise strategy documents based on thorough research



Continuous performance assessment, monitoring and smart interventions



For any assistance call us at:  
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## NOTE:

Dear Students,

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



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



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



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



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

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# FOUNDATION COURSE GENERAL STUDIES PRELIMS CUM MAINS

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# 1. POLITY AND GOVERNANCE

## 1.1. DIGITAL PERSONAL DATA PROTECTION ACT 2023

### Why in the news?

The President of India recently granted assent to the Digital Personal Data Protection Bill (DPDP), 2023.

### Background

- In 2017, the Supreme Court recognised privacy as a fundamental right in the **K.S. Puttaswamy vs. Union of India case**.
- Following this, the **Justice Srikrishna Committee** (established by the Ministry of Electronics and Information Technology (MeitY)) proposed the initial draft of the Personal Data Protection (PDP) Bill in 2018.
- The government revised the **draft and introduced it as the PDP Bill 2019**. Bill referred to a joint committee of both the Houses of Parliament (JPC).
- However, in 2022, the **government withdrew the PDP Bill 2019** by citing the **extensive changes made by the Joint Committee of Parliament** to it.
- **MeitY released a draft of the DPDP Bill 2022** for public consultations, which later became the DPDP Act 2023.

### About Digital Personal Data Protection (DPDP) Act 2023

- DPDP Act aims to **regulate the processing of digital personal data while ensuring individuals' right to protect their data** and the **need to process it for lawful purposes**.
- It **protects digital personal data** (that is, the data by which a person may be identified) **by providing**:
  - **The obligations of Data Fiduciaries** (that is, persons, companies and government entities who process data) for data processing (that is, collection, storage or any other operation on personal data);
  - **The rights and duties of Data Principals** (that is, the person to whom the data relates);
  - **Financial penalties for breach** of rights, duties, and obligations.

### Significance of DPDP act



**Introduce data protection law with minimum disruption** while ensuring necessary change in the way Data Fiduciaries process data



**Enable India's digital economy** and its innovation ecosystem



**Enhance the Ease of Living and the Ease of Doing Business**

### Seven Principles of DPDP Act



**The principle of consented, lawful and transparent use of personal data**



**The principle of purpose limitation** (use of personal data only for the purpose specified at the time of obtaining the consent of the Data Principal)



**The principle of data minimisation** (collection of only as much personal data as is necessary to serve the specified purpose)



**The principle of data accuracy** (ensuring data is correct and updated)



**The principle of storage limitation** (storing data only till it is needed for the specified purpose)



**The principle of reasonable security safeguards**



**The principle of accountability** (through adjudication of data breaches and breaches of the provisions of the Act and imposition of penalties for the breaches)



## Key Provisions of the Act

Specifications	Details
<b>Applicability</b>	<ul style="list-style-type: none"> <li>Processing of digital personal data within India where such data is collected: <ul style="list-style-type: none"> <li>in digital form or</li> <li>in non-digital form and digitised subsequently.</li> </ul> </li> <li>Processing of personal data outside India if it is for offering goods or services in India.</li> <li>Does not apply to: <ul style="list-style-type: none"> <li>personal data processed for any personal purpose.</li> <li>personal data that is made or caused to be made publicly available by- <ul style="list-style-type: none"> <li>✓ Data Principal to whom such personal data relates; or</li> <li>✓ any other person who is under legal obligation to make such personal data publicly available.</li> </ul> </li> </ul> </li> </ul>
<b>Consent</b>	<ul style="list-style-type: none"> <li>Personal data may be processed only for a lawful purpose after obtaining the consent of the Data Principal (who shall have the right to withdraw consent at any time). <ul style="list-style-type: none"> <li>Consent will not be required for 'legitimate uses' including the provision of benefits or services by the government, medical emergency etc.</li> </ul> </li> <li>For a child or a person with a disability, consent will be provided by the parent or legal guardian.</li> </ul>
<b>Data Protection Board of India (DPBI)</b>	<ul style="list-style-type: none"> <li>Provides for the establishment of DPBI by the Central government.</li> <li>Key functions of the Board: <ul style="list-style-type: none"> <li>Monitoring compliance and imposing penalties.</li> <li>Directing data fiduciaries to take necessary measures in event of a data breach.</li> <li>Hearing grievances made by affected persons.</li> </ul> </li> <li>Board members will be appointed for two years and will be eligible for re-appointment.</li> <li>Appeals against its decisions will lie with the Telecom Disputes Settlement and Appellate Tribunal (TDSAT)</li> </ul>
<b>Rights and Duties of Data Principal</b>	<ul style="list-style-type: none"> <li>Data principal will have the right to- <ul style="list-style-type: none"> <li>Obtain information about processing.</li> <li>Seek correction and erasure of personal data.</li> <li>Grievance redressal.</li> <li>Right to nominate a person to exercise rights in case of death or incapacity.</li> </ul> </li> <li>Data principals must not register a false or frivolous complaint and furnish any false particulars.</li> <li>Violation of duties will be punishable with a penalty of up to Rs 10,000.</li> </ul>
<b>Obligations of Data Fiduciaries</b>	<ul style="list-style-type: none"> <li>Data Fiduciary (Entity determining the purpose and means of processing) must- <ul style="list-style-type: none"> <li>Ensure the accuracy and completeness of data.</li> <li>Build reasonable security safeguards to prevent a data breach.</li> <li>Inform DPBI and affected persons in the event of a breach.</li> <li>Erase personal data as soon as the purpose has been met and retention is not necessary for legal purposes.</li> </ul> </li> </ul>
<b>Significant Data Fiduciaries (SDF)</b>	<ul style="list-style-type: none"> <li>Central Government may notify any Data Fiduciary as SDF, based on factors such as: <ul style="list-style-type: none"> <li>Volume and sensitivity of personal data processed.</li> <li>Risk to the rights of data principal</li> <li>Potential impact on the sovereignty and integrity of India</li> <li>Security of the State</li> <li>Risk to electoral democracy</li> <li>Public order</li> </ul> </li> <li>SDF will have certain additional obligations including appointing a data protection officer and an independent data auditor and undertaking impact assessment.</li> </ul>
<b>Exemptions</b>	<ul style="list-style-type: none"> <li>Rights of the data principal and obligations of data fiduciaries (except data security) will not apply in specified cases, including: <ul style="list-style-type: none"> <li>For notified agencies, in the interest of security, sovereignty, public order, etc.;</li> <li>For research, archiving or statistical purposes;</li> <li>For start-ups or other notified categories of Data Fiduciaries;</li> <li>To enforce legal rights and claims;</li> <li>Prevention and investigation of offences;</li> <li>To perform judicial or regulatory functions;</li> <li>To process in India personal data of non-residents under foreign contract.</li> </ul> </li> <li>The central government may exempt certain activities in the interest of the security and public order.</li> </ul>



<b>Processing of personal data of children</b>	<ul style="list-style-type: none"> <li>While processing the personal data of a child, <b>data fiduciary must not undertake:</b> <ul style="list-style-type: none"> <li><b>processing that is likely to cause any detrimental effect</b> on well-being of child, and</li> <li><b>tracking, behavioural monitoring, or targeted advertising.</b></li> </ul> </li> </ul>
<b>Cross-border transfer</b>	<ul style="list-style-type: none"> <li>Bill allows the <b>transfer of personal data outside India, except to countries restricted by the government.</b></li> </ul>
<b>Penalties</b>	<ul style="list-style-type: none"> <li>Act specifies penalties for various offences such as <b>up to Rs 200 crore for non-fulfilment of obligations for children, and Rs 250 crore for failure to take security measures</b> to prevent data breaches.</li> </ul>

### Limitations of Act

- Violate Fundamental Rights:** Exemptions for the State may **lead to data collection, processing, and retention beyond what is necessary** and may violate the fundamental right to privacy.
  - Using exemptions, a government agency may collect data about citizens to create a 360-degree profile for surveillance.
- Inadequate Safeguard:** The transfer of personal data outside India **may not ensure adequate data protection standards in the countries where the transfer of personal data is allowed.**
- No compensation:** The Act has removed Section 43A of the Information Technology (IT) Act, 2000, which mandated companies to compensate users in case of mishandling their data.
- Complicated approach to grievance redressal:** Aggrieved individuals are required to first approach the data fiduciary's redressal mechanism.
  - Unresolved grievances can be escalated to the **Data Protection Board**, with further appeals to the **TDSAT**.
- RTI Exemption:** The Act proposes that the **personal information of public officials will not be disclosed under the Right to Information (RTI) Act**, which could aid corrupt practices by not disclosing assets, liabilities etc.
- Clear definition:** The Act provides that the data fiduciary will not undertake any processing that has a detrimental effect on the well-being of a child. However, there is **no definition of detrimental effect or any guidance** for determining such effect.
- No provision for some rights:** The Act **does not grant the right to data portability and the right to be forgotten** to the data principal.

### Way forward

- Cross-Border Data Governance:** Mechanisms need to be developed for governing cross-border transfer of data especially to countries not mentioned in the list provided by the notification.
- 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:** Terms like sovereignty and integrity of India should be clearly defined along with a defined procedure to provide exemption.
- Quantifying time duration:** A specific time should be defined to delete the data once the purpose has been fulfilled or the Data Principal withdraws his/her consent to the processing of personal data.

### Know the term

- **Right to data portability:** It allows individuals to obtain and reuse their personal data for their own purposes across different services.
- **Right to be Forgotten:** It is the right to remove or erase content so that it's not accessible to the public at large.

## GDPR v/s DPDPA

### General Data Protection Regulation (GDPR)

GDPR applies to processing of **Personal Data wholly or partly** by automated means and to Personal Data which form or will form a part of a filing system

**Minors under age 16 need parental consent.** Members states of Europe can lower this age to 13 for their regions

**Breaches should be notified** to the Supervisory Authority **within 72 hours** and possibly to the affected Data Subjects

GDPR **does not include right to nominate** however provides for the **right to portability** Organizations have **30 days to respond** to a Data Subject request

GDPR lays down **specific mechanisms for transferring data to third country** such as standard contractual clauses and binding corporate rules

Both Controllers and Processors are under the **obligation to appoint a DPO** in specific circumstance

**Data Controller and Data Processor** are required to **maintain the records of processing activities (ROPA)**

### Digital Personal Data Protection (DPDP) Act, 2023

The DPDP Act will apply to **digitized personal data and non-digitized personal data** which is subsequently digitized

**Children under the age of 18 need consent** from parents/guardian

The **Act does not specify a timeframe** for Personal Data breach notification

The Act comprises of an **additional right to nominate** while omits the right to portability and timeline to respond to the Data Principal requests has not been specified

The Act has **not identified any transfer mechanisms** for transferring Personal Data

Only the **Significant Data Fiduciary shall have to appoint DPO** as a point of contact for the Data Protection Board

The Act **does not include any obligation for Data Fiduciaries** to maintain records of processing activities (ROPA)

## 1.2. REFORMING INDIA'S CRIMINAL LAWS

### Why in the news?

The government introduced three bills in the Lok Sabha to replace the existing criminal laws in India.

### More on news

- The three bills include:
  - Bharatiya Nyaya Sanhita 2023** replacing the **Indian Penal Code (IPC), 1860.**
  - Bharatiya Nagarik Suraksha Sanhita 2023** replacing the **Code of Criminal Procedure (CrPC), 1973.**
  - Bharatiya Sakshya Bill 2023** replacing the **Indian Evidence Act, 1872.**
- These bills have been referred to the Standing Committee.

### Need of these bills

- Addressing large pendency in courts:** Union Law Minister stated that **almost 4.7 crore cases** are **pending** collectively in the Supreme Court, High Courts and Subordinate Courts.



- **Timely justice delivery:** Complex legal procedures and a lack of resources have led to many **undertrials** languishing in jails, **constituting around 70% of the prison population**.
- **Increasing conviction rates:** The criminal justice system's inefficiencies, including inadequate forensic investigation, policing deficiencies, and the influence of powerful individuals on law enforcement, contribute to **low conviction rates (around 50%)**.
- **Evolution of the criminal justice system:** Societal changes and emerging challenges require an evolving and adaptable criminal justice system.
  - Also, integrating modern technology in evidence gathering, storage, and presentation would aid in discovering various criminal dimensions.
- **Erasing colonial legacy:** India's criminal justice system is rooted in its colonial past, which has led to a set of laws and procedures that may **not be entirely relevant or suitable for the country's current socio-economic and cultural context**.

### 1.2.1. BHARATIYA NYAYA SANHITA 2023

Bharatiya Nyaya Sanhita 2023 will repeal the Indian Penal Code, 1860 (IPC), which is the principal law on criminal offences.

#### Background

- In 1834, the **first Indian Law Commission** was constituted under the Chairmanship of **Lord Thomas Babington Macaulay** to examine the jurisdiction, power and rules of the existing Courts as well as the police establishments and the laws in force in India.
  - It produced a **draft of the Indian Penal Code (IPC) in 1837**, which was based on the English common law and with colonial interests in mind.
  - The enactment of the IPC was delayed due to subsequent revisions and the 1857 revolt. It was **enacted in 1860** and **came into force in 1862**.
- After independence, it underwent **several amendments**, and all these alterations and modifications made it a **complicated code of law**.
- The new bill aims to:
  - **strengthen law and order,**
  - focus on **simplifying the legal procedure,** and
  - make **existing laws relevant to the contemporary situation** of the common man.



#### Major Provisions of the Bill

- **Sedition:** The Bill **removes** the offence of sedition (Section 124A of IPC). It **instead penalises** the following\*:
  - exciting or attempting to excite **secession, armed rebellion, or subversive activities,**
  - encouraging feelings of **separatist activities,** or
  - **endangering the sovereignty or unity and integrity** of India.

\*These offences may involve the **exchange of words or signs, electronic communication, or the use of financial means**. These will be punishable with imprisonment of up to seven years or life imprisonment and a fine.
- **Terrorism as an offence:** The Bill defines terrorism as an act that **intends to threaten the unity, integrity, and security** of the country, to **intimidate the general public or disturb public order**. **Terrorist acts include:**
  - Using firearms, bombs, or hazardous substances (biological or chemical) to cause death, danger to life, or spread a message of fear,
  - Destroying property or disrupting essential services, and
  - Activities included in the treaties listed in the Second Schedule of the Unlawful Activities (Prevention) Act, 1967, such as unlawful seizure of aircraft or taking of hostages.
- **Organised Crime as an offence:** The Bill defines organised crime as **a continuing unlawful activity** such as kidnapping, extortion, contract killing, financial scams, cybercrime etc., carried out by **individuals acting singly or jointly** as members of or **on behalf of a crime syndicate**.

## Potential Impact

- **Subjective interpretation:** Unclear definitions of “criminal activity” may lead to their improper application and affect Freedom of Speech and Expression. For example-
  - “Subversive activities” might include any form of critique, or
  - ‘Terrorist acts’, which now include damage to property and provocation or intimidation.
- **Enhanced policing powers:** Enhanced discretionary action-taking powers of police personnel may increase the scope for arbitrary police action.
- **Delays in existing trials:** Though these bills exclude their application to pending proceedings and trials, courts are **likely to be bombarded with interpretation**, resulting in delays in the actual trial of the offences.

### 1.2.2. BHARATIYA NAGARIK SURAKSHA SANHITA 2023

Bharatiya Nagarik Suraksha Sanhita, 2023 will repeal the **Code of Criminal Procedure, 1973**. The Code provides for the procedure for arrest, prosecution, and bail for offences under various Acts, including the Indian Penal Code, 1860.

## Background

- CrPC was **first enacted in 1882** by the British Parliament and has undergone several amendments, most importantly in 1898, 1923 and 1955.
- The Law Commission of India, in its 41<sup>st</sup> report, recommended a significant revision of the code, which led to the **creation of CrPC 1973**.

## Major Provisions of the Bill

- **Detention of Undertrials:** First-time offenders will be released on bail if they have completed detention for one-third of the maximum imprisonment for an offence.
  - If the accused has **spent half of the maximum period of imprisonment** during investigation or trial, he/she must be released on a personal bond. This does not apply to offences which are punishable by death and life imprisonment.
- **Trials in electronic mode:** All trials, inquiries and proceedings can be held in electronic mode.
- **Medical examination of the accused:** Any police officer can request for medical examination of the accused in certain cases, such as rape.
- **Forensic investigation:** It mandates forensic investigation for offences punishable with at least seven years of imprisonment.
  - If a state does not have a forensics facility, it shall utilise such facility in another state.
- **Signature and finger impressions:** It allows for the collection of specimen signatures, handwriting, finger impressions and voice samples from any person, whether arrested or not.
- **Timelines:** It prescribes timelines for various procedures such as giving judgment, informing victims of the progress of the investigation and framing of charges.
- **Trial in the absence of offender:** It provides for the conduct of trial and pronouncement of judgment in the absence of a proclaimed offender.
  - **Proclaimed offender** refers to a person who is accused of an offence punishable with imprisonment of at least 10 years or death and fails to appear at a specified time and place as specified by a Court.
- **Stopping political waiver of punishments:** The bill adds that **death sentences can only be converted to life imprisonment** and life imprisonment can be pardoned only within seven years of punishment.

## Potential Impact

- **Expedited case disposal:** Prescribed timelines for different judicial procedures and framing of chargesheets will help in the timely delivery of justice.
- **Integration of technology:** The bills provide for the forensic investigation of crimes and the integration of Information and Communication Technology (ICT) tools into the investigation and judicial process.
- **Improvement in rights of victims:** Provision allows registration of FIR in any police station irrespective of where the offence was committed.



- **Fairness in investigation:** Mandatory video recording of search and seizure seeks to address fairness in police investigations.
- **Increase in detention period:** The period during which an arrested person can be sent to police custody has been expanded.

### 1.2.3. BHARATIYA SAKSHYA BILL 2023

Bhartiya Sakshya Bill, 2023 will **repeal the Indian Evidence Act, 1872**. The Act provides rules for the admissibility of evidence in legal proceedings.

#### Background

- The Evidence Act was enacted in 1872 with a view to **consolidate the laws relating to evidence** on which the court could come to a conclusion and pronounce the judgment.
- The law of evidence (not being substantive or procedural law), falls in the category of '**adjective law**', which defines the pleading and methodology by which the substantive or procedural laws are operationalised.
- The existing law **does not address the technological advancement** undergone in the country during the last few decades.

## Know the term

- **Substantive Law:** These are basically laws derived from **Common, Statutory, Constitution and the Principles found in judicial decisions**. E.g., Penal Law, law of property etc.
- **Procedural Law:** It is that law which prescribes a **method of enforcing rights or obtaining redress for their invasion**; machinery for carrying on a Suit. E.g., Code of Civil Procedure, Code of Criminal Procedure etc.

#### Major Provisions of the Bill

- **Electronic or digital records as evidence:** It provides that electronic or digital records will have the same legal effect as paper records.
  - It **expands electronic records** to include information stored in semiconductor memory or any communication devices (smartphones, laptops).
  - This will also include records on **emails, server logs, smartphones, locational evidence and voicemails**.
- **Oral evidence:** Oral evidence includes statements made before Courts by witnesses in relation to a fact under inquiry. The Bill adds any **information given electronically** to be considered as oral evidence.
- **Joint trials:** It refers to the **trial of more than one person for the same offence**. In a joint trial, if a confession made by one of the accused which also affects other accused is proven, it will be treated as a confession against both.

#### Potential Impact

- **Expansion in the use of electronic evidence:** This can lead to a reduction in wrongful convictions and provide help in investigating cases faster.
- **Issues of privacy:** It emerges from the seizure of electronic devices and access to the sensitive information that may be stored within them.

#### Conclusion

The potency of reforms in the criminal justice system hinges on their alignment with its capacity to implement it effectively. The success of criminal law reforms has to take an arduous journey from its **inception, formulation, implementation approach and regular oversight**.

## 1.3. CEC AND OTHER EC (APPOINTMENT, CONDITIONS OF SERVICE AND TERM OF OFFICE) BILL, 2023

#### Why in the news?

Recently, the Union Government introduced the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023, in Rajya Sabha.

## More on news

- It **repeals the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991.**
- Bill aims to **regulate the appointment, conditions of service and term of office of the Chief Election Commissioner (CEC) and other Election Commissioners (ECs).**
  - It also seeks to **set up a procedure for the transaction of business by the Election Commission** and for matters connected therewith or incidental thereto.

## The present process of appointment of CEC and EC

- As per **Article 324**, the Election Commission consists of the CEC and such a number of other ECs as the President may decide.
- **Supreme Court in Anoop Baranwal vs Union of India judgment** 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, and in case no LoP is available, the leader of the largest opposition Party in the Lok Sabha in terms of numerical strength and
  - **Chief Justice of India (CJI).**
- Till this SC ruling, Election Commissioners and CECs had been appointed by the President after recommendations from the government.

## Key highlights of Bill

Specifications	Details
<b>Appointment</b>	<ul style="list-style-type: none"> <li>• CEC and other ECs will be <b>appointed by President on the recommendation of a Selection Committee.</b></li> </ul>
<b>Selection Committee</b>	<ul style="list-style-type: none"> <li>• It will consist of:               <ul style="list-style-type: none"> <li>○ <b>Prime Minister as Chairperson,</b></li> <li>○ <b>Leader of opposition in Lok Sabha as member,</b> and</li> <li>○ <b>A Union Cabinet Minister is nominated by the Prime Minister as a member.</b></li> </ul> </li> <li>• If the LoP in Lok Sabha has not been recognised, the <b>leader of the single largest opposition party in Lok Sabha</b> will assume the role.</li> </ul>
<b>Search Committee</b>	<ul style="list-style-type: none"> <li>• <b>Headed by the Cabinet Secretary</b> and comprising of <b>two other members, not below the rank of Secretary</b> to the Government of India, having knowledge and experience in matters relating to elections.</li> <li>• It will prepare a <b>panel of five persons</b> for the consideration of the Selection Committee for appointment as CEC and other ECs.</li> <li>• The <b>Selection Committee may also consider any other person</b> than those included in the panel by the Search Committee.</li> </ul>
<b>Qualification of CEC and ECs</b>	<ul style="list-style-type: none"> <li>• Persons who are <b>holding or have held a post equivalent to the rank of Secretary</b> to the Government of India.</li> <li>• <b>Such a person must have knowledge and experience in the management</b> and conduct of elections.</li> </ul>
<b>Term of office</b>	<ul style="list-style-type: none"> <li>• CEC and other ECs shall <b>hold office for a term of six years</b> from the date on which he assumes his office or <b>till he attains the age of sixty-five years</b>, whichever is earlier.</li> <li>• CEC and other ECs shall <b>not be eligible for re-appointment.</b></li> <li>• <b>Where an EC is appointed as CEC, his term of office shall not be more than six years in aggregate</b> as the EC and the CEC.</li> </ul>
<b>Salary and allowances</b>	<ul style="list-style-type: none"> <li>• Salary, allowance, and service conditions of the CEC and other ECs will be the <b>same as that of the Cabinet Secretary.</b></li> </ul>
<b>Removal and resignation</b>	<ul style="list-style-type: none"> <li>• Under Article 324 of the Constitution, <b>CEC can only be removed from his office in a manner similar to that of a Supreme Court judge.</b> This is done through an <b>order of the President, based on a motion passed by both Houses of Parliament</b> in the same session.</li> <li>• Motion for removal <b>must be adopted with:</b> <ul style="list-style-type: none"> <li>○ <b>majority support of total membership</b> of each House, and</li> <li>○ <b>at least two-thirds support from members</b> present and voting.</li> </ul> </li> <li>• <b>An EC can only be removed from office on the recommendation of the CEC.</b></li> </ul>
<b>Conduct of business</b>	<ul style="list-style-type: none"> <li>• All business of the Election Commission is to be <b>conducted unanimously.</b> In case of <b>difference of opinion</b> between the CEC and the other ECs on any matter, it <b>shall be decided through majority.</b></li> </ul>



### Concerns associated with bill

- **Against SC Order:** The proposed legislation seeks to **drop the Chief Justice of India from the selection process** and override the SC judgment in the Anoop Baranwal vs. Union of India case.
- **Neutrality:** The **composition** of the selection committee may lead to the **dominance of the ruling party**.
- **Eligibility criteria:** Bill authorises the selection committee to **go beyond the search committee's recommendations and appoint anyone it wants as CEC/EC**, thus making the entire 'search' process redundant.
- **Independence of CEC/EC:** Bringing the **Election Commission of India (ECI) under the control of the political executive is repugnant to the concept of an independent and impartial election commission**.

### Way ahead

- **Removal of EC:** 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**. Thus, equal constitutional protection should be given to all members of the ECI in matters of removability from office.
- **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.
- **Seniority Principle:** 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 finalising the Bill, the government should conduct comprehensive consultations with opposition parties, legal experts, and stakeholders.

## 1.4. ASPECTS OF ELECTION PROCESS AND REFORM

### Why in the news?

Recently, the Department-related Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice tables a report on "**Specific aspects of the election process and their reform**".

### More about news

- The report analyses the significance of **elections in India and their influence on democratic governance, political representation, and societal progress**.
- It **explores different facets**, including **voter participation and comprehensive representation** through a single electoral roll, **transparency and accountability of candidature** and the **minimum age for contesting elections**.

### 1.4.1. COMMON ELECTORAL ROLL (CER)

By consolidating the Electoral Rolls into a single, comprehensive database, the government could eliminate duplication and streamline the process.

### Provision

- India has two types of electoral rolls, i.e. **General electoral rolls** (overseen by ECI) and **Separate electoral rolls** (prepared by SEC).
- **Election Commission of India (ECI):** Under **Article 324**, ECI administers **Union and State elections** like Lok Sabha, Rajya Sabha, State Legislative Assemblies, etc. in India.
- **State Election Commissions (SEC):** Under **Article 243K (1)**, the SEC in each state has been constituted to **conduct fair elections to local bodies (Panchayat and Municipality)**.

### Issues in the Preparation of CER

- **Absence of permanent electoral roll:** Before every election, a **fresh electoral roll for the local body is prepared**. Unlike the Assembly, Local bodies do not maintain a permanent electoral roll.
  - **This leads to duplication of efforts.**

- **Delimitation frequency:** For assembly and parliamentary constituencies, delimitation happens less frequently, usually every 15 to 20 years. On the other hand, Delimitation of local bodies is often done before elections.
  - Periodic delimitation **ensures fair political representation** in the broader landscape.
- **Constitutional challenge:** Implementing a CER, as proposed by the central government and ECI, **is presently outside the scope of Article 325, which mandates the use of separate electoral rolls** for elections to Parliament and state legislatures.

#### Recommendations

- ECI may **develop a comprehensive plan that considers all the factors** involved in implementing a Common Electoral Roll before making any changes to the current regulations.
- **ECI should consider the constitutional provisions** before preparing the CER and **adhere to the principles of federalism**.
- ECI and the Legislative Department should collaborate to **examine the effects of the delimitation process**, especially in challenging terrains.
- ECI and the Legislative Department **collaborate to encourage States to utilise the Election Commission's electoral roll** when creating their own until there is a change in constitutional and statutory provisions.
- ECI should **establish a legal provision or an alternative mechanism** to ensure that **non-citizens with Aadhaar are not included in CER**.

### 1.4.2. FALSE DECLARATIONS DURING FILING OF NOMINATION FOR ELECTIONS

To ensure the integrity of the democratic process, it is crucial for the government to take strict measures to deter the filing of false declarations/ affidavits.

#### Provision

- **Candidates in elections must** submit an Affidavit (Form 26) per the Conduct of Elections Rules, 1961, **disclosing assets, liabilities, education, etc.**
- False information is a legal violation, **punishable under Section 125A of the RPA**.

#### Issues

- False affidavits can be detrimental to the fairness of the election process as **they can mislead voters and affect their choices**.

#### Recommendations

- Government should **set up a verification process for affidavits and promptly inform the Election Commission** of any false data to ensure adherence to regulations.
- RPA, 1951 needs to have a **clear definition** of what constitutes a false declaration/affidavit.
- **Punishment under Section 125A of RPA, 1951 should be increased for filing a false affidavit** from six months to **up to two years** and a fine, depending on the severity of the offence.
  - However, this penalty should **only be applied in exceptional cases** and not for minor errors.
- **Expediting resolution of disqualification cases**, as prolonged litigation undermines the intended purpose of legal provisions.

### 1.4.3. ESTABLISHING PARITY BETWEEN MINIMUM AGE OF VOTING AND CONTESTING ELECTIONS

Youthful representation in legislative bodies is crucial as they advocate for peers, address youth-centric concerns, and transform political discourse, influencing both internal and external government discussions.

#### Provision

- Presently, the **age** for contesting elections for
  - **Lok Sabha (Article 84) and Legislative Assembly (Article 173) is 25 years.**
  - **Rajya Sabha (Article 84) and Legislative Council (Article 173) is 30 years.**



## Issues

- Only 2.2% of Lok Sabha MPs are under the age of 30.
- Lack of parity between the minimum age of voting (18 years) and contesting elections (25 years) has led to low participation by India's youth population in the political arena.
- As per ECI, it is unrealistic to expect 18-year-olds to possess the necessary experience and maturity for these responsibilities.

## Recommendations

- Suggests reducing the minimum age requirement for candidacy in Assembly Elections.
  - Reducing the minimum age requirement for candidacy in elections would give young individuals equal opportunities to engage in democracy.
- Prioritise providing comprehensive civic education programs to equip young people with the knowledge and skills necessary for political engagement.
- Governments, political parties, and youth organisations should work together towards enabling greater youth participation in decision-making processes.

Scan the QR code to know more about **Electoral Reform**.

**Weekly Focus #58:** Electoral Reform: An Approach to Effective Democracy



## 1.5. GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI (AMENDMENT) ACT 2023

### Why in the news?

The Parliament passed the Government of National Capital Territory of Delhi (GNCTD) (Amendment) Act 2023.

### More on news

- GNCTD (Amendment) Act **repeals the National Capital Territory of Delhi (Amendment) Ordinance 2023**.
- The ordinance, giving the **Delhi Lieutenant Governor (LG)** more powers over the **Delhi government**, was issued after the **decision of the Supreme Court in the GNCTD vs. Union of India (2023) case**.
  - The question before the Court was whether the Delhi government (headed by the elected Chief Minister) or the LG (appointed by the President) would have control over services and civil servants in Delhi.
  - The Supreme Court granted that the government of Delhi had **complete command over most services** in the capital, **leaving out public order, land, and police**, over which the central government has exclusive powers.
- In 2018, the Supreme Court ruled that the **LG did not have independent decision-making powers** and was bound to follow the aid and advice of the Council of Ministers.

### The governance model of Delhi NCT

- **Classification as a Union Territory (UT):** Under the States' Reorganization Act of 1956, **Delhi was classified as a UT**, governed **under Article 239** of the Constitution.
  - It states that UTs are **directly governed by the President or an administrator** appointed by the President.
- **Special Status:** Following the recommendations of the S Balakrishnan Committee, the **69<sup>th</sup> Constitutional Amendment Act of 1991** conferred special status on Delhi and designated it as the National Capital Territory of Delhi (NCTD).
  - It added **Article 239AA** to the Constitution and made **Delhi a UT with a legislature** and a council of ministers.
  - The **Lieutenant Governor (LG) is designated as the administrator** of Delhi, operating with the aid and advice of the council of ministers of Delhi.
- **Powers of Delhi Legislature:** The Delhi Legislative Assembly has the power to **legislate over subjects in the State List and Concurrent List, except for police, public order, and land**. The Delhi government has executive powers over the same subjects.
  - Also, **Parliament can legislate over all matters** in the State and Concurrent Lists related to Delhi.

- **GNCTD Act:** The **Government of National Capital Territory of Delhi (GNCTD) Act, 1991** lays down the framework for the functioning of the Delhi Assembly and the Delhi government.
  - It outlines the powers of the Assembly, the discretionary powers of the LG, and the Chief Minister's duty to provide information to the LG.

#### Challenges in the Governance of Delhi

- **Unclear status:** **Article 1, read with Article 239**, provides that the UTs are to be governed solely by the President. However, Delhi's special status creates ambiguity in the administrative process.
- **Presence of national and international institutions:** The President, the Parliament, the Supreme Court, various constitutional functionaries, foreign diplomatic missions, international agencies, etc., are located in Delhi.
  - This requires maintaining the highest possible national standards in the administration and governance of the NCT of Delhi.
- **National Prestige:** Any decision taken in respect of Delhi also affects the entire country, having the potential of **putting the national reputation, image, credibility, and prestige at stake**.
- **Delays in decision-making:** Due to disagreements between LG and the elected government, there are delays in decision making, creating **inefficiencies and uncertainty in governance**.

#### Key provisions of the Act

- **National Capital Civil Services Authority (NCCSA):** The Act establishes the NCCSA to make **recommendations to the Lieutenant Governor of Delhi (LG) on certain matters** related to services.
- **Functioning of NCCSA:** The **central government will appoint** both the Principal Home Secretary and Chief Secretary.
  - All decisions of the Authority will be based on a **majority vote of the members present and voting**.
- **Powers of the LG:** Matters where the LG may act solely 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/she **is required by law to act in his discretion** or exercise any judicial or quasi-judicial functions.
- **Primacy to LG:** The Act **expands the discretionary role** of the LG by giving him powers to **approve the recommendations of the NCCSA**, or return them for reconsideration.
  - In the case of a **difference of opinion** between the LG and the NCCSA, the former's decision will be final.
- **Disposal of matters by Ministers:** **Certain matters must be submitted to the LG by the ministers of the Delhi Government**, through the Chief Minister and the Chief Secretary, for his/her opinion prior to the issue of any order. These include proposals affecting:
  - The peace and tranquillity of Delhi,
  - Relations between the Delhi government and the central government, Supreme Court, or other state governments,
  - Summoning, prorogation, and dissolution of the Legislative Assembly, and
  - Matters on which LG is to give an order in his sole discretion.
- **Duties of Secretaries:** The concerned Department Secretary must bring certain matters, that may bring the Delhi Government into controversy to the notice of the LG, the Chief Minister, and the Chief Secretary.



#### Key issues with the Act

- **Powers to central government:** The Act gives the central government control over the transfer and posting of officers in Delhi. This is a departure from the Supreme Court's judgement in the Govt. of NCT of Delhi vs. Union Of India 2023.
  - The meeting of NCCSA can be convened without the presence of the Chief Minister as the quorum is of two members.
- **Triple Chain of Accountability:** Conferring powers over the transfer and posting of officers to the NCCSA may **break the triple chain of accountability**.



- According to the Supreme Court, democratic government rests on a triple chain of accountability:
  - ✓ Civil servants are accountable to ministers,
  - ✓ Ministers are accountable to legislatures, and
  - ✓ Legislatures are accountable to the electorate.
- The Act contradicting the first link may violate the **principle of parliamentary democracy**, which is a part of the basic structure doctrine.
- **Violates collective responsibility:** Department secretaries will bring certain matters directly to the LG, the Chief Minister and the Chief Secretary without consulting the concerned minister.
- **Enhanced discretion of LG:** As per Article 239AA, the LG has to act on the aid and advice of the Council of Ministers, except when exercising functions at his/her discretion. Provisions of the Act expand the discretionary and overriding powers of LG.
- **Non-clarity on controversial matters:** The Act provides for bringing matters that may bring GNCTD in controversy with the central government to the notice of the LG but does not define these controversial matters.

#### Way Forward

Given the system of Delhi's Administration has been in flux for a long time, the following ideas can be explored for creating a more stable system.

- **Different models:** There are **varying models for governance of capital cities** in other countries which can be studied for adopting a model for Delhi. These include:
  - **Capital as a federal district** – Abuja, Brasilia, Canberra, Washington DC. There are varying degrees of federal control over these cities.
  - **Capital as city-states** – Berlin, Brussels, Buenos Aires. Here, the city government also carries out state functions.
  - **Capital as a city-in-a-state** – Bern, Ottawa. Here, the capital is a municipality under the state government.
  - **Capital as a full-fledged state** – Mexico City.
- **Decentralisation of decision-making:** A two-tier metropolitan authority can be created with elected municipal councils and regional government. In Australia, the Sydney metropolitan area is divided into 31 local governments, with the state government playing a coordinating role.
- **Domain demarcation:** The places with central government offices and their affiliates can be placed under central administration, while the rest of the NCT can be the domain of the State of Delhi.
- **Enforcement powers:** Municipalities can be provided with enforcement powers exercised through community police officers for civil compliance, whereas Delhi police can deal with criminal issues.

To know more about 'Federalism: Unique Status of Delhi', kindly refer to January 2023 Monthly Current Affairs.

## 1.6. NO-CONFIDENCE MOTION

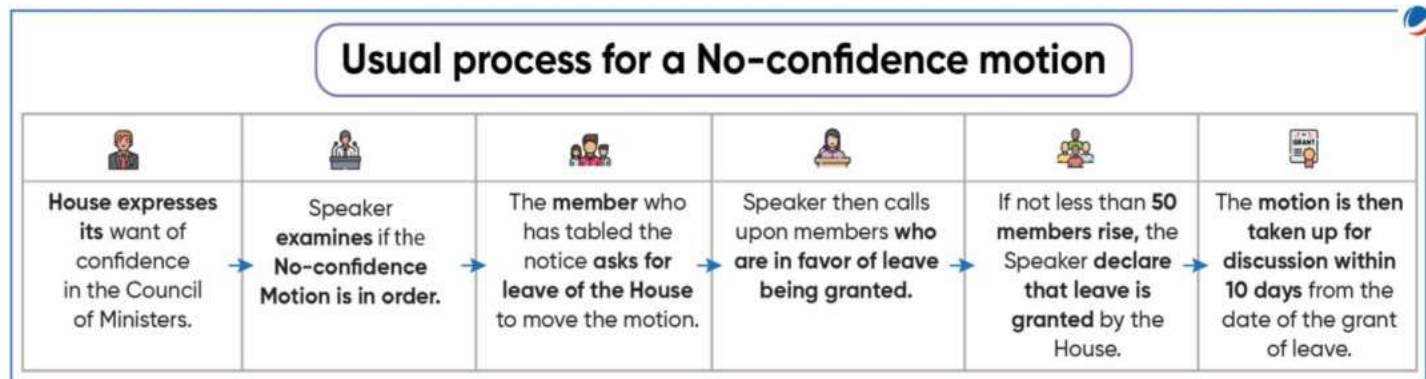
### Why in the news?

Recently, the union government faced a **no-confidence motion** in the Monsoon session of the parliament.

### About No Confidence motion

- **No-confidence motion:** A **legislative resolution** introduced in the Lok Sabha that **allows the Opposition to challenge the government's majority** and ability to govern.
  - In a parliamentary democracy, a government can be in power only if it commands a majority in the directly elected House. Implying that if a No-confidence motion is passed, the Government of the day will have to resign.
  - The motion of No-Confidence can **only be moved in Lok Sabha by any of its MPs**.
- **Constitutional articles/rules of business in Lok Sabha**
  - **Article 75(3)** of our Constitution embodies this rule by specifying that the Council of Ministers are collectively responsible to the Lok Sabha.
  - **Rule 198 of Rules of Procedure and Conduct of Business in Lok Sabha** provides a provision regarding the motion of No Confidence in Council of Ministers.
- **Grounds:** A Motion of No-confidence need not set out any grounds on which it is based.
  - Even when grounds are mentioned in the notice and read out in the House, they do not form part of the No-confidence Motion.

- **Speeches:** Unless leave is granted by the House to move the motion, **no speech is permitted in support of the motion** at the time of obtaining the leave of the House.
- **Repeat Motion:** After a No-confidence Motion has been discussed and negated by the House, another No-confidence Motion cannot be moved in the same Session.



### Implications of the No-confidence motion

- **Political Vacuum:** The passing of a No-confidence motion leads to the resignation of the Council of Ministers, which may lead to a political vacuum.
- **Administrative Challenge:** The sudden removal of the political executive may lead to administrative confusion and policy uncertainty.
- **Parliamentary efficiency:** Politically motivated No-confidence motions tend to affect the optimal time utilisation in Parliament. For instance, up till the current motion, a total of 456 hours have been spent discussing no-confidence motions in Parliament.
- **Burden on Exchequer:** If no other party is able to prove the majority, then the citizens have to bear the expense of conducting general elections.

### Conclusion

The first No-confidence motion was discussed in the Third Lok Sabha; since then a total of 26 No-confidence motions have been discussed in Parliament. 25 of them were negated, and one motion led to the resignation of the Government in 1979. This record highlights the prevalence of opportunity to challenge the government and, at the same time, the stability of India's democratic system.

## 1.7. MEDIATION BILL, 2023

### Why in the news?

Both houses of Parliament recently passed the **Mediation Bill 2023** seeking to promote mediation as a preferred mode of Alternative dispute resolution (ADR) in India.

### About Mediation Bill, 2023

- **Defines Mediation:** It includes **expression mediation, pre-litigation mediation, online mediation, community mediation**, conciliation or an expression of similar import.
  - Here, parties attempt to reach an **amicable settlement** of their dispute with the assistance of a third person referred to as **mediator**.
- **Voluntary Pre-litigation Mediation:** Parties can attempt to settle civil or commercial disputes by mediation before approaching any court or certain tribunals.
- **Disputes not fit for mediation:** Centre may amend this list. List includes:
  - relating to claims against minors or persons of unsound mind,
  - involving criminal prosecution,
  - affecting the rights of third parties.



- **Territorial Jurisdiction:** Mediation to take place within the territorial jurisdiction of the court or tribunal of competent jurisdiction, unless parties agree **otherwise or undertake mediation in online mode**.
- **Timeline for conducting Mediation:** Must be completed within **120 days**, which may be extended by another **60 days** with the **consent** of the parties.
  - A party may **withdraw from mediation after two sessions**.
  - Court annexed mediation must be **conducted as per the rules framed by the Supreme Court or High Courts**.
- **Establishment of Mediation Council of India (MCI):** To promote mediation and develop India as a robust centre for domestic and international mediation and **make regulations for registration of mediators**.
  - MCI consist of **1 chairperson, 2 full-time member** (with experience in mediation or ADR), **1 part-time member** (including the Law Secretary, and the Expenditure Secretary) **and 3 ex officio members**
- **Defines Mediation Service Providers:** As a body or organization **recognized** by the MCI for conducting mediation.
  - Mediation can be done by the Authority, constituted under the **Legal Services Authorities Act, 1987** also.
- **Conduct of community mediation:** To resolve disputes likely to affect the peace and harmony amongst residents of a locality by a panel of 3 mediators.
- **Enforceability:** Agreements resulting from mediation will be **binding and enforceable** in the same manner as court judgments.
  - **Verdict can be challenged** before a competent court within **90 days**.
  - Mediated settlement can be challenged on grounds of **fraud, corruption, impersonation, and disputes not fit for mediation only**.

#### About Alternative dispute resolution (ADR)

- ADR refers to the different ways people can resolve disputes without a trial. **Other than Mediation ADR mechanisms include**
  - **Arbitration:** Procedure in which a dispute is submitted, by agreement of the parties, to one or more arbitrators who make a binding decision on the dispute.
  - **Conciliation:** A non-binding procedure in which an impartial third party, the conciliator, assists the parties to a dispute in reaching a mutually satisfactory agreed settlement of the dispute.
  - **Negotiation:** A non-binding procedure in which discussions between the parties are initiated without the intervention of any third party with the object of arriving at a negotiated settlement to the dispute.
- **Other steps to promote ADR in India**
  - **Arbitration and Conciliation Act, 1996** and **Arbitration and Conciliation (Amendment) Act, 2019** for establishment of the **Arbitration Council of India**.
  - Legal Services Authorities Act, 1987
  - **New Delhi International Arbitration Centre (NDIAC) Act, 2019** for the establishment NDIAC for facilitating institutional arbitration.
  - **Commercial Courts Act, 2015** provides for the such Commercial Courts for **adjudicating commercial disputes**.

#### Need of Mediation bill

- **Dedicated Act:** Presently, there is no comprehensive law governing the various aspects of mediation.
- **Reduces the burden of court:** 5.02 crore cases were pending in various courts (as per Ministry of Law and Justice).
- **Amicable Solution:** Helps to preserve relationships amongst disputants and reduces the chance of any future disputes.
- **Fulfilling Singapore Convention commitment:** This is also in line with India's commitment as a signatory to the **United Nations Convention on International Settlement Agreements Resulting from Mediation**.
- **Reduces cost of Mediation:** Bill introduces the concept of online mediation which can reduce the travel cost of litigants.
- **Less Time Consuming:** People resolve their disputes in short period as compared to courts.

#### Concerns related with the bill

- **Online Mediation:** Only 55% of India have access to the internet and only 27% possess compatible devices (as per NITI Aayog report).
- **Prior approval:** Mediation Council requires prior approval from the central government before issuing regulations related to its essential functions.
  - This raises the **conflict of interest** as the government is the biggest litigant in the country.

- **Issue of International Mediation:** It does not provide for the enforcement of settlement agreements resulting from international mediation conducted outside India.
- **No punishment/liability for breaching confidentiality.**

#### Way forward

- **Include Government-related disputes:** Standing committee had recommended that government-related disputes be included in the bill.
- **Confidentiality agreement:** With the start of the mediation to ring-fence any potential breach of confidentiality need to have a formal agreement.
  - Also, there is a **need for the provision of punishment/ liability for breaching confidentiality.**
- **Reducing the disputes from the list:** The number of disputes in the Schedule should be reduced to ensure that a maximum number of disputes go through pre-litigation mediation.

## 1.8. GUIDELINES FOR CELEBRITIES, INFLUENCERS, AND VIRTUAL INFLUENCERS

#### Why in the news?

The Advertising Standards Council of India (ASCI) has released the comprehensive Guidelines for Influencer Advertising in Digital Media.

#### More on the news

- These guidelines are an **extension to the Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements, 2022.**
- **Department of Consumer Affairs, Consumer Affairs Ministry** will actively monitor and enforce these guidelines.
- Influencers found to be in violation of the **new guidelines** could face penalties under the **Consumer Protection Act (2019).**

#### Key Provisions for celebrities, influencers, and virtual influencers

- **Guidelines for All:**
  - **Disclosure:** All **material connection** (such as **monetary or other compensation, free products**) between the **advertiser** and the **influencer**.
    - ✓ It must be **upfront** and **prominent** so that it is **not missed by an average consumer**.
    - ✓ Terms including **advertisement, sponsored, collaboration, and paid promotion** can be used, which must be indicated as a hashtag or headline text.
  - **Due Diligence:** Endorsers are **encouraged to conduct a thorough review** and ensure they are in a **position to substantiate** the claims made in the advertisement.
    - ✓ They must **use or experience a product or service** before endorsement.
    - ✓ Influencers must **refrain from making false, misleading, or exaggerated claims.**



#### Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements 2022

- **Key Provisions of Guidelines:**
  - **Prohibit Surrogate Advertisements:** No surrogate advertisement (like Alcohol brands advertising for sodas/music) shall be made **for goods or services whose advertising is prohibited** or restricted.
  - **Prohibit Targeting Children:** Advertisements that take **advantage of children's inexperience** have been prohibited.
  - **Penalties:** Violations may lead to penalties under the **Consumer Protection Act 2019** and other relevant provisions of the law.
    - ✓ CCPA can impose a penalty of up to Rs 10 lakh on manufacturers, advertisers, and endorsers. For subsequent offences, a penalty can go up to Rs 50 lakh.



- **For Health Influencer:**
  - **Disclose Certification:** Endorsers must disclose that they are **certified health/fitness experts** and **medical practitioners**.
  - **Disclaimer:** Endorsers must ensure that the **audience understands** that their endorsements should not be **seen as a substitute for professional medical advice**.
- **For Finfluencers:**
  - **Registration:** Can offer **investment-related advice** {with subjects like banking, financial services, and insurance (BFSI)} only after registering with the **Securities and Exchange Board of India (SEBI)**.
  - ✓ **Other financial influencers** must also possess **appropriate credentials**, such as a licence from the **Insurance Regulatory and Development Authority of India (IRDAI)**.



#### Need of the Guidelines

- **Affects decision-making of Consumers:** People believe in celebrities, influencers, and virtual influencers. They tend to follow whatever they say or endorse.
  - This may lead to **negative consequences** such as **financial loss, health issues, etc.**
  - It violates the **Right to Choose**, the **Right to information**, and the **Right to be safeguarded** against harmful products and services.
- **Rising horizon of Influencers:** The **social influencer market is expanding quickly**, projected to be worth around Rs 2,800 crore by 2025.
  - Increased use of **social media for promotional activities** and influencer violations comprising almost 30% of advertisements taken up by the **ASCI**.
  - People have ample information about celebrities (for instance any cricketer), but consumers may not necessarily know much about influencers.
- **Clarity for Celebrities and Influencers:** Guidelines will help celebrities and influencers to **understand their social responsibility**, and will make them more sensitive towards their followers.
- **Deceptive marketing:** Posting an advertisement without mentioning that it is an advertisement.
  - Also, they claim themselves as experts (in the sphere of BFSI, and health and nutrition products and services) but the reality may be different.

#### Conclusion

Guidelines will help protect the interests of consumers. It will bring transparency to advertisements by checking misleading advertisements. It will help consumers identify promotional content and make informed decisions on products or services.

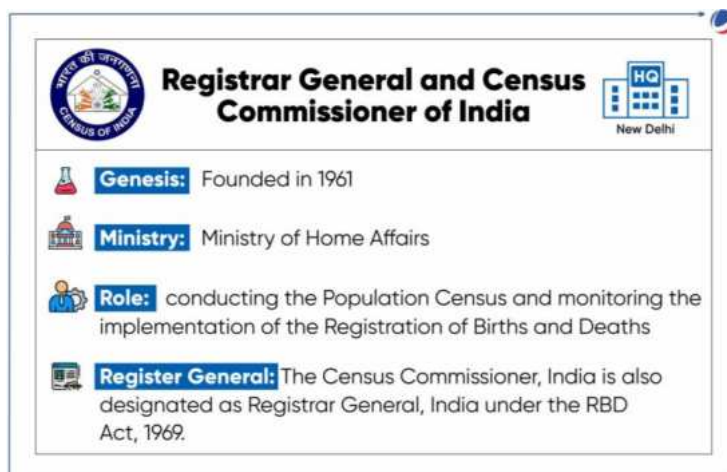
## 1.9. REGISTRATION OF BIRTH AND DEATH (AMENDMENT) ACT, 2023

#### Why in the news?

Recently, the Act to amend the **Registration of Birth and Death Act 1969** was passed.

#### Background

- **Key features of the Registration of Births and Deaths Act of 1969**
  - Provides for the **regulation and registration of births and deaths** in India.



- Provides for the appointment of a **Registrar General of India** by the Central Government for the implementation of this Act.
- **Chief Registrar, District Registrar & Registrar to be appointed** in every State by the state government for the implementation of the Act in the state, district & local area, respectively.
- **Certain persons to report** births and deaths to the Registrar, like a medical officer in charge.
- Provides to obtain an **extract from the register related to any birth or death**.
- In respect of birth or death occurring in a house, it is the duty of **the Head of the house, and in a hospital, the medical officer** in charge is responsible for reporting.
- A birth certificate can be obtained **without the name of the child**.
- The registration of births and deaths **falls under the Concurrent List**.
- As of 2019, **the national level of registration of births was 93%, and death registration was at 92%**.
- This Act **had not been amended since its inception**, therefore new amendment is brought to:
  - To keep pace with societal change and technological advancements and to make act more citizen-friendly.
  - For efficient and transparent delivery of public services and social benefits.

### Key features of the Birth and Death (Amendment) Act, 2023

- **Database of births and deaths:** It adds that the Registrar General of India will maintain a national database of registered births and deaths.
  - **Chief Registrars and Registrars** will be obligated to share data of registered births and deaths to the national database.
  - The Chief Registrar shall maintain a **similar database at the state level**.
- **Electronic certificates:** Provide digital registration and electronic delivery of certificates of births and deaths.
- **Linking with Aadhaar:** To collect Aadhaar numbers of parents and informants in case of birth registration.
- **Connecting database:** It states that the national database may be made available to other authorities preparing or maintaining other databases like **population registers, electoral rolls, ration cards, etc.**
- **Use of birth certificate:** The information will be used for purposes including admission to an educational institution, preparation of voter lists, appointment to a government post, etc.
- **Appeal process:** Any person aggrieved by any action or order of the Registrar or District Registrar may appeal to the District Registrar or Chief Registrar, respectively, within 30 days.

### Issues with the Act

- **Against Fundamental right**
  - **Denying admission to school without a birth certificate** may violate the fundamental right to education under **Article 21A**.
  - Linkage across databases does not require consent from the person whose data is being linked, which is **against the right to privacy**.
- **Sole conclusive proof of age:** The Act does not provide alternative proof if a person does not have a birth certificate.
- **Surveillance state:** Centralizing the database may lead to mass surveillance.

### Conclusion

The Act, in its implementation, will help with e-governance. Although the act defined a database (organised collection of data, generally stored and accessed in electronic form from a computer network), the government could bring robust privacy and surveillance laws.

## 1.10. NEWS IN SHORTS

### 1.10.1. PRESS AND REGISTRATION OF PERIODICALS (PRP) BILL, 2023

- Bill, introduced in Rajya Sabha, seeks to replace the **Press and Registration of Books (PRB) Act, 1867** which governs the registration of print and publishing industry in the country.

#### • Key Highlights

- The Central Government may appoint a **Press Registrar General of India (PRG)** and empowers PGI to **suspend/ cancel certificate of registration**.
- Restricts **persons convicted of offenses involving terrorist or unlawful activities**, to bring out periodicals.

- **Decriminalization of various offenses** as mentioned under the PRB Act 1867, e.g., improper declaration of offenses
- Provides for an **Appellate Board (Press and Registration Appellate Board)**, headed by the **Chairman, Press Council of India** to hear an appeal against refusal of grant of registration, imposition of penalty or suspension/cancellation of registration by PRG.
- **Books taken out of the purview of the PRP Bill**, which were earlier subject to PRB Act, 1867 (Books as a subject are administered by Ministry of Education)
- **Significance of the bill**
  - **Simplifies registration process** of periodicals and brings **transparency** in governance of press and periodicals.
  - **Upholding media freedom**
  - Improves **ease of doing business**, particularly for small and medium publishers.

#### About PRB Act 1867

- Enacted during the Viceroyalty of **Lord John Lawrence**
- **The 1867 act** helped governments control the press, regulate book publishing, and inadvertently **curb the freedom of speech and expression**.

#### 1.10.2. ADVOCATES (AMENDMENT) BILL, 2023

- The bill, passed by Rajya Sabha, seeks to make the **act of 'Tout'** punishable and repeal certain provisions of Legal Practitioners Act, 1879 which have become obsolete.
- **Provisions**
  - Bill provides that **every high court and district judge** can frame and publish lists of touts.
  - Such persons named in the list of touts will be excluded from entering the court premises.
  - **Tout refers to a person** who either proposes to procure or **procures the employment of a legal practitioner** in return of any payment.



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# फाउंडेशन कोर्स

## सामान्य अध्ययन

### प्रारंभिक एवं मुख्य परीक्षा 2024

#### इनोवेटिव क्लासरूम प्रोग्राम

लाइव/ऑनलाइन कक्षाएं भी उपलब्ध

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- मौलिक अवधारणाओं की समझ के विकास एवं विश्लेषणात्मक क्षमता निर्माण पर विशेष ध्यान
- एनीमेशन, पॉवर प्वाइंट, वीडियो जैसी तकनीकी सुविधाओं का प्रयोग
- अंतर - विषयक समझ विकसित करने का प्रयास
- योजनाबद्ध तैयारी हेतु करेंट ओरिएंटेड अप्रोच
- नियमित क्लास टेस्ट एवं व्यक्तिगत मूल्यांकन
- सीसेट कक्षाएं
- PT 365 कक्षाएं
- MAINS 365 कक्षाएं
- PT टेस्ट सीरीज
- मुख्य परीक्षा टेस्ट सीरीज
- निबंध टेस्ट सीरीज
- सीसेट टेस्ट सीरीज
- निबंध लेखन - शैली की कक्षाएं
- करेंट अफेयर्स मैगजीन

**DELHI:** 25 जुलाई, 9 AM | 5 सितंबर, 1 PM

**JAIPUR:** 1 सितंबर 7:30 AM & 4 PM

**JODHPUR:** 21 अगस्त & 11 सितंबर 7:30 AM & 4 PM

**LUCKNOW:** 22 जून, 9 AM

**SIKAR:** 4 सितंबर 7:30 AM & 4 PM

**BHOPAL:** 8 अगस्त, 9 AM



## 2. INTERNATIONAL RELATIONS

### 2.1. INDIA- GREECE

#### Why in the news?

The Indian Prime Minister recently visited Greece for the first time in four decades.

#### More about news

- India and Greece agreed to **upgrade their bilateral ties to a level of strategic partnership** and further expand bilateral cooperation in political, security and economic spheres.
- Indian Prime Minister** was conferred with the **Grand Cross of the Order of Honour**, Greece's second highest civilian honour.
- Highlights of visit**
  - India **welcomed Greece into the International Solar Alliance** and looked forward to **Greece's membership of the Coalition for Disaster Resilient Infrastructure**.
  - Encourage joint efforts in preserving and protecting ancient sites** and strengthen cooperation within UNESCO.
  - Both countries agreed on the finalisation **of the Mobility and Migration Partnership Agreement** to facilitate skilled migration.



#### Significance of Greece for India

- Support at the Global arena:** Greece supported India's membership at NSG (National Supplier Group) and bid for a permanent seat on the United Nations Security Council.
- Geopolitical:** India's relations with Greece and Armenia are crucial in the context of an **emerging Turkey-Pakistan-Azerbaijan military axis (often referred to as the Three Brothers)** and can **counter increased Chinese presence** in the region.
- Geostrategic:** Greece **borders the Mediterranean Sea**, which covers three continents, i.e., **Asia, Africa and Europe** and thus **can help enhance India's outreach to the Mediterranean region**.
  - The Mediterranean region is vital for **India's Indo-Pacific policy**.
- Access to the European Market:** India is exploring a multi-modal link between Mumbai and the European mainland via the Greek transshipment port of Piraeus.
  - This will allow much faster shipment of Indian goods to markets in the entire Eurasian region.

#### Other Aspects of India- Greece Relations

- Historical linkage:** Chanakya, in Chandragupta's Court records in Arthashastra about the Yavan Ambassador in the Kings' court, named Megasthenes.
  - Trading between Mauryan Kings and Greece is **evidenced by coinage and writings**. **Gandhara art** is believed to be a **fusion of Indian and Greek influences**.
- Political:** Diplomatic relations were established between the two countries in 1950. **Greece opened its Embassy in Delhi in 1950 and India in Athens in 1978.**
- Science & Technology:** **Agreement on Science & Technology was ratified by both sides** to encourage and support cooperation in the science and technology field based on equality and mutual benefit.

- This is also part of the Newly announced **India-Middle East-Europe Economic Corridor** Sealed at G20 Summit 2023 (Details of this will be covered in September 2023 Magazine)
- **Energy Hub:** The Mediterranean region can be a potential source to meet India's increasing energy demand and enhance energy security given its vast resources of oil (1.7 billion barrels) and gas (112 trillion cubic feet).
  - Greece's abundant sunshine and its robust wind energy capacity present substantial untapped opportunities for electricity generation.
- **Defence and Security:** With Greece expanding its defence expenditure from US\$5 billion to 8.4 billion (2019- 2022), it can act as a **potential market for India's defence exports**.
  - India and Greece have engaged in **joint naval exercises in the Mediterranean Sea and multinational air force exercise INIOCHOS-23**.

#### Concerns associated with India- Greece relations

- **Lack of bilateral engagements:** The absence of high-level interaction in four decades has resulted in a **lack of strong strategic connections**.
- **China's Presence:** Chinese state-owned shipping company COSCO has approx 60% stake in the Piraeus port and thus can hamper India's connectivity plans and trade opportunities through the port.
- **Low Trade and Investment:** India's trade relations with Greece face challenges characterised by limited business opportunities, insufficient investment and capital inflow, a shortage of enterprises capable of bolstering exports, etc.

#### Way forward

- **Enhance engagements:** Greece and Cyprus are two EU member states that can act as a bridge between the European Union and India, and thus, urgent steps are required to strengthen bilateral ties.
- **Developmental aid:** India can extend its Line of Credit, utilise its soft power and diaspora to counter China's presence and provide an alternative to China's Debt Trap Policy.
- **Promote Tourism:** Collaborate on tourism promotion efforts, including joint marketing campaigns and improved air connectivity.
  - Greece is emerging as a popular tourist destination among Indians.
- **Maritime Cooperation:** Enhance cooperation on maritime security, including information sharing and joint naval exercises.

## 2.2. BRICS

#### Why in the news?

The 15<sup>th</sup> BRICS summit, the first in-person meeting since 2019 was held in Johannesburg, South Africa.

#### More on News

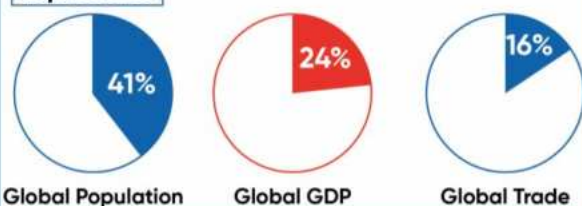
- South Africa has chosen the theme **"BRICS and Africa: Partnership for Mutually Accelerated Growth, Sustainable Development, and Inclusive Multilateralism"** for the summit.
- Apart from BRICS leaders, South Africa had invited **all 55 members of the African Union (AU)** to the event and about **20 other leaders from Asia, South America and Small Island States** who represent the **Global South** for sessions on the sidelines of the summit.

# BRICS

## Conception

- Conceived of in the early 2000s in a Goldman Sachs paper as a **grouping of the fastest growing developing economies not in the G-7**.
- BRIC countries started their dialogue in 2006, with the induction of South Africa in 2010, BRICS came into existence.

## Represents



## Members



## Major initiatives of BRICS

<p>BRICS countries institutionalized <b>New Development Bank (NDB)</b> in 2014.</p>	<p><b>Contingency Reserve Arrangement (CRA)</b> of BRICS to provide short-term liquidity support to the members.</p>	<p><b>BRICS R&amp;D centre for vaccines</b> to prevent and control infectious diseases.</p>	<p>Significant growth in <b>BRICS investments and Trade</b>. In <b>2022</b>, trade between BRICS countries totalled some \$162 billion.</p>
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## Outcome of BRICS Summit

- **Expansion of BRICS:** BRICS members agreed to induct six new member countries with their membership coming into effect from January 2024. These countries include **Argentina, Egypt, Ethiopia, Iran, Saudi Arabia and the UAE**.
- **Johannesburg II Declaration:** It encapsulates significant BRICS viewpoints on global economic, financial and political matters.
- **Three pillars:** BRICS members committed themselves to strengthening the framework of mutually beneficial BRICS cooperation under the three pillars of-
  - **Political and security,**
  - **Economic and financial, and**
  - **Cultural and people-to-people cooperation.**
- **Enhancing Strategic Partnership:** With a focus on areas like the promotion of **peace**, a more **representative, fairer international order**, a reinvigorated and **reformed multilateral system**, sustainable development and inclusive growth.
- **Trading in local Currencies:** The BRICS summit tasked BRICS finance ministers and/or central bank governors to consider the **issue of local currencies, payment instruments and platforms**.
- **Push for UN reforms:** The statement for the first time in the recent past said that BRICS countries support a **comprehensive reform of the UN**, including its Security Council.

## India's Proposals

- **Space cooperation:** India's Prime Minister called for establishing a **BRICS space exploration consortium** that could focus on space research and weather monitoring for global good.
  - BRICS is already working on the **BRICS satellite constellation**.
- **Inclusion in G20:** India proposed that all the **BRICS nations and the African Union be permanent members** of the G20.
- **Future ready BRICS:** India called for cooperation in the areas of **education, skills development and technology** to make BRICS a future-ready organisation.
  - India also proposed a **skills mapping exercise** to complement each other in their development journey.
- **Other proposals advocated by India-**
  - **Big Cat Protection** between the five countries.
  - **Building resilient supply chains** advocated during BRICS Business Forum.
  - Building a **repository for traditional medicine**.



## Significance of BRICS Expansion

- **Geopolitical and geoeconomic expansion:** The expansion signifies a growing alignment of geopolitical and economic agendas within the BRICS.
  - It incorporates **major global oil producers** near crucial trade chokepoints, such as the Suez Canal and the Strait of Hormuz and Bab-al Mandab Strait.
- **Infrastructure linkages:** Expanding BRICS opens up new horizons of economic and people-to-people connect.
  - India, Iran, and Russia are already developing the **International North-South Transport Corridor**.
- **Africa's growth:** Inclusion of two African countries strengthens the ongoing efforts to promote **integration, development, and growth** through the African Continental Free Trade Area.
- **Global Peace:** The induction of 4 major Middle East Players- Egypt, Iran, UAE and Saudi gives BRICS a major boost – as these countries have been at odds with each other.
- **Reform of the multilateral system:** BRICS will greatly push forward the agenda for reform in the present system of multilateralism, where Western powers play a dominant role.

## Emerging challenges to BRICS with expansion and other reforms

- **Dilution of original purpose:** The rapid expansion of members could dilute the original purpose of the BRICS grouping, especially if China is seen as taking a dominant position in the grouping.
  - **China factor:** It is believed by many that the expansion of BRICS is a political manoeuvre to advance China's vision of international order.
- **India's balancing interests:** As the BRICS, an economic grouping, becomes more strategic and political, India may find its balancing act with the Quad, Shanghai Cooperation Organization and Indo-Pacific Economic Framework more difficult.
- **Geopolitical dimensions:** Tensions between different countries may now make BRICS more unwieldy to run, akin to SAARC, due to tensions between India and Pakistan.
  - Egypt and Ethiopia continue to dispute the management of the Nile River.
  - Although a Chinese-brokered deal has eased tensions, Saudi Arabia and Iran remain historical rivals for regional dominance in the Middle East.
- **No clear membership criteria:** A clearly defined membership criteria has not been put in the public domain.
- **Difficulties in Intra-BRICS trade:** The sanctions Iran faces might make intra-BRICS trade more difficult to grow- both Russia and Iran are now off the SWIFT system.
- **Push to minilateralism:** With expanded BRICS, we are seeing a new wave of “minilateralism” — a style of diplomatic engagement that gives prominence to small- and medium-sized coalitions of like-minded states.
  - One problem with minilateralism is that it threatens to further erode our **means of global collective action** needed to tackle the massive threats posed to humanity today.

## How should India respond to these developments?

- **Do the Balancing Act:** India needs to strategically balance its ties with the Western powers, especially the US, since the expanded BRICS will also include Iran (sanctioned by the US).
  - However, the expansion could **advance Indian interests**, giving India more clout with a set of nations with which it is keen to expand relations.
- **Checking Chinese influence:** India needs to balance the strategic influence that China exerts in the BRICS grouping with its economic diplomacy and its relations with Russia and Iran.
- **Engaging with Global South via BRICS:** BRICS expansion means India's increased influence and added opportunity to collaborate on the problems of the Global South.
- **Indian Payment Systems:** India should push for institutionalising intra-BRICS trade in the national currencies of members via the Indian payment mechanisms and systems.
  - This will also indirectly encourage the idea of the Internationalization of the Rupee.
- **Energy Security:** The inclusion of major oil-producing Middle Eastern powers such as Saudi Arabia and UAE in BRICS increases the opportunity for energy diversification and better energy pricing for India.
- **Defining membership criteria:** Advocating a clear membership criterion for BRICS will help ease India's concerns about who could be future members of the BRICS.

## Conclusion

BRICS stands for a multipolar world order that is equitable and builds on international law and the principles of the United Nations Charter.

## 2.3. MALABAR: NOT JUST AN EXERCISE

### Why in the news?

India, Japan, the United States and Australia held the Malabar naval exercise off the coast of Sydney (Pacific Ocean) for the first time. Previously, it was held in the Indian Ocean.

### Background of the exercise in conjunction with QUAD

- **1992:** Malabar naval exercise commenced in **1992 as a bilateral exercise between India and USA.**
- **2007:** For the first time, the exercise also included Australia, Japan and Singapore.
  - In the same year, the **US, Japan, Australia and India converged** in the **Quad 1.0 (Quadrilateral Security Dialogue).**
- **2008:** Due to **China's protest** to the accord, **Australia and, subsequently, Japan dropped out** of the exercise and Quad.
- **2015:** Japan became a permanent participant in the Malabar exercise
- **2020:** Australia rejoined it after the revival of Quad (Quad 2.0).
  - The **'China factor'**—which was key to the failure of Quad 1.0 to take off—just a decade later appears to be serving as the **pivot around which Quad 2.0 rejuvenated.**

In the decade since 2007, rising **Chinese domination via its land and maritime disputes**, the increasingly **questionable intent of its One Belt, One Road (OBOR) programme**, and its related **debt trap diplomacy** have encouraged the idea of Quad' further.

### Geopolitical importance of Malabar exercise and connected events

- **Strategic Convergence:** Shifting exercise from the Malabar Coast to the Bay of Bengal and alternating between the latter and the Western Pacific region suggests a strategic convergence between the participants in the 'Indo-Pacific'.
- **Balance of Power:** China's assertiveness in the Indo-Pacific region through OBOR, logistics bases, debt traps, etc., disturbs the balance of power in the region.
  - The exercise tilts the balance of power towards the larger Pacific region and, in some ways, acts as a **reinforcement exercise in the context of the rising power of China.**
- **General Indo-Pacific Stability:** The QUAD and the Malabar Exercise should be viewed as a major step towards building a **sustainable Indo-Pacific coalition.**
- **Protecting global commons:** The growing instability in the international order, including the weakening of US influence in the Indo-Pacific, makes a stronger case for the protection of the global commons. Quad and Malabar help in this regard.
- **Rules-based international order:** Quad countries have affirmed their commitment to uphold the rule of law and freedom of navigation in the international seas and upholding the territorial integrity and sovereignty of all states as essential.
- **Establishing trust and military cooperation:** The naval cooperation among major powers in the Indian Ocean region has had limited success, and the strategic distrust levels still remain quite high due to their competing interests.
  - Malabar exercise is one of such other initiatives like the Indian Ocean Rim Association (IORA) and the Indian Ocean Naval Symposium (IONS) to address this issue.

### Significance of these developments for India

- **Development of strong maritime order:** A conducive maritime order requires to be underpinned by naval power projection capabilities. This includes sea-control (aircraft carriers/surface ships) and sea-denial (submarines, underwater drones, et cetera) capabilities.
  - Malabar exercise helps further enhance such capabilities along with the protection of navigation routes for seaborne commercial traffic and control over navigational chokepoints.

- **National Military Capabilities:** Although the Quad's present objectives, its members also actively cooperate to build each other's economic, technological and military capabilities, specifically in the context of rising China.
- **Strengthening India's SAGAR policy:** 'SAGAR' ('Security and Growth for All in the Region') vision posits the requirement to safeguard the region alongside protecting our national interests.
  - These exercises can help enable this policy. For example, information sharing during natural disasters and enhanced capacity in case of search and rescue.
- **Economic Significance:** As India's economy grew, so did its larger maritime interests. Thus, encouraging to look beyond the proximate oceanic space.
  - Japan and the USA bring to the table considerable capital and economic support.

## Conclusion

'Malabar Exercise', on the surface of it, seems to address only India's maritime security concerns. However, the evolution of the Malabar exercise series could be seen as representing a barometer of the shifting geopolitics in the Indo-Pacific region.

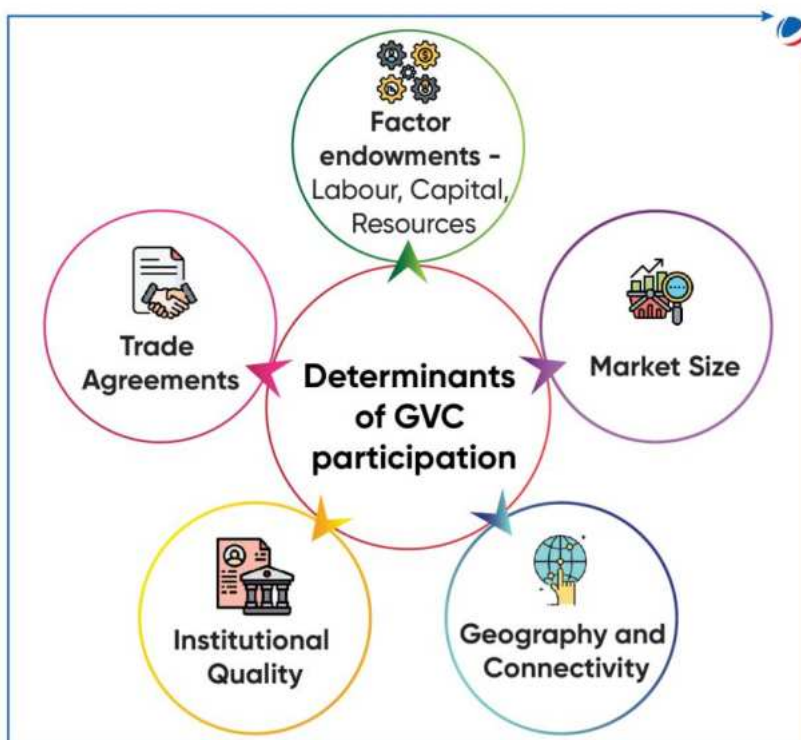
## 2.4. GLOBAL VALUE CHAINS

### Why in the news?

Trade and Investment Ministers of G20 nations under India's G20 Presidency agreed to **map Global Value Chains (GVCs)** and adopted a **G20 Generic Framework for Mapping GVCs**.

### What are GVCs?

- **Definition:** GVCs consist of intricate production networks that are **fragmented across multiple firms and countries** for cost optimization and for achieving production efficiency.
- **Distinct from international trade:** Unlike traditional international trade whose transactions involve only two countries (an exporting country and an importing country), **GVC trade crosses borders multiple times**.
- **GVC Participation:** Countries can participate in GVCs by engaging in either backward or forward linkages:
  - **Backward GVC participation** is when a country uses inputs from another country for domestic production.
  - **Forward GVC participation** is when a country supplies inputs that are used for production in another country.
- **Current GVC distribution:** A few countries in Asia, Europe, and North America have driven GVC expansion over the past 30 years.
  - Europe is the most regionally integrated region, with four times as many regional linkages as global linkages.
  - **South Asia, the Middle East and North Africa are the least regionally integrated regions.**







### Risks and Challenges in GVC Participation

- **Economic gaps:** There is a risk of widening economic gaps between countries since the gains from GVC participation are not distributed equally across and within countries.
  - Some developing countries participating in GVCs, for example, may find themselves locked into low-value-added activities in the long run.
- **Risk of external shocks:** GVC participation increases the local economy's exposure—albeit not necessarily its ability to cope with—external shocks.
  - Recent examples suggest that the increasing complexities of GVCs are contributing to increased dependencies and heightened vulnerabilities to disruptions.
- **Inflation linkage:** GVCs create strong links in price formation, implying that inflation in one country is more likely to spill over to its direct and indirect trading partners.
- **Gaps in GVC participation:** There exists a significant gap between the ability of developing and developed countries in GVC participation.
  - Participation in GVCs partially depends on the capacity of countries to attract global production, including by promoting and fostering linkages between foreign enterprises and domestic companies, particularly MSMEs.
- **Challenges to MSMEs:** MSMEs across the world, especially in developing countries, face significant impediments with the entry of global firms and the associated competition in local markets.

#### G20 Generic Framework for Mapping GVCs

It is a voluntary, and non-binding generic mapping framework based on the following building blocks:

- **Data:** GVC resilience framework should be based on collecting timely high-quality sectoral data and voluntarily providing firm-level data.
- **Analysis:** The complexity of GVCs necessitates the use of models and indicators, which can provide key insights from such GVC data.
- **Representation:** GVC resilience framework should use advanced technological tools that present underlying patterns from data analysis in a user-friendly manner.

By incorporating these building blocks, the framework can help in the identification of the sectors and products critical to GVC resilience.

### What should be the strategy for participation in GVCs?

- **Building trust:** A key to robust and adaptable global supply chains is trust. **Quality infrastructure** fosters this trust among trading partners, addressing consumer demands and facilitating private-sector collaboration.
  - For instance, enhance domestic monitoring of the logistics sector to ensure quality physical and digital logistics infrastructure.
- **Encouraging interoperability:** The interoperability of standards and protocols among countries is essential for allowing supply chains to operate properly. These standards **encapsulate best practices** for safety, quality, and efficiency.

- **Mapping vulnerabilities:** It is crucial to identify the hidden vulnerabilities within GVCs and develop resilience strategies to mitigate the impact of external shocks. For example, developing capabilities of local industries through schemes like Performance Linked Incentive (PLI).
- **Clear Legal framework:** Facilitate the establishment of legal frameworks that promote transparency and ease of doing business, keep pace and evolve with technological advancements.
  - Also, strengthen contract enforcement, protect intellectual property rights, and improve standards regimes.
- **Promoting Investment:** Sustainable and inclusive GVCs require investment. The robust flow of capital transforms the economic relations of countries, integrating it effectively into the GVCs.
- **Integrating MSMEs in global trade:** MSMEs, particularly in developing countries, plays significant role in value chain but often lack the requisite resources to collect and analyse all the relevant information for their target markets.

## 2.5. NEWS IN SHORTS

### 2.5.1. OUTCOME DOCUMENT OF G20 DIGITAL ECONOMY MINISTERS MEETING

#### Key highlights of the outcome document

Priority Areas	Initiatives announced/adopted
Digital Public Infrastructure (DPI)	<ul style="list-style-type: none"> <li>• <b>G20 Framework for Systems of DPI-a voluntary and suggested framework</b> for development, deployment and governance of DPI               <ul style="list-style-type: none"> <li>○ DPI refers to a <b>set of shared digital building blocks</b>, such as applications, systems, and platforms, powered by <b>interoperable open standards or specifications</b>.</li> <li>○ <b>India Stack</b> is a set of <b>commonly used DPIs in India</b>.</li> </ul> </li> </ul>
Security in the Digital Economy	<ul style="list-style-type: none"> <li>• <b>G20 High-Level Principles (HLPs) to Support Businesses</b> in Building Safety, Security, Resilience, and Trust in the Digital Economy.               <ul style="list-style-type: none"> <li>○ It draws from the <b>practices, strategies and tools developed and implemented by G20 members</b>.</li> </ul> </li> <li>• <b>G20 Toolkit on Cyber Education and Cyber Awareness of Children and Youth</b> to protect children's privacy and personal data, uphold children's dignity, and respect their rights</li> </ul>
Digital Skilling	<ul style="list-style-type: none"> <li>• <b>G20 Toolkit for Designing and Introducing Digital Upskilling and Reskilling Programs</b> to help better assess and improve strategies towards building a future-ready workforce.</li> <li>• <b>G20 Roadmap to Facilitate Cross-Country Comparison of Digital Skills</b> to enable a common understanding of job roles, digital skills, and related credentials.</li> </ul>

### 2.5.2. BUSINESS 20 (B20) SUMMIT HELD IN NEW DELHI

- Theme of summit is **R.A.I.S.E – Responsible, Accelerated, Innovative, Sustainable and Equitable Businesses**.
- B20 was established in 2010 as the official G20 dialogue forum with global business community.
  - It **brings policymakers, business leaders and experts from across the world** to deliberate and discuss B20 India Communique.
- **Key Recommendations/Policy actions**

Areas	Recommendations/Policy Actions
Global Economic Recovery	<ul style="list-style-type: none"> <li>• Creation of <b>Global SDG Acceleration Fund (GSAF)</b> for financing Global Public Goods and <b>bridging SDG financing gap</b>.</li> <li>• GSAF is proposed as a <b>global multi-donor fund</b> where <b>G20 countries and next ten largest countries by GDP</b> would allocate and contribute a fixed capital.</li> </ul>
Inclusive GVCs for Resilient Global Trade and Investment	<ul style="list-style-type: none"> <li>• <b>Facilitate FDI flows</b> towards green, sustainable, and circular business model.</li> <li>• <b>Identify niche opportunities with competitive advantages</b> for less represented segments.</li> </ul>
Financial Inclusion for Economic Empowerment	<ul style="list-style-type: none"> <li>• <b>Provide incubation/mentorship assistance</b> to small businesses to enable them access to right resources.</li> </ul>
Digital Transformation	<ul style="list-style-type: none"> <li>• <b>Set unified standards and metrics</b> for digital literacy.</li> </ul>
Technology, Innovation and R&D	<ul style="list-style-type: none"> <li>• Set up <b>Virtual Digital Lab and Library</b> as a platform for cross-border collaboration.</li> <li>• Establish '<b>Council for Earth Observation</b>' to leverage</li> </ul>

	space technology with focus on water conservation etc.
<b>Future of Work, skilling and mobility</b>	<ul style="list-style-type: none"> <li>Develop <b>Universal Labour Information Management System</b> that provide centralised data on employment trends, job vacancies etc.</li> </ul>
<b>Energy, Climate Change and Resource Efficiency</b>	<ul style="list-style-type: none"> <li>Develop harmonised international carbon markets.</li> </ul>

### 2.5.3. PANAMA CANAL

- **Shipping disruptions** occurred in a drought hit Panama Canal.
- Panama Canal is a **constructed waterway** that connects the **Atlantic and the Pacific Oceans**.
  - It enables ships to **avoid the lengthy and hazardous voyage around Cape Horn** at the southern tip of South America.
  - Panama Canal **connects nearly 2,000 ports in 170 countries**.
- Panama is an **isthmus** connecting North and South America.



- **Isthmus** is narrow strip of land connecting **two larger landmasses**. For example, Suez Canal is constructed on the isthmus of Suez.
  - However, **they are different from Straits** which are narrow waterways connecting **two larger bodies of water**.

✓ For example, **Strait of Gibraltar connecting the Mediterranean Sea and the Atlantic Ocean**.

- **Role of Straits and Isthmus in Global Trade:**
  - **Important trade link:** Approximately 12% of global trade passes through the Suez canal.
  - **Time and Cost Savings**
  - **Global Supply Chain:** Supporting the movement of various commodities, including Dry Bulk, Container, etc.
  - **Strategic significance:** Panama Canal's significance goes beyond economic benefits and encompasses national security, defense capabilities, and logistical resilience for the region, especially for USA.

### 2.5.4. SULINA CHANNEL

- Sulina Channel – a **tributary of Danube river, connects major Ukrainian ports on the river to Black Sea**.
  - **Chilia, Sulina and St George** are major channels in **Danube delta**.
  - Of these three, **Sulina Channel is the only one deep and wide enough** for freight transport.
  - It **lies completely within Romania**, a NATO member.
- **Danube Delta** has **provided Ukraine with an alternative passage** after Russia withdrew from Black Sea grain deal.

### 2.5.5. THE SPIRIT OF CAMP DAVID

- Leaders of **United States, Japan, and South Korea** issued a joint statement titled 'The Spirit of Camp David'.
  - Summit was held to project unity in the face of **China's growing power** and nuclear **threats from North Korea**.
- **Key highlights of the joint statement**
  - **Consult promptly** with each other during crises.
  - **Hold annual multi-domain trilateral exercise**
  - Develop the Partnership for Resilient and Inclusive Supply-chain Enhancement (RISE)
  - Hold **trilateral summits annually**

### 2.5.6. 70 YEARS OF COUP IN IRAN

- In 1953 US orchestrated coup **toppled Iran's prime minister**.
- The coup was driven by **America's fears** about a possible **tilt toward the Soviet Union** and the **loss of Iranian crude oil**.
- It is considered to be **backed** by the country's **leading Shiite clergy** and **brought** Shah Mohammad Reza Pahlavi to power.





- It also lit the fuse for the **1979 Islamic Revolution**.
  - The revolution forced Shah to flee Iran and **Ayatollah Ruhollah Khomeini** usher in the **theocracy** that still governs the country.

#### 2.5.7. ERRATA

- Due to a typographical error in **Article 2.1 "India-US relations"** of June 2023 Current Affairs Magazine, it

was incorrectly mentioned that "State visit to the US was in 1969".

- Correct information is "Earlier, only 2 Indian leaders have been hosted by the US as an **official state guest**: **President S Radhakrishnan in 1963**, and **PM Manmohan Singh in 2009**. India's first PM, Jawaharlal Nehru made a US visit for the first time in 1949".

 <p><b>SMART QUIZ</b></p>	<p>You can scan this QR code to practice the Smart Quiz of International Relations at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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## 3. ECONOMY

### 3.1. CREDIT RATING AGENCIES

#### Why in the news?

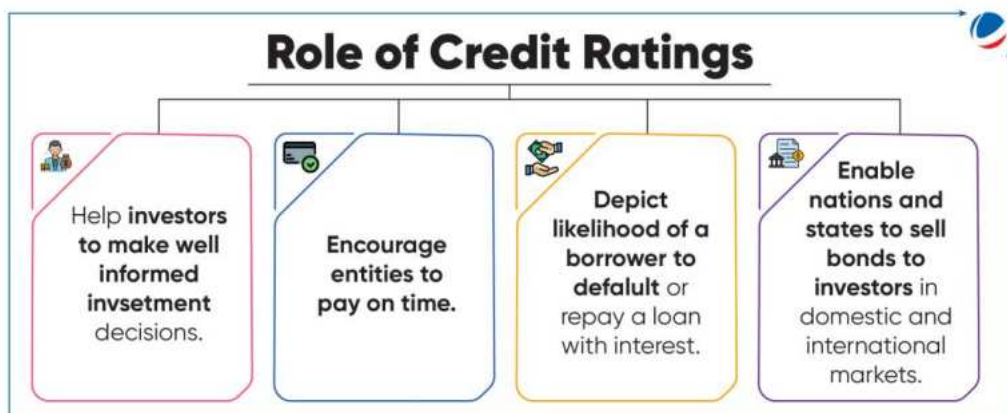
Ratings agency **Moody's** has affirmed a **BAA3 rating on India** and maintained a stable outlook on the Indian economy.

#### More on news

- Other research shows that **India's sovereign credit rating** could be downgraded due to the impact of **climate change and the rise in temperature volatility by the 2030s**.
  - The reason behind this is the **delay in green investment**, which later increases **the borrowing cost for nations** and subsequently increases debt.
- Sovereign ratings assess the creditworthiness** of countries and are a key gauge for investors.
- Covering more than \$66 trillion** in sovereign debt, the **credit ratings agencies** act as gatekeepers to **global capital**.
- Currently, India is rated investment grade by **three major Credit Rating Agencies (CRAs)** - **Standard & Poor's(S&P), Moody's and Fitch**.
  - There are **several criteria** behind rating a government's creditworthiness -
    - ✓ **Political risk, taxation, currency value and labour laws.**
    - ✓ **Another is sovereign risk**, where a country's central bank can change its foreign exchange regulations.

#### Issues with India's sovereign ratings by global agencies

- Historical anomaly:** Recently, S&P and Fitch rated India 'BBB-' while Moody's has 'Baa3', indicative of the lowest possible **investment grade**.
  - Economic Survey 2020-21 noted that **never in the history of sovereign credit ratings** has the **5<sup>th</sup> largest economy** in the world been rated at **the lowest rung of the investment grade (BBB-/Baa3)** except in the case of **China and India**.
- Structural issues: Flawed "issuer-pays" model** where the entity also pays the rating agency for its services. This often leads to a **conflict of interest**, with tremendous potential for rating biases.
- Ratings do not capture India's fundamentals:** India's willingness to pay is unquestionably demonstrated through,
  - It's **zero sovereign default history**.
  - Comfortable size of its foreign exchange reserves** (As of July 2023, Forex Reserves stood at **US\$ 607 bn**) and **low external debt to GDP ratio around 19-20%**.
  - India is one of the **largest recipients of FDI** and is also high on the scale of **foreign portfolio investment**.
- Bias and Subjectivity in sovereign credit ratings:** Especially against **countries with lower ratings** as highlighted by **Economic Survey**.
  - One study highlighted in the survey found that CRAs gave higher ratings (from 1999-2010) to **developed countries regardless of their macroeconomic fundamentals**.



**In India, the Securities and Exchange Board of India (SEBI) regulates all credit rating firms under the SEBI (Credit Rating Agencies) Regulations, 1999.**

- There are seven credit rating agencies in India.**
  - They are CRISIL; CARE; ICRA; Acuité Ratings; Brickwork Rating; India Rating and Research Pvt. Ltd., and Infomermics Valuation and Rating Pvt. Ltd.
- What do they do?**
  - Empower market participants** with timely information and unbiased opinions.
  - Help the financial market grow** and be more efficient.
  - Evaluate and assess an **individual's or a company's creditworthiness**.

- **Pro-cyclical nature of credit ratings:** Can have a potentially adverse impact on economies and can **affect equity and debt FPI flows of developing countries**, causing damage and worsening crisis.
- **Complete regulatory void in global CRAs:** **Lack of transparent mechanism** to disclose more information on how decisions have been made by CRAs.

### Way Ahead

- **Refocus regulatory scrutiny:** A global “super-regulator” of CRAs would be best placed to address regulatory issues.
  - The global regulator, where **Emerging Market and Developing Economies (EMDEs)** would be adequately represented, would complement the activities of national regulators.
- **Reducing dependency on credit ratings in regulation:** There is a need for mechanisms to determine capital requirements **that suffer less from the pro-cyclicality and contagion sensitivity of ratings**.
- **Long-term ratings:** Rating agencies should be compelled to make more explicit long-term credit analyses; the relative short-term perspective of the ratings can be misleading.
- **Improving transparency of CRA methodologies:** Sovereign credit rating methodology to be made more transparent, less subjective and better attuned to reflect an economy’s fundamentals (**Economic Survey 2020-21**).

## 3.2. INCREMENTAL CASH RESERVE RATIO (ICRR)

### Why in the news?

The Reserve Bank of India (RBI) recently asked banks to maintain an Incremental Cash Reserve Ratio (ICRR) of 10%.

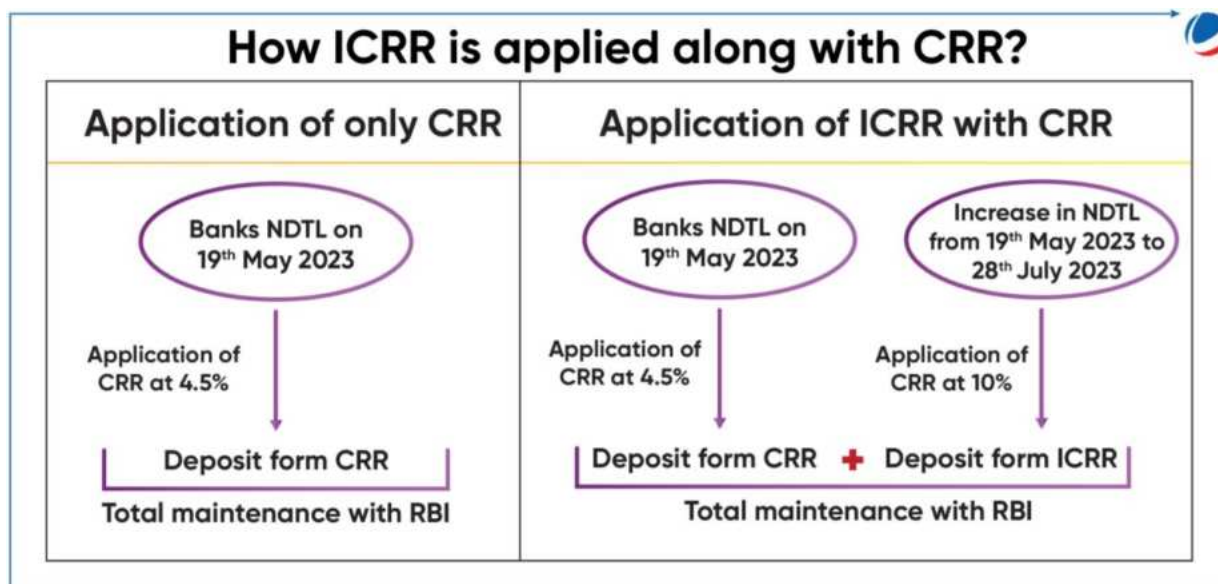
### CRR and ICRR

- **Cash Reserve Ratio (CRR):** It is the **share of a bank’s Net Demand and Time Liabilities (NDTL)** that is mandated by the Reserve Bank of India (RBI) to be maintained with the latter as reserves in the form of liquid cash.
  - 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**.
- **Incremental Cash Reserve Ratio (ICRR):** I-CRR is similar to the CRR, wherein banks need to set aside a certain portion of their money with the RBI. They do not earn any interest on this. RBI has the option to impose ICRR in addition to the CRR.
  - For instance, the Reserve Bank of India (RBI) asked banks to maintain an ICRR of 10% on the increase in their deposits between May 19 and July 28, 2023 due to discontinuation of 2000 notes. This implies that Banks must maintain both **CRR and ICRR**.

### Know the term

- **Net Demand and Time Liabilities (NDTL)** shows the difference between the sum of demand and time liabilities (deposits) of a bank (with the public or the other bank) and the deposits in the form of assets held by the other bank.

### How ICRR is applied along with CRR?





## Need of ICRR

- **Manage Liquidity:** There was a **recent increase in liquidity** in the economy due to a pickup in **government spending**, **sustained foreign inflows**, and **withdrawal of Rs. 2000 notes**, among others.
  - Estimates suggest that ICRR will pull out somewhere **between ₹20,000 crore and ₹40,000 crore** from the system.
- **Inflation Control:** India's **retail inflation** (measured by the Consumer Price Index (CPI)) rose to **7.5%** in July compared with 4.9% in June. Hence requiring a **tighter monetary policy**.
- **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.
  - For instance, the incremental CRR increases protection against the potential threat of Bank Run.
- **Decreased Lending:** Decreased liquidity implies a decrease in the lending capacity of the Banks.
  - Lower lending will, in turn, **bring down demand for goods and services**, reducing the **Aggregate Demand of the Economy**.

### Know the term

➤ **Bank Run** is when the customers of a bank or other financial institution **withdraw their deposits at the same time** over fears about the bank's solvency.

## Conclusion

As stated by RBI, ICRR is only a temporary measure that is **aimed to be a non-disruptive way of dealing with the issue of excess liquidity** in the system. In the long term, a combination of other liquidity control measures can also be applied.

### Other Liquidity Management Tools

- **Standing Deposit Facility (SDF):** SDF allows the RBI to absorb liquidity (deposit) from banks without giving government securities in return to the banks.
- **Altering Repo and Reverse repo rates:** Altering these rates directly affects the deposit rate in banks as well as their lending rates.
- **Open Market Operation (OMO):** OMO refers to **sale or purchase of government securities (bonds)** by the RBI.
- **Ways and Means Advances (WMA):** It is a **temporary loan facility** to the central and state governments.

## 3.3. STARTUPS IN INDIA






### Why in the news?

The Parliamentary Standing Committee on Commerce recently released a report titled '**Ecosystem of Startups to Benefit India**'.




## Startups In India

### Definition and Criteria

A company or entity will be referred to as a startup if it fulfills certain **criteria/parameters** given by Dept of Promotion of Industry and Internal Trade (DPIIT, Ministry of Commerce and Industry) under Start-Up India Scheme.


Company Age	Company Type	Annual Turnover	Original Entity	Innovative & Scalable
 Period of existence and operations <b>should not exceed 10 years</b> from the Date of Incorporation	 Incorporated as a <b>Private Limited Company</b> a Registered <b>Partnership Firm</b> or a <b>Limited Liability Partnership</b>	 Should have an annual turnover <b>not exceeding Rs 100 crore</b> for any of the <b>financial years</b> since its Incorporation	 Entity should <b>not have been formed by splitting up or reconstructing</b> an already existing business	 Should <b>work towards development or improvement of a product</b> process or service and/or have scalable business model with high potential for <b>creation of wealth &amp; employment</b>

## Initiatives launched to promote Startups

 <b>Startup India</b>	 <b>Other Funding Mechanisms</b>	 <b>Platform Facilitating Startups</b>
<ul style="list-style-type: none"> <li>• Launched in <b>2016</b>.</li> <li>• Administered by the <b>Ministry of Commerce and Industry</b></li> <li>• <b>Startup India Investor Connect Portal</b> has been developed under it with <b>SIDBI</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Startup India Seed Fund Scheme (SISFS)</b>, 2021</li> <li>• <b>Fund of Funds for Startups Scheme (FFS)</b>, 2016</li> <li>• <b>Credit Guarantee Scheme for Startups (CGSS)</b>, 2022</li> </ul>	<ul style="list-style-type: none"> <li>• <b>National Initiative for Developing and Harnessing Innovations (NIDHI)</b> by the <b>Department of Science and Technology (DST)</b> in 2016</li> <li>• <b>Innovations for Defence Excellence (iDEX)</b> by the <b>Ministry of Defense</b> in 2018</li> <li>• <b>MeitY Startup Hub (MSH)</b></li> <li>• <b>Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RKVY-RAFTAAR)</b>, 2017</li> </ul>

### Impact of Startups

- **Promoted employment opportunities:** Approximately 47% of the recognised startups are from Tier 2 and 3 cities, which provides employment opportunities to the youth.
- **Women Empowerment:** Approximately 47% of recognised startups in the country have at least one-woman director.
- **Rise in Research and Development:** They promote new ideas and innovations. For instance, **Deep Tech Startups** (refer to the box at the end of the article).
- **Promoted democratisation of technology and Inclusivity:** Fintech startups are now reaching **out to remote areas**, for instance, Paytm, etc.
- **Attracted new investments:** Startups have **attracted multinational corporations** to bring in foreign investments.


**Data Bank**

- **3rd largest startup ecosystem** of the world is in India.
- **98000 Startups** in 2023 as compared to **428 in 2016**.
- **108 Unicorns** (more than \$1 Billion in valuation). as of May 2023.

### Issues/Challenges in the Startup Ecosystem of India

- **Less focus on Agriculture:** Out of the total recognised startups, **only 5.18% are in agriculture sector**.
- **Low Intellectual Property Rights (IPR):** **Only 11%** of the patent applications filed by startups have been granted patents.
- **Flipping (Registering in a foreign country):** The Economic Survey 2022-23 highlighted the **flipping** trend due to more access to **overseas debt**, **eliminating the risk of angel tax**, **better IP protection**, etc.
- **Low utilisation of Income Tax Exemptions:** Under Section 80-IAC of the Income Tax Act, 1961, **only 1%** of recognised startups have received the Certificate of Eligibility.
  - This Section allows recognised startups a 100% tax exemption for three consecutive profit-making years.
- **Lack of Infrastructure Support:** Absence of **adequate and specific testing standards**, particularly for startups dealing with hardware products.
- **Uncertainty with Funding:** Funding from **angel investors and venture capital firms** becomes available to startups only after the proof of concept has been provided.

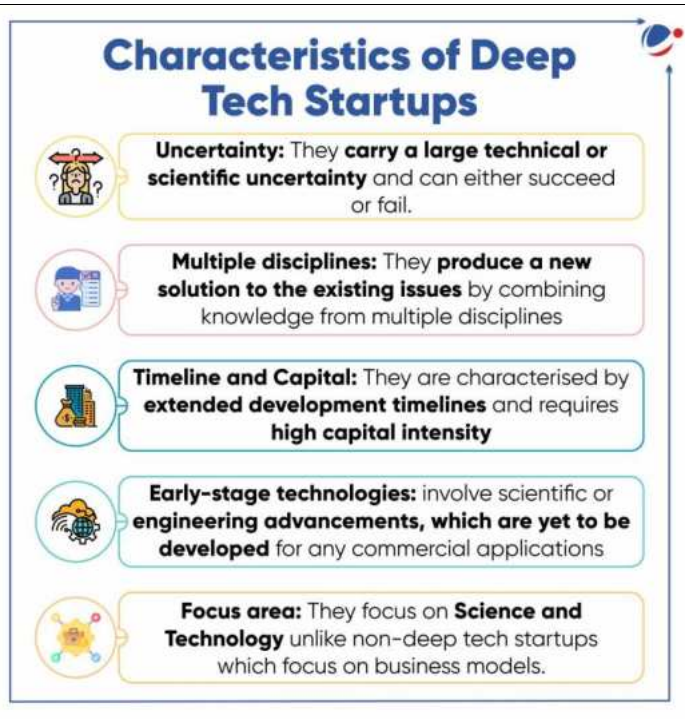
### Recommendations of the Committee

- **Encourage the adoption of advanced technologies:** Such as the Internet of Things (IoT), data analytics, etc., to improve productivity, optimise resource utilisation, and enhance decision-making in agriculture.
- **Establishing women entrepreneurs-focused funds:** To ensure uninterrupted access to capital.
- **Relaxation in regulatory/legal framework:** To enable **direct overseas listing** of **unlisted Indian startups** and steps to facilitate reverse flipping.
- **Amendments to the Income Tax Act, 1961:** So that **Employee Stock Option Plans (ESOPs)** are taxed only at the **time of sale of shares and not on notional gains**.

- **Dynamic testing and certification standards:** Shall be established as per **international best practices**.
- **Filling up the talent gap:** Encouraging industries to collaborate with educational institutions to create customised courses.
- **Encourage partnerships:** Between startups and research institutes for collaborative innovation and R&D partnerships.

#### Related News: Draft National Deep Tech Startup Policy (NDTCP), 2023

- **Deep Tech Startup:** A deep tech startup typically produces a solution along an **unexplored pathway** based on **new knowledge** within a **scientific or engineering** discipline or by **combining knowledge from multiple disciplines**.
  - Majority of them operate on a **business-to-business (B2B) model**, indicating their focus on **serving enterprise clients** and **providing technology solutions** tailored to **specific industry needs**.
- **Key Highlights of Draft NDTCP 2023:**
  - **Investment** in basic and **curiosity-driven scientific research**.
  - Strengthening **Intellectual Property Regime**.
  - Encourage participation of **public/private industries** especially MSMEs and Startups to create an ecosystem for the development of cutting-edge and dual-use technologies.
  - Establishing **Frontier Scientific Infrastructure (FSI)**, in academic institutions and R&D establishments.
  - **Regulatory sandboxes** shall be established across different deep technology domains.



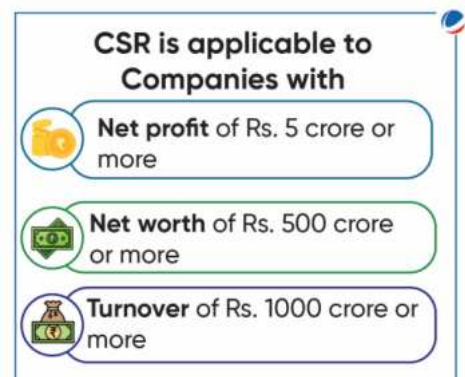
## 3.4. CSR SPENDING IN INDIA

### Why in the news?

Recently, **CSR Spending** data was released by the **Ministry of Corporate Affairs**.

### What is Corporate Social Responsibility (CSR)?




- **CSR** is a management concept whereby **companies integrate social and environmental concerns in their business operations** and interactions with their stakeholders.
  - It is a **form of self-regulation** that reflects a business's accountability and commitment to contributing to the well-being of communities and society.
- It is governed by **Section 135 of the Companies Act, 2013** and **Companies (CSR Policy) Rules, 2014** in India.
  - **Schedule VII of the Act** provides the list of activities to be included by companies for CSR policies.
  - India was the **first country to have statutorily mandated CSR** for specified companies.
  - Companies are required to spend, annually, at least **2% of average net profits** made in the previous 3 financial years.
- **Significance of CSR:** Aids **societal contribution** of companies, promotes their **positive brand image** and upholds the principles of **equitable sharing of wealth**.







## Trends in CSR Spending

 <p><b>150%</b> increase from CSR spending from 2014-15.</p>	 <p><b>Rs. 26,000 crore</b> has been invested by more than 18,000 companies.</p>	 <p><b>29.5% and 24.5%</b> of the total spending was done in Health and Education sector respectively.</p>
 <p><b>Doubling</b> of spending in the Environment sector due to India's global climatic commitments.</p>	 <p><b>Increased</b> spending on sanitation through the Clean Ganga fund, Drinking water, and Slum area development</p>	 <p><b>Less than 0.1%</b> spending towards technology incubators since the inception of CSR</p>

### Issues with CSR Spending in India

- **Lack of Proper Enforcement:** The mandate to spend CSR funds according to the act lacks effective monitoring. For example, lack of transparency with local implementing agencies of corporates.
- **Focus on avoiding regulatory liability:** For most companies, the approach towards CSR centres around regulatory compliance. This hinders the development of a long-term plan for CSR engagement in companies.
- **Geographical Bias:** According to a KPMG report, companies tend to spend their CSR funds in economically developed states, i.e., Maharashtra, Karnataka etc.
- **Low Spending:** According to KPMG, 52 out of the country's 100 largest companies failed to spend the required 2% on CSR activities.
- **Lack of Community Participation in CSR Activities:** The local community often lacks interest in participating and contributing to the CSR activities of companies. This is largely attributable to the fact that there exists little or no knowledge about CSR within the local communities.
- **Non-availability of well-organized NGOs:** Companies face difficulty in identifying the real needs of the community. The NGOs can fill this gap, acting as a bridge between them and streamlining the projects.

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

- **Bottom-Up approach:** CSR spending can be contextualised with local needs. For example, investing in cottage industries to provide employment opportunities to reduce migration.
- **Prioritising Social welfare:** CSR spending should prioritise the idea of social and economic justice. For example, ensuring equitable redistribution of profits from mining or selling of minor forest produce.
- **Performance Management and Program Evaluation:** This includes regular monitoring of CSR projects, development of teams and regular assessment of impact on local communities.
- **Diversification:** CSR spending should be diversified according to developmental priorities, addressing the skewed allocation. For example, investment in agricultural modernisation.
- **Alignment with SDGs:** Companies can align their goals and CSR spending with SDGs. For example, gender equality, sustainable consumption, etc.
- **Role of Media:** Media can help highlight good cases of successful CSR initiatives. It will create awareness and sensitise the local population about various ongoing CSR initiatives of companies.

## 3.5. SELF HELP GROUPS (SHGS)

### Why in the news?

Recently, the Government announced that skill development training will cover **two crore women under the 'Lakhpati Didi' scheme**, which aims to encourage them to **start micro-enterprises**.

### About Lakhpati Didi Scheme

- **Objective:** Enable rural SHG women to earn at least Rs.1 lakh per annum.
  - In 2021, the **Ministry of Rural Development** launched the **Lakhpati SHG women initiative**.
  - It is based on a **women-led development** approach.
- **Activities Covered:** Women would be trained in skills like **plumbing, LED bulb making, and operating and repairing drones, among others.**

### Role of SHG's in Empowering Women

- **Economic Sphere:**
  - **Promoted entrepreneurship Culture:** Among rural women by **enhancing their skills** and allowing them to engage in various entrepreneurial activities.
  - **Providing Finance:** SHG provides **micro-loans** to sustain businesses while also creating an environment for them to **develop greater agency and decision-making skills.**
  - **Participation in Labour Force:** Rise in Rural Female Labour Force Participation Rate (FLFPR) **from 19.7% in 2018-19 to 27.7% in 2020-21** (Economic Survey 2023-23).
  - They are also bridging the **gap between rural and urban India.**
- **Social Sphere:**
  - Contributed to **strong social networks and stronger local institutions**, thus contributing to **social capital.**
  - Enhanced position of women, for instance, their **participation in family decision-making has increased**, etc.
  - Meet national targets, such as those under the **Sustainable Development Goals (SDGs) 5 (gender equality), 16 (peace, justice and strong institutions)** etc.
  - **During Disaster and Other Exigencies:** During the COVID-19 pandemic, SHGs led from the front in producing masks, sanitisers, and protective gear.
- **Political Sphere:**
  - Many SHGs have started to **advocate for their rights** and, through **pressure groups**, have forayed into activism while **sustaining livelihoods.**

### Challenges/Issues Faced by SHG






- **Less availability of Finance:** The contribution of private banks in providing funds to SHGs is **low in comparison to public sector banks and government funding mechanisms.**
- **Lack of Cooperation:** SHG members often find it difficult to **sustain cohesiveness as they come from different backgrounds (caste, religion, etc.).**
- **Prevalence of Patriarchy:** In many cases, **women are** only used as a face for the business, whereas the actual work is done by the male members.
- **Limited definition of SHG:** Future expansion of SHGs becomes an issue because **an SHG cannot have more than 20 members.**
- **Poor Marketing:** Despite having a **very good product and team**, they are not able to make their product available in the market through efficient market linkages.
- **Other:** Lack of understanding about **core values of business**, Short-term orientations, Feeble management framework, etc.

### About Self Help Group (SHG)

- SHG is a village-based **financial intermediary committee** usually composed of 10-20 local women.
- It is **voluntary** in nature.
- India has around 1.2 crore SHGs, **88% of them all women-based.**
- SHG success stories include **Kudumbashree** in Kerala, **Jeevika** in Bihar, **Mahila Arthik Vikas Mahamandal** in Maharashtra, and **Looms** of Ladakh.

## Major Initiatives to Promote SHG



Initiative	Year/Agency	Key Features
 <b>Self-Help Group Bank Linkage Programme (SHG-BLP)</b>	1992/ National Bank for Agriculture and Rural Development (NABARD)	Linked <b>SHG with banks</b> .
 <b>Deendayal Antyodaya Yojana– National Rural Livelihoods Mission (DAY – NRLM)</b>	2011 as NRLM/ Ministry of Rural Development	Organizing <b>rural poor women</b> into SHGs and continuously <b>nurturing and supporting</b> them. Renamed as DAY-NRLM in 2015.
 <b>Start-up Village Entrepreneurship Programme (SVEP)</b>	2016/ Sub-schemes under DAY-NRLM	help SHGs to <b>set-up enterprises</b> at the village level in <b>non-farm sectors</b> .
 <b>Mahila Kisan Sashaktikaran Pariyojana (MKSP)</b>	2011/ Sub-schemes under DAY-NRLM	Empowering women in agriculture by <b>making systematic investments to enhance their participation and productivity</b> , also create and sustain their agriculture-based livelihoods.
 <b>Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)</b>	2014/ Sub-schemes under DAY-NRLM	Skilling the <b>poorest of the poor</b> youth between the <b>ages of 15 and 35 years</b> .

### Way Forward

- **Policy Making:** A policy should be **designed and implemented** to support their activities so that they can sustain their livelihoods.
- **Gender-neutral ecosystem:** For women entrepreneurs by ensuring the development of adequate infrastructure, providing training, removing red-tapism, etc.
- **Capacity Development:** Specialised training should be given on emerging business activities such as artificial technologies.
- **Improving Funding Mechanism:** Corporate social responsibility (CSR) support, international funding, and multilateral bank support should be facilitated to SHGs.

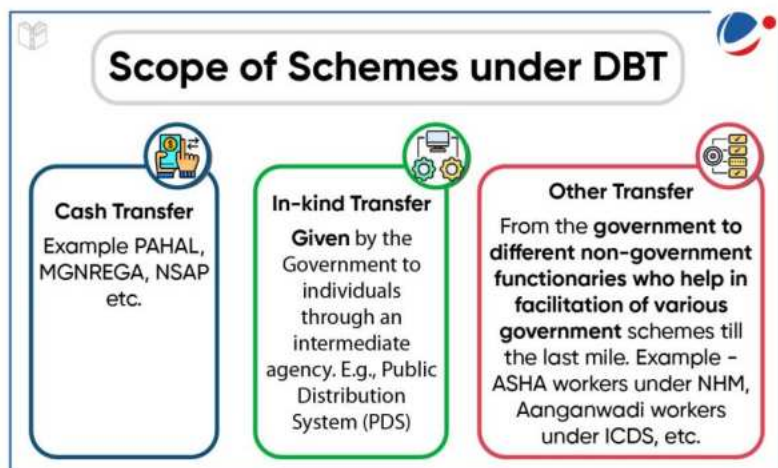
## 3.6. DIRECT BENEFIT TRANSFER (DBT)

### Why in the news?

According to the Union Finance Ministry, the government has saved Rs 2.73 lakh crore of taxpayers' money from 2014 to 2023 by adopting **Direct Benefit Transfer (DBT)** to send money directly to the targeted beneficiaries.

### About Direct Benefit Transfer (DBT)

- **Objective:** Bring **transparency** and **terminate pilferage** from the distribution of funds **sponsored by the Union Government**.
- **Launch:** It was rolled out in 2013 in certain districts. Later, it was implemented across the country in 2014.
- **Nodal Agency:** DBT Mission, Cabinet Secretariat under Secretary (Co-ordination & PG).
  - Disbursements are channelled through the **Public Finance Management System (PFMS)**.





- **Aadhaar Requirement:** Aadhaar is **not mandatory in DBT schemes**.
  - Since Aadhaar provides a unique identity and is useful in targeting the intended beneficiaries, Aadhaar is preferred, and beneficiaries are encouraged to have Aadhaar.
- **Key Enablers for DBT:**
  - **JAM (Jan Dhan, Aadhaar, and Mobiles) trinity:** Enabled transfer benefits in a **leakage-proof, well-targeted, cashless, and timely manner**.
  - **Business Correspondents (BC) Infrastructure:** Ensure that payments are disbursed to the beneficiaries **on time, at their doorstep, and of full value**.
  - **Payments Bank:** Increased the **penetration level of financial services** in remote areas of the country.
  - **Mobile money:** Develop a comprehensive **eco-system for cashless transactions** over a mobile platform using Aadhaar as an identifier.

### Impacts of DBT

- **Expedited Fund Transfer:** DBT expedited the **flow of funds and information** securely while reducing the possibility of fraud. Also, the **cost of transferring funds** from the government to the beneficiary has been reduced.
  - Schemes like **PM Awas Yojana** and **LPG Pahal scheme** have been successfully implemented.
- **Reduced Corruption:** It ensured **accurate targeting of beneficiaries**.
  - It eliminated the **need for intermediaries**, including government officers.
  - Beneficiaries can link only **one bank by seeding the fund deposits** to their Aadhaar details to **avoid duplication of subsidies**.
- **Financial Inclusion:** It encouraged people to **open bank accounts**.
- **Better Monitoring:** Enabled the Government to simultaneously **monitor** and **reach out to both citizens and beneficiaries of the scheme**.
- **Empowered Citizen:** DBT encouraged people to take benefit of other **e-governance services of the government**.

### Challenges in the implementation of DBT

- **Identification of beneficiaries:** For instance, reportedly, due to complex eligibility criteria under PM-KISAN, crores of funds were distributed to ineligible beneficiaries.
  - After identification and enrolment, there is also the challenge of database management.
- **Compliance and operational Issues:** **Aadhaar-related errors** such as **fingerprint mismatch, inadequate training of data entry operators** at the field level, etc., have led to transaction failure.
- **Low Financial Inclusion:** People in rural areas, scheduled tribes, etc., have less access to bank accounts, due to which benefits of DBT do not reach all.
- **Digital divide and illiteracy:** Among the poorest 20 per cent of households, only 2.7 per cent have access to a computer and 8.9 per cent to internet facilities (**India Inequality Report 2022: Digital Divide by Oxfam**).
- **Others:** Ineffective **grievance redressal mechanism** for beneficiaries who face issues with DBT, data security, privacy breaches, etc.

### Way Forward

- **Grievance redressal:** A proper customer grievance redressal mechanism is required to be conceptualised and coordinated by the PMO.
- **Better coordination and interaction:** Between all the stakeholders, such as the ministry which has launched the scheme, the nodal bank, and the NPCI (National Payments Corporation of India) system.
- **Promotion of Women Agents:** Greater focus should be given to increasing the number of **women agents** in the field to improve access to women beneficiaries.
- **Promoting Digital Infrastructure** initiatives like BharatNet (for Broadband Connectivity).

## 3.7. DRAFT NATIONAL POLICY ON OFFICIAL STATISTICS

### Why in the news?

The Ministry of Statistics & Programme Implementation (MoSPI) has formulated a Draft “**National Policy on Official Statistics (NPOS)**”.

### More on News

- This policy promotes the use of the **latest technologies** and lays down a road map towards modernised **data collection and timely dissemination** of information.
- The policy reinforces the **United Nations Fundamental Principles of Official Statistics (UNFPOS)** (India adopted the UNFPOS in 2016).
- **Definition:** According to UNFPOS, Official Statistics are **statistics derived by Government agencies** from statistical surveys, administrative and registration records and other forms that are published regularly.

### Present status Official Statistical System in India

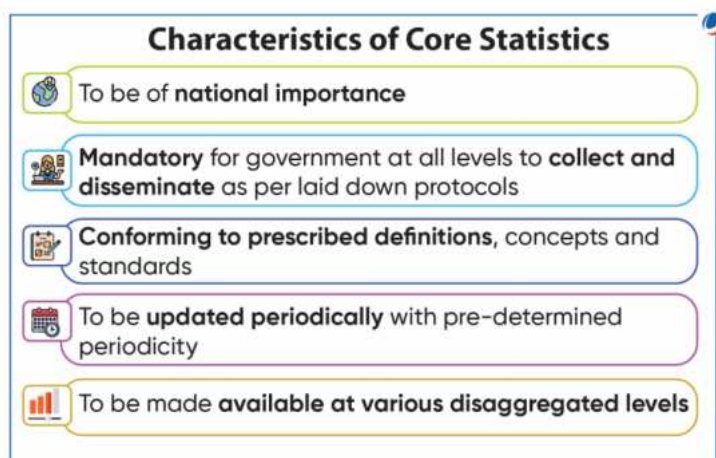
- **Role of Central Government:** The Official Statistical system in India is laterally divided amongst Union Ministries at the central level and vertically distributed between the Centre and the States/Union Territories (UTs).
  - At the national level, the **Ministry of Statistics and Programme Implementation (MoSPI)** is the nodal agency for planning integrated development of the statistical system in the country.
- **Role of State Government:** The Official Statistical System in the States is generally decentralised laterally over the Departments of the State Government.
  - At the apex level, the **Directorates of Economics & Statistics (DES)** coordinates statistical activities in the State/UT.
- **National Statistical Commission (NSC):** The government constituted the NSC in 2006 as an **apex advisory body on statistical matters** on the recommendations of the C. Rangarajan Commission.
- **Place in Seventh Schedule:** The subject ‘Statistics’ is covered in **Entry 94 of the Union List (List – I) and Entry 45 of the Concurrent List (List – III)**.
- **Legislations:** Exclusive statistical laws, such as the Census Act 1948, the Registration of Births and Deaths Act 1969 and the Collection of Statistics Act 2008, have guided the respective statistical exercises.

### Need and Significance of NPOS

- **Improved data quality:** Innovations in surveys, reduction in respondent burden, optimum use of administrative statistics and continuous monitoring will improve data quality.
- **Digital transformation:** NPOS supports contemporary digital-driven statistical transformations that revolutionise the exercises of data collection, compilation processing, storage, integration, analysis and dissemination.
  - This includes adopting **key emerging technologies** such as Big data analytics, Artificial Intelligence (AI)/Machine Learning (ML), Blockchain, etc.
- **Increase in public confidence:** Timely release of quality data, participatory and informed citizenry and feedback from users will increase public confidence in official statistics and, in turn, trust in government.

### Key Initiatives/Thrust Areas Mentioned in the Policy

- **Creation of Integrated Data System (IDS):** An IDS led by MoSPI would seamlessly **interlink data sets and enable interoperability** among different data-producing systems at the National and State/UT levels. It will have the **following features**:
  - **Digital survey platform** for computer-assisted interviewing and online data interchange.



- **Data warehouse** for data ingestion, storage, processing, analytics and archiving, along with a metadata repository.
- A state-of-the-art **output system for better access & dissemination**.
- An **innovation hub for piloting emerging technologies** such as Artificial Intelligence (AI) and Machine Learning (ML).
- **Core Official Statistics:** Key statistical products, such as GDP, price indices, SDGs, etc., are to be designed as core statistics.
  - A list of core statistics has been prepared for **eight domains**.
- **Innovation on Surveys:** NPOS seeks to reorient the **planning and development of various Surveys** to identify gaps in data availability, avoid duplication, and disseminate their results while maintaining decided timelines.
- **Augmentation of Quality of Official Statistics:** It encourages periodic reviews of statistics, documentation of steps involved, alignment of data products with the Data Governance Quality Index of NITI Aayog, and application of advanced technological tools.
- **Enhancing Statistical Coordination:** Establishment of an institutional mechanism for central ministries and states/UTs to coordinate with MoSPI through statistical advisers.
- **Capacity Development of Statistical Officials:** Through funding various schemes, which include training, infrastructure augmentation, public awareness exercises, exposure of statistical professionals to international practices, etc.

## Conclusion

The NPOS is expected to provide a robust and modern framework for delivering reliable, timely, and credible socio-economic statistics and ushering in a data-driven governance and decision-making system.

## 3.8. BHARAT NEW CAR ASSESSMENT PROGRAM (BHARAT NCAP)

### Why in the news?

The Ministry of Road Transport and Highways (MoRTH) has rolled out an indigenous star-rating system for vehicles to assess their safety in cases of collision.

### More on news

- It will enable Indian auto manufacturers to get their vehicles **tested and evaluated on a five-star rating scale** as per **Automotive Industry Standard (AIS) 197**.
  - AIS 197 contains the overall assessment method, vehicle selection procedure, various tests and their assessment protocols.
- It 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 worldwide.
  - Global NCAP is a major project of the Towards Zero Foundation, which is a UK registered charity.

### Features of the Bharat NCAP

- **Applicability:** To passenger vehicles with **not more than eight seats in addition to the driver's seat (8+1)** with gross vehicle weight not exceeding 3,500 kg, which are either manufactured or sold in India.
  - **Combustion engine vehicles, 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**.
  - For this, **three 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.
- **Format of testing:** Testing will be **voluntary**, and carmakers will be encouraged to offer their models for testing as per the AIS 197.
  - 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.



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

#### Significance

- **Road Safety:** Help consumers make an **informed decision** before purchasing a car and spur demand for safer cars.
- **Technology:** Align manufacturing practices with recent road safety regulations, including **mandatory dual front airbags, anti-lock braking system, and reverse parking sensors**, etc.
- **Cost Saving:** **Reduced cost of safety testing** for car manufacturers under Bharat NCAP (approx. ₹ 60 Lakhs) as compared to a similar test overseas (₹ 2.5 crores).
- **Competitiveness:** Enhanced **export-worthiness** of Indian cars to the global market.

#### Conclusion

Bharat NCAP will help reduce casualties and injuries, lessen the strain on healthcare and insurance sectors and foster a positive societal impact by reducing trauma caused by road traffic injuries and deaths.

For more details on road safety, kindly refer to the monthly current affairs of June, 2023.

Comparison with Global Standards			
Criteria	Bharat NCAP	Global NCAP	Euro NCAP
Frontal impact test	✓	✓	✓
Side impact test	✓	✓	✓
Pole side impact test	✓	✓	✓
Whiplash test	✗	✓	✓
AOP	✓	✓	✓
COP	✓	✓	✓
Safety assist technologies	✓	✓	✓
Pedestrian Occupant safety	✗	✓	✗
Vulnerable road user protection	✗	✗	✓

### 3.9. UDAN (UDE DESH KA AAM NAAGRIK) SCHEME

#### Why in the news?

Comptroller and Auditor General's (CAG) Audit report on the **Regional Connectivity Scheme – UDAN (Ude Desh Ka Aam Naagrik)** was laid down in the Parliament.

#### About UDAN Scheme

- **Objective:** Promote **cheaper travel** and **better connectivity** from underserved airports.
  - It seeks to create a **demand-driven mechanism** for regional air connectivity.
- **Launch:** It was initiated in **2017 (for ten years)** to fulfil the objective of the **National Civil Aviation Policy (NCAP), 2016**.
  - It envisaged a **Regional Connectivity Scheme (RCS)** to enhance regional air connectivity through fiscal support and infrastructure development.
- **Ministry:** Ministry of Civil Aviation (MoCA).
- **Implementing Agency:** Airports Authority of India (AAI)
- **Key Features:**
  - **Concessions:** Central and State Governments provided **concessions** to **airline** and **airport operators**.
  - **Viability Gap Funding (VGF):** Financial assistance through **VGF** to airline operators for their operations on RCS routes.
  - **Regional Air Connectivity Fund (RCF):** Funded by a **levy or fee per departure** on all domestic flights for providing concessions/ VGF for operations on regional routes.
  - **Budgetary support:** By the Government for the development/ revival of the airports/ heliports/ water aerodromes.

## Need/Importance of Regional Air Connectivity in India



Sphere	Importance
 Promoting Regional Development	Launch of several new flights to airports in <b>Tier-II and III cities</b> will fulfill the development aspiration of people and <b>reduce regional disparity in infrastructure.</b>
 Mobilization and accessibility	Will ease the mobilization of people, especially from difficult topography such as North-east, etc.
 Growth Engine	Will facilitate development activities such as <b>investment through Foreign Direct Investment (FDI)</b> etc.
 Disaster Management	<b>Quick response and relief operations</b> can be carried out.
 Cultural Exchange and Tourism	Will <b>complement initiatives</b> such as <b>Swadesh Darshan.</b>

### Key Issues in the Implementation of the Scheme

- **Identification:** No exercise was carried out by MoCA/ AAI to identify **eligible heliports based on their potential.**
  - The majority of heliports identified for operations from the proposals submitted by helicopter operators.
- **Absence of Rules:** MoCA did not frame any rules to **regulate the collection and remittance mechanism** of the RCF levy.
  - Also, there was a delay on the part of RCF Trust in raising RCF levy claims on the airline operators.
  - **No penal clause** was incorporated with regard to delays in the realisation of the RCF levy.
- **Non-compliance:** The decision of the Regional Connectivity Advisory Board to accept VGF claims by AAI on a self-certification basis resulted in non-compliance to various provisions of the scheme.
  - Out of 371 commenced routes, **only 30% (112 routes) completed** the full concession period of three years.
- **Big vs. small Airlines Companies:** As smaller airlines have to compete with big airlines, the former is at a disadvantage due to a lack of resources.
  - Most prominent airlines operate on routes that **do not have sufficient passengers.**
- **High Cost of Operation:** Due to rising costs of fuel, maintenance, etc., airline operators resist in operating on regional routes.

### Way Forward (Recommendation of the CAG)

- **Feasibility:** Assess the **feasibility of routes** for achieving the **sustainability of operations** in the long run and for the identification of unserved/underserved airports.
  - A **better mechanism** for the **identification** of airports for revival/development should be devised.
- **Monitoring:** Devise a mechanism to **monitor the RCF levy** collected by airlines and ensure that the amount collected from the passengers is not more than the amount to be remitted to the Government.
- **Incorporation of Penal Clause:** RCF levy claims should be raised promptly as per the **draft Standard Operating Procedure**, and a **penal clause** may be **incorporated** for delay in the realisation of dues from the airlines.
- **Reconcile the VGF:** A suitable mechanism should be **devised to reconcile the VGF claims** lodged by the airlines from the flight data available with Airport operators instead of disbursing the VGF **on a self-certification basis.**

## 3.10. URBAN INFRASTRUCTURE DEVELOPMENT FUND (UIDF)

### Why in the news?


National Housing Bank (NHB) has operationalised the **Urban Infrastructure Development Fund (UIDF)** with the **outlay of ₹10,000 crore.**

## More on News

- Its establishment was announced in the Union Budget 2023-24.
- It will be funded through the use of **priority sector lending shortfall**.
- Established on the lines of the **Rural Infrastructure Development Fund (RIDF)**.

## About UIDF


- **Objective:** Supplement the efforts of the State governments/UTs by providing a **stable and predictable source of finance** for the creation of infrastructure.
  - States will be encouraged to leverage resources from the **grants of the 15th Finance Commission**, as well as existing schemes, to adopt appropriate **user charges while accessing the UIDF**.
- **Coverage (Cities as per Census 2011):**
  - **459 Tier 2 cities** (population between 1 lakh to 9,99,999)
  - **580 Tier 3 cities** (population between 50,000 to 99,999)
- **Allocations of Funds:** Based on the **population of the eligible cities** of each state/UTs.
  - **Interest rate** on funds will be Bank Rate minus 1.5.
- **Eligible Activities:** Shall be aligned to the Missions and programmes of the **Ministry of Housing and Urban Affairs**.
  - Basic services like **sewerage and solid waste management**, water supply and sanitation, etc., and impact-oriented projects would be prioritised.
  - **Minimum size and maximum size** of the project proposal shall be **₹5 crores (₹1 crore for northeast & hilly States) and ₹100 crore**, respectively.
- **Nodal Agency:** Finance Department of the **respective States**.
- **Other Features:**
  - Funding for **administrative expenses and maintenance** will be kept out of the **purview**.
  - Housing, power and telecom, rolling stock (buses and trams), urban transport, health, and education institutions **are not covered**.
  - Principal loan amount is repayable in **five equal annual installments within seven years, including a two-year moratorium period**.
  - Borrowing by States will be governed by **Article 293 (3) of the Constitution of India**. i.e., within **borrowing powers of the State** from the **market and financial institutions** during a financial year.



राष्ट्रीय आवास बैंक  
NATIONAL HOUSING BANK

## National Housing Bank (NHB)

New Delhi



HQ  
New Delhi

**Genesis:** Set up in **1988**, under the **National Housing Bank Act, 1987**.

**Mandate:** **Harness and promote the market potentials** to serve the **housing needs** of all segments of the population with a focus on **low and moderate-income housing**.

**Other Key Information:** In 2019, it became a **government-owned entity**, after the government purchased a stake of the Reserve Bank of India (RBI).  
 ◦ **RESIDEX index (housing price index (HPI))** is released by it.

## About RIDF

- **Establishment:** 1995-96
- **Objective:** Financing **rural Infrastructure projects**.
- **Managed by:** National Bank for Agriculture and Rural Development (NABARD)
- **Funding Mechanism:** Domestic commercial banks contribute to the Fund to the extent of their **shortfall in stipulated priority sector lending to agriculture**.

## Challenges in developing Infrastructure of Tier 2 and 3 cities

- Lack of Availability of **low-finance funds**
- Municipal authorities **lack the ability to plan, execute, and manage** infrastructure projects
- Poor or inadequate **urban planning**
- **Acquiring land** for infrastructure projects

## Need/Relevance of UIDF

- **Achieving Sustainable Development Goals (SDGs):** SDG 11 provides for **Making cities and human settlements inclusive, safe, resilient, and sustainable**.
- **Promoting Town Planning:** States will be encouraged to undertake **urban planning reforms**.
- **Improving Infrastructure:** Will help them to become major hubs for **small and medium-sized enterprises** and major producers of textiles, etc.
  - These cities are **nodal points** in the **logistics and supply chain networks** of the country.
- **Reduce Urban Congestion:** As per the Census of 2011, **40% of India's Urban population** lives in Tier 2 and 3 cities, which is expected to grow at a very fast pace.



- At present, people from **rural and other remote areas** directly **migrate** to **Metropolitan cities** such as Mumbai, Delhi, etc. Development of Tier 2 and 3 cities will attract such migration.
- **Others:** Provide **adequate resources to the Municipal corporation** for development work, create employment opportunities, **Balanced Regional Development**, etc.

#### Other Initiatives for Infrastructure development of Tier 2 and 3 cities

- Smart Cities Mission (2015)
- AMRUT (Atal Mission for Rejuvenation and Urban Transformation), 2015
- Other: Heritage City Development and Augmentation Yojana (HRIDAY), 2015, etc.

### Conclusion

UIDF will play a crucial role in the development of Tier 2 and 3 cities. It will help in enhancing the overall quality of urbanisation in India. All the stakeholders need to play an effective role in its implementation.

## 3.11. BHARATNET





### Why in the news?

The Government recently approved Rs 1.39 lakh crore for modernising the BharatNet project.

### More about News

- It involves changing its execution strategy and **providing fibre connections to the last mile through Village Level Entrepreneurs (VLEs)**.
  - VLEs, known as Udyamis, will take the fibre connections to **households on a 50:50 revenue-sharing basis**.
- With this upgrade, the **government is looking to speed up its process of connecting all 640,000 villages over the next two years**.
- The cost of taking the infrastructure **to the home will be borne by the government**.
  - Rural entrepreneur will **only need to be involved in the maintenance and operations of home connections**, including addressing consumer complaints related to fiber cuts, etc.
- For BharatNet, **this is the third such package approved by the Centre**.
  - In 2017, the Cabinet approved financial assistance for the first two phases.
  - In 2021, the Cabinet allocated more funds to implement the last-mile connectivity **under a PPP model, which failed to attract much interest**.

### BharatNet: Quick Facts

 Type	 Purpose	 Implementing Agency	 Funding
<b>Central Sector Scheme (under Ministry of Communications)</b>	To provide <b>broadband connectivity to Gram Panchayats</b>	<b>Bharat Broadband Network (Merged into BSNL in 2022)</b>	<b>Universal Service Obligation Fund (USOF)</b>

*For more details of the scheme, refer Appendix at the end of the document.*

### Significance of Bharat Net

- **Village Modernization:** By digitalising the basic infrastructures such as banking, post office, etc.
- **Agriculture sector:** Help improve farmers' awareness, such as being tutored online on how to apply pesticides.
- **Better Medical Facilities:** Broadband connectivity helps medical service delivery at the door.
- **Improving Quality of Education:** Students get quality education online, and it also helps in government schemes penetration, such as DIKSHA, etc., in rural areas.



### Data Bank

- **58%** Rural tele-density (October 2022).
- **816 million** Broadband connections (September 2022).
- **61<sup>st</sup>** rank of India in 2022 in Network Readiness Index.

- **E-Commerce penetration:** Village-level broadband connectivity will help in the penetration of e-commerce, such as government initiatives of Open Networks for Digital Commerce.
- **Employment:** As extension program will provide nearly 2.50 lakh jobs.

#### Universal Service Obligation Fund (USOF)

- Under **Indian Telegraph (Amendment) Act, 2003**.
- It is the **pool of funds generated by a 5% Universal Service Levy** that is charged upon all the telecom fund operators on their Adjusted Gross Revenue (AGR).
- Aims to provide for **quality and affordable** mobile and digital services across the rural and remote areas of the country.

#### Challenges in implementing BharatNet

- **Delay in project completion:** The earlier project deadline was 2019; however, work is ongoing.
- **Lack of Basic supporting infrastructure:** Infrastructure support at Gram panchayat in the form of protected space and power supply are the major issues.
- **High project costs:** Project costs have skyrocketed because of delays in project completion.
  - For instance, the cost of laying one kilometre of optic fibre cable (OFC) has doubled between 2020-21 and 2021-22.
- **Low utilisation:** As of March 2022, only 27% of the expected villages had received network connectivity.
- **Quality of service (QoS):** Complaints by village officials about frequent line faults, connection outages, and the lack of response to requests for service and repairs have grown increasingly common
- **Poor administrative capacity of BSNL:** BSNL itself has incurred major losses over the past few years and has been criticised for **slow decision-making and red-tapism**.
- **Poor Private Participation:** In the 2022 bid, not a single bid was received, and the tender was eventually cancelled because of low incentives and more responsibility for operating and upgrading BharatNet for the private sector.

#### Way forward

- **Participation of Panchayat Raj institution** for enhancing the implementation and utility of the BharatNet project.
- **Improve the efficiency of project implementation:** Proper administrative framework and governance for the efficiency of the project is required.
- **More private sector involvement** is required in investment, infrastructure, and running the project.
- **Awareness Generation:** BharatNet is not so popular among the rural population and faces competition from private-sector broadband providers.

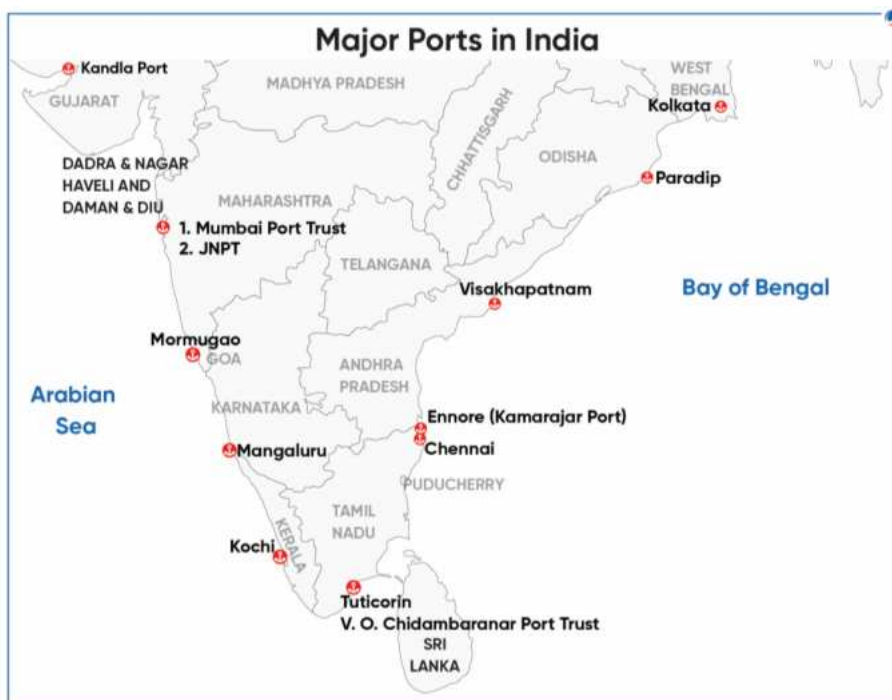
## 3.12. FUNCTIONING OF MAJOR PORTS IN INDIA

#### Why in the news?

Recently, the **Department-related Parliamentary Standing Committee on Transport, Tourism and Culture** presented the 352nd Report on 'Functioning of Major Ports in the Country'.

#### Ports in India

- Ports in India are broadly categorised into two types based on **traffic they handle**.
  - **Major Ports:** They are under the direct administrative control of the Central Government and fall in the **Union List** in the **7th Schedule** of the Constitution.
  - **Minor Ports:** They fall under the jurisdiction of the respective **State Maritime Board** and fall in the **Concurrent List**.
- There are **12 major ports** and about **213 non-major ports**.



- The **Major Port Authorities Act, 2021** and the **Indian Ports Act** are the two principal statutes governing the functioning of Major Ports.

### Performance of Ports in India

- **Turn Around Time (TRT):** The turnaround time (time spent by a vessel at the port from its arrival to its departure) across Indian ports has been **consistently declining from 94 hours (FY13-14) to 52 hours (FY23-24)**.
- **Traffic:** Indian ports have witnessed a consistent rise in container traffic from **555 million tonnes (FY13-14) to 796 million tonnes (FY23-24)**.
- **Cargo:** Cargo handling of the Major Ports has steadily increased over the years, with a **10% increase from last year**.
- **Operating Ratio:** The operating ratio, the rupee spent for every rupee earned, has come down to Rs. 48 from Rs. 53 in 2020-21 (i.e., Rs. 48 is spent for every Rs. 100 earned).

### Challenges in Functioning of Major Ports

- **Financial Constraints:** Major ports in India face financial constraints due to pensions and other liabilities. For example, Mumbai port has a pension fund liability of 13000 crore.
- **Non-Optimum Utilization:** The capacity utilisation of the major ports is only about 49 %, leading to the wastage of resources.
- **Lack of Transshipment Hubs:** Indian Ports handle **only 25% of Indian transshipment cargo**, leading to a loss of revenue opportunities for India.
- **Connectivity Challenges:** Rail congestion and lack of multi-modal transport connectivity are concerns at certain ports, adversely affecting freight movement.
- **Infrastructural Bottlenecks:** Indian ports face the challenge of low capacity and non-optimum utilisation due to infrastructure bottlenecks.
  - **Evacuation Bottlenecks:** The low availability of railway rakes also adversely impacts the evacuation of cargo from/to ports.
  - **Lack of Mega Ports:** Only 5 Major Ports and 2 Non-Major Ports have over 100 MTPA capacity.
- **Inflexible Tariff Structure:** Major ports owned by the government are unable to attract more cargo due to a rigid tariff structure, unlike private ports.



### Efforts that have been taken to improve the functioning of Ports

- **Overall Monitoring:** The **Sagarmanthan Dashboard** was developed for regular monitoring of projects and the financial and operational performance of the ports.
- **Real-Time Tracking:** The **Sagar Setu App** has been launched to give real-time information on vessels for better traffic management.
- **Trade Facilitation:** The **National Logistics Portal (NLP)** (Marine) is a national maritime single window platform facilitating trade between importers, exporters and service providers.
- **Monitoring of Port Performance Indicators:** **Sagar Unnati** has been implemented as a Dashboard for monitoring all Major Ports Key performance indicators like Turnaround Time.
- **Improving connectivity:** **101 road and 90 rail connectivity projects** have been taken up under the **Sagarmala Project** for better connectivity.
- **Cyber Security:** Establishment of Asset Management Systems, Multi-Factor authentication on all accounts, and implementation of IT security policy, etc. have been undertaken.
- **Digitisation of Ports:** Steps like **Vessel Traffic Management System, Enterprise Business System (Port Operation and allied system, and online (Radio Frequency Identification) RFID System** have been implemented.

### Recommendations to Improve Port Efficiency

- **Integrated Planning:** While planning port development, **integration of the local economy, development of industrial clusters and connectivity** should also be accounted for.
- **Port Modernization:** Major ports must **invest in replacing old, outdated equipment at the old berths with modern equipment** to enhance their productivity.



- **Port Mechanisation:** The Government should **prioritise the 31 mechanisation projects**.
- **Increase PPP Investments:** All major ports must take steps to achieve their PPP investment targets under the **Maritime India Vision (MIV)** to improve their productivity and competitiveness.
  - MIV **identifies initiatives** such as developing world-class Mega Ports, transshipment hubs and infrastructure modernisation of ports **to develop global standard ports in India**.
- **Port-Led Industrialization:** Leasing port land to private investors on a PPP basis for **setting up industries/facilities** would go a long way in promoting the coastal economy and port revenues.
- **Promote Connectivity:** **Connectivity by water/rail/road to the hinterland** needs to be established along with linkage through dedicated rail freight corridors.
- **Extensive implementation of Port Community System (PCS):** The PCS is a **centralised web application** introduced in the port sector and acts as a single window for port community members and stakeholders.

Scan the QR code to know more about **Port Connectivity**.

**Weekly Focus #49:** Port connectivity: India's conduit to the world



### 3.13. SIXTH CENSUS REPORT ON MINOR IRRIGATION SCHEMES

#### Why in the news?

Ministry of Jal Shakti recently released the sixth Census Report on Minor Irrigation Schemes.

#### About Minor Irrigation (MI)

- Irrigation Projects in India are classified into three categories, viz. **Major, Medium and Minor Irrigation**.
  - **Major Irrigation Projects:** Cultivable Command Area (CCA) of more than 10,000 hectares
  - **Medium Irrigation projects:** CCA of less than 10,000 hectares but more than 2,000 hectares.
  - **Minor Irrigation Projects:** CCA of 2,000 hectares or less.
- Minor irrigation projects have **both surface and groundwater as their source**, while **Major and Medium** projects mostly **exploit surface water resources**.
- MI sector as a whole is **implemented by State Governments**, and states have **state-specific schemes**.
- The **Centrally Sponsored Plan Scheme “Rationalisation of Minor Irrigation Statistics (RMIS)”**, was launched in 1987-88.
  - Later, it has become part of the **Central Sector Plan Scheme “Development of Water Resources Information System (DWRIS)”**.
  - The main objective of the RMIS scheme is to **build up a comprehensive and reliable database in the Minor Irrigation (MI) Sector** for effective planning and policymaking.
- Sixth Census has been conducted **under the centrally sponsored scheme “Irrigation Census” of the Ministry of Jal Shakti**.
  - **First census of minor irrigation schemes was conducted with the reference year 1986-87**, and the report was **published in November 1993**.
  - Census is essential for **effective planning and policy-making in the irrigation and agricultural sector**.

#### Know the term

- **Cultivable Command Area (CCA):** It is the area which can **be physically irrigated** from a scheme and **is fit for cultivation**.

#### Categories of Minor irrigation schemes



##### Ground water Schemes,

Consisting of dug wells, bore wells, Shallow Tube wells, Medium Tube wells and Deep tube wells



##### Surface flow schemes

Consists of tanks, check-dams, structures for conservation cum ground water recharge.

- **Significance of Minor Irrigation Schemes**

- **Groundwater recharge** is done by the creation of surface minor irrigation projects.
- Cost-effective and can be implemented by **small and marginal farmers** in their fields.
- **Government support** is being provided in terms of subsidies like electricity, machineries, etc by the states.
- **Improvement in water use efficiency** and **decline in wastage of water** in Minor irrigations through the use of improved water distribution devices over the years

#### Key Highlights of the report

- **First Census of Water Bodies:** It was conducted in **convergence with the sixth Minor Irrigation schemes** and using **2017-18 as the reference year** with the objective of developing a national database for all water bodies.
- **Minor Irrigation Schemes in India:**
  - **23.14 million Minor Irrigation schemes** were reported in the country from 695 districts.
  - **94.8%** of the Minor Irrigation schemes are **groundwater-based**, and the rest, **5.2%**, are **Surface Water schemes**.
  - **Uttar Pradesh (17.2%)** possesses the **largest number of Minor irrigation schemes** in the country, followed by **Maharashtra (15.4%)**, **Madhya Pradesh (9.9%)** and **Tamil Nadu (9.1%)**.
  - **Dug wells** have the **highest share in MI schemes** followed by shallow tube wells, medium tube wells and deep tube-wells.
- **Increase of 1.42 million in Minor Irrigation schemes:** As compared to the fifth Census.
- **Ownership of minor irrigation schemes:** **96.6** are **privately owned** whereas **3.4%** are under public ownership.
  - Out of all the individually owned schemes, **18.1% are owned by women**.
- **Usage of schemes:** **97%** of the irrigation schemes are **'in use'** whereas **2.1%** and **0.9%** are **'temporarily not in use'** and **'permanently not in use'**, respectively.

#### Issues in Minor Irrigation Schemes

- **Groundwater exploitation** is rampant with minor irrigation schemes, which leads to various environmental and geological consequences.
- **Tube-well technology** is **technically not feasible** in non-alluvial tracts, which constitute nearly 70% of Indian landmass.
- **Private ownership of the minor irrigation schemes**, in a way, affects the distribution of a common resource like water.
- **More prone to vagaries of climate change** like drought as their reservoir capacity is less.

#### Conclusion

There is a **need to prevent the exploitation of groundwater** through the implementation of state and district-level policies. Moreover, **enhancing Community ownership** of minor irrigation projects by implementing them through panchayats and schemes like MGNREGA will also be beneficial.

### 3.14. OFFSHORE AREAS MINERAL (DEVELOPMENT AND REGULATION) AMENDMENT ACT, 2023

#### Why in the news?

Recently, the **Offshore Areas Mineral (Development and Regulation) Amendment Bill, 2023**, received assent from the President.

#### More on News

- It has amended the **Offshore Areas Mineral (Development and Regulation) Act 2002**.
  - It provides for the **development and regulation of mineral resources** in the **territorial waters, continental shelf, exclusive economic zone (EEZ), and other maritime zones of India**.
- **Offshore mineral resources** are controlled and regulated by the Union.
  - **Offshore mining** is the process of **retrieving mineral deposits** from the deep seabed at a depth of more than 200 meters.

## Key Changes in the Act

Sphere	Offshore Areas Mineral (Development and Regulation) Act, 2002	Offshore Areas Mineral (Development and Regulation) Amendment Act, 2023
Licence	Different licences for reconnaissance, exploration, and production.	Composite licence for granting rights for <b>exploration</b> as well as <b>production</b> .
Validity	Production lease is granted for a <b>period of up to 30 years</b> , further renewed for up to 20 years.	Production lease under a <b>composite licence will be valid for 50 years</b> .
Auction Process	Provides for the <b>grant of concessions through administrative allocation</b> .	<b>Provides two types of operating rights</b> to the private sector by <b>competitive bidding</b> , viz. production lease, and composite licence.
Mining in reserved areas	Allows the <b>government to reserve offshore</b> areas that are not held under any operating right.	Allows the <b>administering authority</b> to grant a composite licence or production lease to the government or a government company.
<b>New Provisions in the 2023 Act</b>		
<ul style="list-style-type: none"> <li><b>Mining of atomic minerals:</b> Exploration, production, and composite licenses <b>will be granted only</b> to the government or government companies.</li> <li><b>Offshore Areas Mineral Trust:</b> Will manage funds under the <b>Public Account of India</b> that will <b>be non-lapsable in nature</b>. <ul style="list-style-type: none"> <li>Funds will be used for specified purposes including exploration in offshore areas, etc.</li> </ul> </li> </ul>		

## Need of the Amendment

- Utilizing offshore Mineral Wealth:** No mining activity has been undertaken in the offshore areas till now.
  - Mainly due to a **lack of transparent legal framework** to allocate the **operating rights** in the earlier Act.
- Encourage Participation of the Private Sector:** The provision of **competitive bidding for auction** was missing in the earlier Act. The private sector will bring the **necessary expertise and technology** to explore and mine.
- On the lines of the Mines and Minerals (Development and Regulation) Act, 1957:** The Mines and Minerals Act has helped in the **effective utilisation of onshore mineral wealth** by ensuring **auctioning of mineral belts**, etc.

### Offshore Mineral Wealth of India Geographical Position

- Its **7,517-km coastline** is home to **nine coastal states**, four Union territories, and **1,382 islands**.
- India's EEZ is spread over **2 million sq. ft.**

### Mineral Resources (As per Geological Survey of India)

- Lime mud** within the EEZ off Gujarat and Maharashtra coasts.
- Construction-grade sand** off Kerala coast.
- Heavy mineral placer deposits** in the inner-shelf and mid-shelf off Odisha, Andhra Pradesh, Kerala, Tamil Nadu and Maharashtra.
- Phosphorite** in the Eastern and Western continental margins.
- Polymetallic Ferromanganese (Fe-Mn) nodules** and crusts in Andaman Sea and Lakshadweep Sea.

## Concerns related to the Act

- Environmental Impact**
  - Marine ecosystems (including coral ecosystems) along the shore will be under threat.
    - ✓ **Mining nodules** would involve the **destruction of the seabed**, leading to the potential extinction of species.
  - Also, **noise and marine pollution** could be enhanced due to **extraction activities**.
- Socio-economic Impact**
  - Livelihood** of those **dependent on seas, especially fishermen**, will be under threat due to the involvement of big private entities.
- Economic Viability**
  - Extracting Offshore minerals is **costly as compared to the onshore minerals** due to dependence on **cutting-edge technologies**, etc.
- Privilege to Government Entities**
  - The act grants operating rights **without competitive bidding to a government** or a government company or a corporation in the mineral-bearing areas reserved by the Centre.

## Conclusion

Offshore Areas Mineral (Development and Regulation) Amendment Act, 2023, will open up the **country's vast mineral-bearing offshore areas**. The extraction of minerals from these areas **will also serve India's strategic interests** and give it a **stronger foothold** in its territorial waters.



### 3.15. MEDICAL AND WELLNESS TOURISM

#### Why in the news?

The Ministry of Home Affairs recently notified the creation of a **new category of AYUSH visa for foreign nationals for treatment** under AYUSH systems of medicine, i.e. easing medical and wellness tourism in India.

#### More about News

- A new chapter, i.e. **Ayush Visa**, has been incorporated under the Medical Visa of the Visa Manual, which deals with treatment under the Indian systems of medicine.
  - Accordingly, **necessary amendments** have been made in various chapters of the **Visa Manual, 2019**.
- This will boost **Medical Value Travel in India** and strengthen our endeavour **to make Indian traditional medicine a global phenomenon**.
- AYUSH** is an acronym for **Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy**; however, it also includes other traditional and **non-conventional health care systems** such as **Sowa Rigpa, etc.**

#### About Medical and Wellness Tourism

- Medical tourism** is a term used to describe the rapidly growing **practice of travelling across international borders to seek healthcare services**.
  - Services typically sought by travellers include **elective procedures, complex surgeries, etc.**
- Wellness Tourism** is a travel associated with maintaining or enhancing one's well-being. It includes the pursuit of physical, mental, spiritual or environmental 'wellness' while travelling for either leisure or business."
- Medical and Wellness Tourism are part of the **Wellness economy**.
- The Ministry of Tourism has formulated a **National Strategy and Roadmap for Medical and Wellness Tourism**.
  - Aims to provide an **institutional framework, strengthening the ecosystem for medical and wellness tourism**, developing a brand and ensuring quality assurance.
  - Strategy key pillars include:**
    - ✓ Enable digitalisation by setting up an **Online Medical Value Travel (MVT) Portal**.
    - ✓ **Enhancement of accessibility** for MVT, etc.
  - Constituted National Medical and Wellness Tourism Promotion Board** for Institutional framework.



#### Significance of Medical and Wellness Tourism for India

- Demand for Wellness and alternate cures:** India is uniquely positioned to attract medical value travellers (MVT) for treatment through AYUSH.
- Long waiting periods in developed countries.**
- Demand from countries with undeveloped medical facilities.**
- Improved Connectivity**, which provides better opportunities for medical and wellness tourism.
  - Such as the **Regional Connectivity scheme-UDAN** connecting smaller cities like **Dharamshala**.
- Demand from Countries with an ageing population**, with India being able to cater to the needs of such a population.

- **Various other factors like** Low Cost of Treatment, High-Quality Medical Care, Ease of communication, etc., favour India as a Medical and Wellness Tourism destination.

### Challenges of Medical and Wellness Tourism

- **Regional Competition** from Malaysia, Thailand, Singapore etc.
- **Lack of international accreditation:** India still has a relatively smaller number of Joint Commission International (JCI) accredited hospitals.
  - JCI is a non-profit, U.S.-based, international accreditation organisation that certifies healthcare companies, services, and programs.
    - ✓ JCI standards are **internationally recognised** as a leading healthcare accreditation program for patient safety and quality of care.
- **Overseas medical care not covered by insurer:** Most medical care is not covered by insurance, making medical value travel less attractive.
- **Lack of Skilled Manpower:** Recruitment and retention of skilled manpower is the biggest challenge faced by the wellness industry.
- **Exploitation by middleman** as Medical tourism facilitators are not well organised and accredited.
- **Lack of uniform Fee structure,** lack of transparency in billing to foreign patients, and high margins to trade to refer patients.

### Way forward

- **Relaxation/Incentives** for import of medical equipment.
- **Medical and Wellness tourism diplomacy** and **attracting Diaspora.**
- **Develop supporting infrastructure:** Last-mile connectivity is important to provide better facilities, such as extending the UDAN scheme to major AYUSH-located regions.
- **Stronger regulation** of the hospitals and wellness centres must be ensured to avoid exploitation, overcharging fees, etc.
- **Need to establish linkages and understanding amongst the stakeholders** about the role and responsibilities of different stakeholders and forge partnerships for promoting the sector.

#### Initiatives by Government

- **Market Development Assistance (MDA) Scheme:** Assistance provided to medical/wellness Tourism Service Providers & Centres under the MDA Scheme.
- **National AYUSH Mission:** Launched in 2014 and played a crucial role in preserving and promoting **India's traditional systems of medicine and their integration into the mainstream healthcare system.**
- **Promotion of Information, Education, and Communication (IEC) in AYUSH:** Through the organisation of Arogya Fairs, Ayurveda Parv and Yoga Fest/Utsav etc
- **National Accreditation Board for Hospitals & Healthcare Providers (NABH)** is a constituent board of the Quality Council of India, set up to establish and **operate accreditation programme for healthcare organisations.**

#### Related News: First WHO Traditional Medicine Global Summit

Recently, the **World Health Organization (WHO)** and **Ministry of AYUSH** organised First WHO Traditional Medicine Global Summit "Towards health and well-being for all" in Gandhinagar, Gujarat.

- Summit aimed to harness the potential of the **evidence-based traditional, complementary and integrative medicine (TCIM).**
- WHO released the **outcome document** of first WHO Traditional Medicine Global Summit 2023 in form of **"Gujarat Declaration"**:
  - Reaffirmed global commitments towards **indigenous knowledges, biodiversity and TCIM.**
  - Scalling up **efforts to further implement evidence-based TCIM interventions** and approaches in support of the goal of universal health coverage (UHC) and all health-related SDGs.
  - **Advocate for increased political and financial commitments** at global, regional, national and community levels.
  - Scale up the **multi-regional, multi-disciplinary and multi-stakeholder collaborations.**
  - **Accelerate the production, regulation, and formal utilization** of scientifically proven TCIM products and practices.
  - Ensure full participation and consultation with **Indigenous Peoples.**

## 3.16. PHARMACY (AMENDMENT) ACT, 2023

### Why in the news?

Pharmacy (Amendment) Act, 2023, to extend the Pharmacy Act, 1948 to the UT Jammu & Kashmir was recently adopted.

### About Pharmacy (Amendment) Bill 2023

- **Registration:** Specifies that anyone registered as a pharmacist under the Jammu and Kashmir Pharmacy Act, 2011 or possesses qualifications will be deemed to be registered as a pharmacist under the Pharmacy Act, 1948.

#### About Pharmacy Act, 1948

- Provides provisions for **regulating the profession and practice of pharmacy**.
- **Registration** under the Act is **mandatory** to practice pharmacy in India.
- **Act mandated** establishment of **Pharmacy Council of India**, State Pharmacy Council and Joint State Pharmacy Council.
  - **Pharmacy Council of India** deals with Regulation of the Pharmacy Education in the Country.
- **Power of Removal** of name of pharmacist from the register but 30 days appeal period will be provided.
- **Penalties based on offences** such as falsely claims to be registered Pharmacist.
- **Appointment of Commission of Enquiry**-whenever it appears to the Central Government that the Central Council is not complying with any of the provisions of this Act.

### Pharmacy sector of India

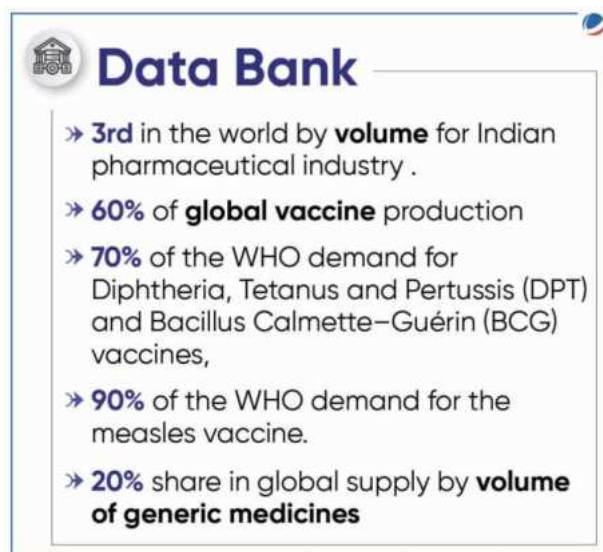
- The Indian Pharmaceuticals industry plays a **prominent role in the global pharmaceuticals industry**.
- **Major segments** of the Indian Pharmaceutical Industry include:
  - **Generic drugs**,
  - **Over-the-counter (OTC) medicines**
  - **Bulk drugs**, vaccines,
  - Contract research & manufacturing,
  - Biosimilars and biologics.
- India is one of the **biggest suppliers of low-cost vaccines in the world**.

### Issues with the Pharmaceutical Sector

- **India's heavy dependence on China** for its pharma requirements, such as the import of bulk drugs or APIs.
- **Higher Cost of Domestically Produced APIs:** APIs produced in India are around **20% costlier** than those produced in China.
- **Steep rise in prices of APIs:** Due to multiple reasons such as inflation, increase in prices of key starting materials and solvents due to crude, and freight costs.
- **Lack of R&D:** Due to poor return on R&D, pharma companies hesitate to invest respectable amounts in their R&D.
- **Fake Products/Spurious drugs:** As per ASSOCHAM, Fake drugs constitute 25% of the domestic medicines market in India.
- **Intellectual property:** Protecting and enforcing patents can be a complex and costly process, and the threat of patent infringement is a constant concern.

### Way forward

- **Expanding the export market:** Growing and expanding in newer geographies beyond the US, such as China and Japan.
- **Creating a research ecosystem:** It will require interventions across three dimensions.
  - **Targeted regulatory and tax interventions**
  - **Streamline clinical trials**
  - **Support health-tech start-ups**
- **Creating anchor educational institutions:** A well-funded research institute with the ability to attract global talent is critical to kickstart the cycle of innovation.



**Data Bank**

- **3rd** in the world by **volume** for Indian pharmaceutical industry .
- **60%** of **global vaccine** production
- **70%** of the WHO demand for Diphtheria, Tetanus and Pertussis (DPT) and Bacillus Calmette–Guérin (BCG) vaccines,
- **90%** of the WHO demand for the measles vaccine.
- **20%** share in global supply by **volume of generic medicines**



- **Creation of an independent Ministry for Pharmaceuticals:** Such a ministry can be modelled on the lines of the Ministry of AYUSH or the Ministry of New and Renewable Energy.

#### Steps taken by Government

- **Scheme for Strengthening of Pharmaceuticals Industry (SPI)** with 3 sub schemes
  - ✓ Assistance to Pharmaceutical Industry for Common Facilities (APICF).
  - ✓ Pharmaceutical Technology Upgradation Assistance Scheme (PTUAS).
  - ✓ Pharmaceutical Promotion and Development Scheme (PPDS).
- **Production Linked Incentive (PLI) Schemes of Pharma Sector**
  - ✓ PLI Scheme for promotion of domestic manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates (DIs) and APIs.
  - ✓ PLI Scheme for Pharmaceuticals.
- **Promotion of Bulk Drug Parks** providing financial assistance for establishing Bulk Drug Parks.
- **Non-schematic interventions**
  - ✓ 100% foreign direct investments (FDI) in **the medical devices sector**.
  - ✓ In the **pharma sector**- Greenfield projects have 100% FDI under automatic route and for brownfield projects, up to 74% FDI is allowed.
  - ✓ The **National Medical Devices Promotion Council** was established to take up important issues of the MedTech Industry

## 3.17. NEWS IN SHORTS

### 3.17.1. PUBLIC TECH PLATFORM FOR FRICTIONLESS CREDIT

- The **Reserve Bank of India (RBI)** has launched a pilot program for 'Public Tech Platform for Frictionless Credit.'
- **About Platform**
  - It will be an **end-to-end platform with an open architecture, open Application Programming Interfaces (API) and standards** to which all financial sector players can connect seamlessly in a '**plug and play**' model.
  - It would enable **linkage with services such as Aadhaar e-KYC, land records from onboarded state governments, satellite data, PAN validation, etc.**
  - It is being **developed by the Reserve Bank Innovation Hub (RBIH)**, a wholly-owned subsidiary of RBI.
  - The pilot run focuses on credits like:
    - ✓ **Kisan Credit Card loans up to ₹1.6 lakh per borrower,**
    - ✓ **Dairy Loans,**
    - ✓ **MSME loans** (without collateral),
    - ✓ **Personal loans and Home loans** through participating banks.
  - The pilot run is implemented in select districts of **Madhya Pradesh, Tamil Nadu, Karnataka, Uttar Pradesh, and Maharashtra.**
- Currently, the Data required for **the credit appraisal rests with different entities like governments and account aggregators.**
  - This **hinders** the delivery of rule-based lending.



### 3.17.2. CAG'S AUDIT REPORT ON RAILWAYS FINANCES

- Recently the Comptroller and Auditor General of India (CAG) released its audit report on the finances of the Indian Railways.
- **Key Findings of the Report**
  - **36.02 per cent increase in Gross Traffic Receipts** during 2021-22 as compared to 2020-21.
    - ✓ Freight Earnings was the major contributor.
  - **22.61 per cent increase in capital expenditure** during 2021-22.

- ✓ Creation of new assets, timely replacement and renewal of depleted assets etc., are carried out through capital expenditure.
- **107.39 per cent Operating Ratio (OR)** in 2021-22 against 97.45 per cent in 2020-21.
  - ✓ A higher ratio indicates lower ability to generate a surplus.
- **75.47 per cent of the total working expenses on staff cost**, pension payments and lease hire charges on rolling stock.
- **Passenger fares are cross-subsidised** using profits generated on freight operations.
- **Under-provisioning for the Depreciation Reserve Fund** resulted in piling up of 'throw forward' (renewal and replacement of over-aged assets) works.
- **Recommendations**
  - Needs to **critically analyse the cost of passenger operations** and take steps to reduce its losses.
  - May take **steps to diversify their freight basket** to enhance freight earnings.
  - May take steps to **augment internal revenues**.
  - Railways administration should ensure **all unsanctioned expenditure is regularised on priority**.
  - To evolve practice and strengthen internal control mechanisms to **reduce the instances of misclassification of expenditure**.

### 3.17.3. MAHARATNA AND NAVRATNA CATEGORY

- Two **Central Public Sector Enterprises (CPSE's)** are Oil India, which was earlier a Navratna company (now Maharatna), and ONGC Videsh, which was a Miniratna CPSE (now Navratna).
  - CPSEs are majorly classified into **Maharatna, Navratna, Miniratna I, Miniratna II** status.
  - **Department of Public Enterprises** (is the **nodal department** for all the Central Public Sector Enterprises (CPSEs)

Status	Maharatna	Navratna	Miniratna
<b>Eligibility Criteria</b>	1. <b>Navratna status</b> 2. <b>Listed on Indian stock exchange</b> 3. <b>Annual turnover for 3 years: Rs. 25,000 crore</b>	1. CPSEs which are <b>Miniratna I, Schedule 'A'</b> . 2. Obtained 'excellent' or 'very good' rating in 3 out of last 5 years 3. Composite score of 60	<b>Miniratna Category-I status:</b> - ● <b>Made profit in the last 3 years</b> continuously ● <b>Pre-tax profit is Rs.30 crores</b> or more in at least 1 of the 3 years

	4. <b>Annual net worth for 3 years: Rs. 15,000 crore</b> 5. <b>Annual net profit for 3 years: Rs. 5,000 crore</b> 6. <b>Significant global presence</b>	<b>or above in following 6 performance indicators including</b> Net Profit to Net worth, Cost of Services, Earning per share, etc.	● Having <b>Positive net worth status</b> <b>Miniratna Category-II status:</b> ● <b>Made profit for the last 3 years</b> continuously ● Having <b>positive net worth status</b> . ● <b>Not defaulted in the repayment of loans/interest</b> payment on any loans due to the Government. ● <b>Not dependent upon budgetary support</b> or Government guarantees.
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### 3.17.4. REPORT ON ONSHOREING INDIAN INNOVATION TO GIFT IFSC

- **Committee of Experts (CoE)** submits **Report** on 'Onshoring the Indian Innovation to GIFT IFSC'.
- CoE aims to understand the **reasons for flipping (shifting of Indian startups to an overseas jurisdiction like Singapore)** and **propose suggestions to avoid externalization of startups** in future.
  - It also **encourages startups that are presently externalized to return back to IFSC in GIFT City, Gujarat**.
  - CoE was **constituted by International Financial Services Centres Authority (IFSCA)**.
- India constitutes **third largest startup ecosystem** in world after USA and China. An **entity shall be considered as a Startup**
  - **Upto a period of ten years** from date of incorporation, if it is incorporated as a **private limited company** (Companies Act, 2013) or a **Limited Liability Partnership i.e. LLP** (LLP Act, 2008) in India.
  - **Turnover for any financial years has not exceeded Rs. 100 crore**.
- **Drivers for Growth of Indian Startup:**
  - **Consumption-Driven Growth:** India is **third largest in terms of purchasing power parity** and consumption contributes 70% of GDP.

- **High-quality tech talent.**
- **Reasons of flipping:** Agile regulatory environment, Prospects for better valuation with access to foreign capital market etc.
- **Impact on India:** Brain drain of entrepreneurial talent; Value creation in foreign jurisdictions; Tax Revenue loss etc.

#### Recommendations

- **Review committee for delay in grant of patents and trademarks.**
- **Provide exemptions from applicable conditions for listing of startup** in GIFT IFSC.
- **Constitute special court/arbitration** for dispute resolution.

### 3.17.5. RATE HIKE TO CURB INFLATION

- Finance Minister said that **Rate hike is not the best option to curb inflation**, can hurt recovery.
- Under India's "**inflation-targeting**" regime inflation is brought down to a targeted level by **increasing or decreasing interest rate** prevailing in economy.
  - **Increasing the rate** is believed to **bring down inflation** by curtailing economic activity.
  - **Decreasing rate** increases inflation level by increasing economic activity.
- **RBI is solely responsible** for keeping retail inflation in the band of **2%-6%**.
  - However, **the retail inflation recently breached 7.4%** despite RBI's tighter monetary policy.
  - Any further tightening **may drag down GDP and may increase unemployment.**
- **Reasons for RBI's inability to contain inflation**
  - **Unanticipated and short-lived supply demand mismatches** lie outside the realm of monetary policy.
  - **Domestic factors** like white fly disease and uneven monsoon distribution **exerted pressure on vegetable prices.**
  - **Supply shocks due to geopolitical uncertainties** fuelling inflation across the world.
- In this situation **Government can use fiscal measures** to complement monetary policy to tame inflation. These include:
  - **Increasing supply** like selling tomatoes and onions at subsidized rates, releasing stocks of wheat and sugar in the market
  - **Reducing taxes** on petrol and diesel.

### 3.17.6. GOLDBLOCKS SCENARIO

- A Goldilocks scenario in an economy refers to an **ideal situation where there is a steady growth.**

- Economic growth is **neither too high (hot) to trigger inflation and nor too low (cold) for a slowdown.**
- **Key feature under Goldilocks scenario**
  - **Low rate of unemployment**
  - **Steady GDP growth rate**
  - **Relatively low retail inflation and interest rates**
- Goldilocks phase is usually **temporary in nature** and sets in typically after an adverse shock to the economy, during the recovery and growth period.

### 3.17.7. UDGAM (UNCLAIMED DEPOSITS – GATEWAY TO ACCESS INFORMATION) PORTAL

- **RBI** has launched a centralized web portal – UDGAM (Unclaimed Deposits – Gateway to Access Information).
- **Objective:** It will enable bank customers to find their **unclaimed deposits** across multiple banks in one place.
  - **Unclaimed deposits:** Balances in savings/current accounts that are not operated for 10 years, **or term deposits not claimed within 10 years** from the date of maturity.
- It will promote **financial inclusivity**, using digital advances to deliver banking services to its customers efficiently.

### 3.17.8. REVISED TIMELINE FOR INITIAL PUBLIC OFFERING (IPO)

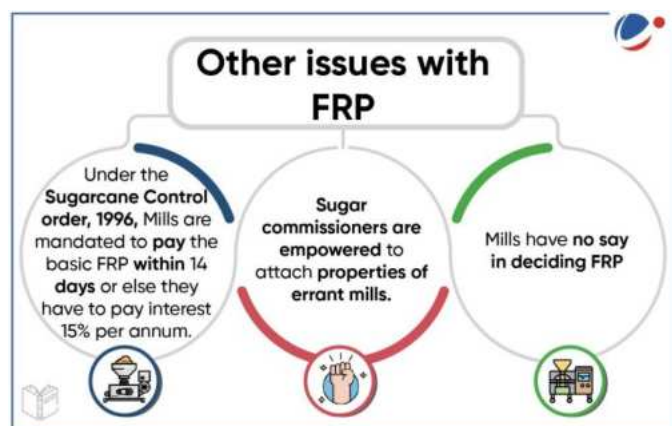
- **SEBI** has halved the time for IPO listing of companies from six days to three days. i.e from T+6 to T+3.
  - **IPO** refers to the **selling of securities to the public in the primary market.**
  - It acts as the **largest source of funds for the company.**
- It will enhance the **ease of doing business** for issuers and provide investors with **quicker access to capital and liquidity.**
- The revised T+3 days timeline will **become mandatory from 1 December 2023 onwards.**

### 3.17.9. FAIR AND REMUNERATIVE PRICE (FRP)

- Finance Ministry Notified Rules **Enabling Cooperative Sugar Mills to Claim Past Cane Price Payments.**
- The notification allowed **payments** to farmers, in **excess of the Centre's Fair and Remunerative Price (FRP) before 2015-16 as "business expenditure".**
  - It was done by amending **Section 155 of the Income Tax Act** and expected to provide mills a **relief of almost Rs 10,000 crore.**



- So far, cooperatives were allowed to claim such payment as **business expenditure for payment made from the 2016-17 assessment year.**
- **FRP is the minimum price** that mill owners are mandated to **pay to sugarcane farmers.**
  - It is governed by the **Sugarcane (Control) Order, 1966** issued under the Essential Commodities Act (ECA), 1955.
  - It is announced at the recommendations of the **Commission for Agricultural Costs and Prices based on the cost of production.**
- Cooperative factories usually pay farmers a **final cane price more than the Centre's FRP** due to **State Advised Prices** (usually higher than FRP) and the **demand of farmer unions.**



### 3.17.10. REGULATION OF ONLINE ADVERTISEMENT

- **Union Cabinet** has assigned the **Ministry of Information & Broadcasting (I&B)** as the **administrative authority** for regulation of online advertisements.
  - It was done by **amendment to Allocation of Business (AoB) Rules, 1961.**
- **Ministry of I&B** was already looking at **online advertising**, most notably through circulars in 2022 to clear ads from **“betting and gambling”** firms from TV and OTT.
- Prior to this, regulation of online gaming content and advertisements were primarily **overseen by MeitY and Information Technology Act, 2000.**

### 3.17.11. AMRIT BHARAT STATION SCHEME (ABSS)

- PM laid foundation stone for redevelopment of 508 railway stations under ABSS.
- ABSS was **launched to redevelop railway stations nationwide** to provide **state-of-the-art public transport** and **world-class amenities** at railway stations.

- It is **based on Master Planning for long term and implementation** of Master Plan will be as **per station needs.**
- **Stations will be developed as ‘City Centres’** in an integrated approach for **overall city development, centred around station.**
- **Design of station buildings** will be inspired by **local culture, heritage and architecture.**
- **Initiatives taken by Indian railways for modernisation:**
  - **Train Modernisation** by introducing indigenously developed Vande Bharat Trains, Vistadome coaches, SMART coaches with ultra-modern facilities, Increasing Speed of Freight Trains etc.
  - **Signalling and Safety features** include Real Time Information System (RTIS) for tracking, Linke Hofmann Busch (LHB) coaches, KAVACH-Indigenously developed Train Collision Avoidance System, Electronic Interlocking system etc.
  - **Combating Climate Change** through initiatives such as setting up Dedicated Freight Corridors (DFCs), becoming a **Net Zero entity by 2030** by completing electrification of all railway tracks etc.
  - **Others:** Elimination of all unmanned level crossings on broad gauge, Wi-Fi services at stations, One Station One Product scheme etc.

### 3.17.12. STALLED HOUSING PROJECTS

- Committee on stalled housing projects submits report to **Ministry of Housing and Urban Affairs (MoHUA).**
- Committee was formed by the ministry following a recommendation made by the **Central Advisory Council (CAC).**
  - **CAC** constituted under **RERA 2016** is **chaired by Minister of Housing & Urban Affairs.**
- **Key highlight**
  - **Around 4.12 lakh housing units** (44% in NCR) worth ₹4.08 lakh crores **are stalled.**
  - **Lack of financial viability** (leading to cost overruns and delays) is the main reason for stalled projects.
  - **Finding a resolution** will add **more housing units and impetus to economic growth.**
- **Recommendations**
  - **Mandatory registration with RERA:** To enhance **developers’ accountability** for their actions and the commitments made to homebuyers.
  - **Rehabilitation Package:** By **States Governments** to make stalled projects financially viable.
  - **Financing of Stalled Projects:** Treat it as a priority and utilise **Special Window for Affordable and Mid-Income Housing (SWAMIH) Fund.**
  - **Resolution of stalled projects:**

- ✓ All stakeholders (developers, financiers, land authorities, etc.) would have to **take a “haircut** (accept less than what is due to them).
- ✓ **Improve the Internal Rate of Return** of the projects in order to attract funding.
- ✓ **Judicial interventions**, like the use of the Insolvency and Bankruptcy Code, should be “the last resort”.



### 3.17.13. INDIA SMART CITIES AWARDS CONTEST (ISCAC) 2022

- ISAC is **organized under the Smart Cities Mission** by the **Ministry of Housing and Urban Affairs**.
- ISAC recognizes and **rewards cities, projects and innovative ideas** that are **promoting sustainable development across 100 smart cities**, and stimulating inclusive, equitable, healthy and collaborative cities.
  - ISAC has witnessed **three editions in 2018, 2019 and 2020**.
- **Top 3 Smart City:** Indore, Surat and Agra
- **Top 3 in State:** Madhya Pradesh, Tamil Nadu, Rajasthan
- **Top UT:** Chandigarh

### 3.17.14. INSURANCE SURETY BONDS

- NHAH recently held discussions with stakeholders on insurance surety bonds for NHAH contracts.
- **About Insurance Surety bonds**
  - It is a **three-party contract** by which one party (the surety) guarantees the performance or obligations of a second party (the principal) to a third party (the obligee).
  - It act as a **security arrangement for infrastructure projects** and insulate the contractor as well as the principal.
  - Insurance Surety Bonds (ISB), **allowed by Insurance Regulatory and Development Authority in April 2022**, has been brought as a **replacement of bank guarantees**.

### 3.17.15. RAIL-SEA-RAIL (RSR) TRANSPORTATION

- **Ministry of Coal** will promote Rail-Sea-Rail (RSR) transportation.
- **RSR is a multimodal transportation system** that **seamlessly transports the coal to end-users**.
- It is required to meet the **coal production target of doubling the mining in the next seven years**.
  - Currently, **railways account for about 55% of coal evacuation** in the country and are expected to handle 75% of the coal by 2030.
- **Issues in Coal transportation:** Low handling capacity, improper loading and unloading infrastructure, non-availability of wagons, and congestion on the road or rail network.
- **Advantages of RSR system:**
  - Decongests the rail routes and creates export opportunities,
  - reduces the logistic cost for end-user states.
  - Ensures a resilient and efficient coal supply system.
  - Lowers the carbon footprint.
- **Initiative for Coal Transportation**
  - Around 67 First Mile Connectivity (FMC) Projects with 885 MT capacity are being implemented.
  - The Ministry of Coal released a draft National Coal Logistic Plan.
- **Coal in India**
  - **India has an estimated coal reserve of 361411.46 million tonnes**, with most of it lying in the states of Odisha, Jharkhand, and Chhattisgarh.
  - **Consumption centers:** Coal-based **generation capacities are in proximity** to the Coal production center and other coal-powered industries are in northern or coastal regions.

### 3.17.16. MERA BILL MERA ADHIKAAR SCHEME

- **Central Board of Indirect Taxes and Customs (CBIC)** is launching **Invoice Incentive Scheme “Mera Bill Mera Adhikaar”** from 1st September 2023 on pilot basis.
- **Objective:** to **bring a cultural and behavioural change** in the public to ‘Ask for a Bill’ as their right and entitlement.
- **Key features:**
  - Allows people to **earn cash prizes from ₹10,000 to ₹1 crore on the upload of GST invoices**.
  - All **B2C (business-to-consumer) invoices** issued by GST registered suppliers to consumers will be eligible for the scheme.
  - **Minimum value for invoices: Rs. 200.**

### 3.17.17. HIGH PRICE DAY AHEAD MARKET AND SURPLUS POWER PORTAL (PUSHP PORTAL)

- PUSHP portal was launched by Ministry of Power to ensure greater availability of power during peak demand season.
  - Power Distribution Companies (DISCOMS) will be able to indicate their surplus power in block times / days / months on portal.
  - Those DISCOMs who need power will be able to requisition the surplus power.
  - This will reduce the fixed cost burden on DISCOMs and enable the available generation capacity to be utilise.

### 3.17.18. 'NAMOH 108' LOTUS

- A lotus variety named 'Namoh 108' was unveiled in CSIR - National Botanical Research Institute, Lucknow under the One Week One Lab (OWOL) initiative of the CSIR.
  - Under OWOL, every lab would showcase its history and scientific achievements for a week.
- It was discovered several years ago in Manipur and is

the only lotus variety in India to have had its genome sequenced.

- To promote its cultivation in other parts of the country Lotus Mission was also launched as part of horticulture mission.

### 3.17.19. 'BHAGWA' POMEGRANATE

- APEDA facilitated the export of the first trial shipment of 'Bhagwa' pomegranate to the USA in collaboration with NPPO.
- 'Bhagwa' (Saffron-colored) Pomegranate
  - High antioxidant content and super fruit characteristics
  - Solapur (Maharashtra) contributes almost 50% of pomegranate export from India.
- Agricultural and Processed Food Products Export Development Authority (APEDA) is a statutory body under the APEDA Act, 1985.
  - It is an apex-Export Trade Promotion authority.
- National plant protection organization (NPPO)
  - Directorate of Plant Protection, Quarantine and Storage is the national NPPO of India.
  - It undertakes all phytosanitary responsibilities for the export of agro-commodities.



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## 4. SECURITY

### 4.1. DEFENSE RESEARCH AND DEVELOPMENT ORGANIZATION (DRDO)

#### Why in the news?

The Ministry of Defense (MoD) has constituted a nine-member committee headed by **Prof. K VijayaRaghavan** to review the functioning of DRDO and suggest restructuring and redefining its role.

#### More on News

- The need to reform stems from the following factors:
  - **Failure to complete mission mode projects** on time resulting in heavy time and cost overruns.
    - ✓ Such delays led to the obsolescence of the product and recourse to imports to meet urgent requirements.
  - **To streamline the modernisation of administrative, personnel and financial systems** to address the trilemma (high quality, low cost and quick delivery) of defence indigenisation.



## Defence Research and Development Organisation



New Delhi, India

**About:** R&D wing of Ministry of Defence with a vision to empower the nation with state-of-the-art indigenous Defence technologies and systems.

**Mission:**

- To provide technological solutions to the Services to optimise combat effectiveness.
- To equip armed forces with state-of-the-art weapon systems and equipment.

**Major products/systems developed:** Agni and Prithvi series of missiles; BrahMos; light combat aircraft, Tejas; multi-barrel rocket launcher, Pinaka; air defence system, Akash; a wide range of radars and electronic warfare systems, Main Battle Tank 'Arjun Mk-I etc.

#### Reasons for inefficient delivery by DRDO

- **Lack of harmonisation** on projects where multiple agencies get involved.
- **Inadequate monitoring by different committees and frequent changes of requirement:** Recommendation for changes in engineered prototypes at the trial stage results in inordinate delays and cost overruns.
- **Working on redundant:** R&D work on **obsolete technologies** results in redundant efforts and 'reinventing the wheel' with poor operational utility by armed forces.
- **Bureaucratisation of DRDO:** Greater emphasis on procedural aspects than outcome and delivery.
  - This created a scientific work environment comprising caution, rules, reviews, centralisation, less communication, etc.
- **Monopoly and lack of competition:** Limited involvement of the private sector and the predominant role of generalist bureaucrats with no expertise in defence.
  - This also creates the issue of **limited scalability** of projects undertaken by the DRDO.

#### Way Forward

- **Creating an Architecturally New Defence Techno-Industrial Consortium (DTIC):** For integrated defence R&D and manufacturing concept, strategy and structure.
  - This would also bring in a third force, the private sector, in a big way into the defence industry.

- Bring ecosystems like the **iDEX (Innovation for Defence Excellence)** under the consortium to nurture innovations required for the armed forces.
- **Establish a Defense R&D council** comprising top military leaders and scientists as the apex decision-making body with emphasis on capability development plans.
  - Carry out **research in frontier technology** in **collaboration with other national research organisations/ laboratories, academia, and industries.**
- **Create a new tri-service division within the Department of Military Affairs** to look after defence research for **integration of capability development and defence R&D.**
- **Procedural measures:** Any modification/ improvisation should be done at the prototype stage. Modification at the production stage should be avoided.
  - **Effective synchronisation mechanism** should be established in projects involving multiple agencies to avoid any slippages.
  - **Wind up of redundant DRDO labs and projects** could release sizeable landed assets and monetise them to create a corpus fund for innovation.

## 4.2. CENTRAL ARMED POLICE FORCES (CAPF)

### Why in the news?

The Ministry of Home Affairs had mentioned that around 1532 Central Armed Police Forces (CAPF) personnel had died by suicide in the last 13 years.

### About Central Armed Police Forces (CAPF)


- There are **7 CAPF forces** are under the authority of the **Ministry of Home Affairs (MHA).**
- **Various Forces include:**

Forces	Mandate
Sashastra Seema Bal (SSB)	<ul style="list-style-type: none"> <li>● <b>Created in 1963</b> guarding <b>Bhutan and Nepal borders.</b></li> </ul>
Border Security Force (BSF)	<ul style="list-style-type: none"> <li>● <b>Created in 1965</b>, guarding <b>India's borders with Pakistan and Bangladesh.</b></li> <li>● It is also <b>thrusted with Anti Naxal operation</b>, United Nations Peace keeping operations, disaster management and Border Area development programmes.</li> </ul>
Indo-Tibetan Border Police (ITBP)	<ul style="list-style-type: none"> <li>● <b>Created in 1962</b>, guarding <b>India-China borders.</b></li> </ul>
Assam Rifles (AR)	<ul style="list-style-type: none"> <li>● <b>Created in 1835</b> as 'Cachar Levy' to protect British tea estates and was renamed as "AR" in 1917.</li> <li>● It <b>protects the Indo-Myanmar border.</b></li> <li>● Though the AR functions under <b>the administrative control of the MHA</b>, its <b>operational control</b> rests with the <b>Ministry of Defence.</b></li> </ul>
Central Reserve Police Force (CRPF)	<ul style="list-style-type: none"> <li>● <b>Created in 1939</b> to <b>maintain Rule of Law, Public Order and Internal Security</b> and Promote Social Harmony.</li> </ul>
Central Industrial Security Force (CISF)	<ul style="list-style-type: none"> <li>● <b>Created in 1969</b>, to provide integrated security cover to certain sensitive public sector undertakings.</li> <li>● The CISF also protects important <b>government buildings, monuments, airports, nuclear installations, space establishments and the Delhi Metro.</b></li> </ul>
National Security Guard (NSG)	<ul style="list-style-type: none"> <li>● <b>Created in 1986</b>, to create a federal contingency force to tackle various manifestations of terrorism.</li> <li>● <b>Modelled on lines of the SAS of UK and GSG-9 of Germany</b>, their role is to handle all facets of terrorism in any part of the country.</li> </ul>

### Issues faced by CAPF

- **High Vacancies** burden the existing force and also impact the country's security.
- **Lack of Stress management** leading to a high number of suicides as well as an increase in the number of clashes among personnel.
- **Bureaucratisation of Armed Forces and decreased level of promotions:** The top positions in CAPFs are occupied by IPS officer, which has a demoralising effect on the force and also impacts their effectiveness.

- **Absence of a robust in-house grievance redressal mechanism.**
- **Poor Infrastructure,** like Lack of electricity at several installations of Border Out Posts (BOPs), seriously affects the working conditions.
- **Lack of modern weapons:** The CAPFs lack modern arms, clothing and equipment. Their procurement process is also noted as cumbersome and time-consuming in nature.
- **Demand from the States:** The states are heavily dependent on CAPFs in the event of a law and order issue in the state.



## Data Bank

- Around **11 Lakhs** is the total sanctioned strength of CAPF's.
- **3.76%** is the representation of women in all CAPFs.
- Around **83,000 posts** are vacant across all the CAPFs.

### Steps to enhance their performance

- **Special Forces in States:** The states must develop their own forces to efficiently manage law and order and augment their existing police forces by providing adequate training and equipment.
- **Enhancing the training methods:** The training methods are to be improved in line with the latest requirements, and the training curriculum be updated.
- **Increase the representation of women:** The percentage of women in the CAPF needs to be increased, and a separate training curriculum be set for them.
- **Inclusion of Agniveers:** The existing limit of 10% reservation for inclusion of Agniveers in the CAPFs, is to be followed along all the CAPFs, and separate drives need to be enhanced to fill the vacancies.
- **Grievance redressal:** An efficient grievance redressal mechanism be implied, which looks into the issues of delayed promotions, clashes within the personnel and harassment at the workplace.
- **De-stressing the force:** Scientific methods to reduce the stress of the personnel are to be introduced along with special intermittent training to improve their morale and well-being.

## 4.3. INTER-SERVICES ORGANISATION (COMMAND, CONTROL & DISCIPLINE) BILL, 2023

### Why in the news?

Both houses of the Parliament cleared this bill recently.

### Background

- There are **various Inter-services Organisations (ISO)** like Andaman and Nicobar Command or Defence Space Agency and joint training establishments like National Defence Academy or National Defence College.
  - The personnel are presently bound by respective **provisions of the Air Force Act 1950, the Army Act 1950 and the Navy Act 1957.**
- **Commander-in-Chief or Officer-in-Command of such ISO are not empowered** to exercise disciplinary or administrative powers over the personnel belonging to other services.
  - Consequently, the **personnel serving in ISO needed to be reverted to their parent Service units** for any action, which was time-consuming & cumbersome and had financial implications.
- Accordingly, a **need arises to empower these officer of ISO** to exercise control over the service personnel serving under their command.

### Key Highlights of the bill

- **Define Inter-services Organisation (ISO):** as a body of troops including a Joint Services Command consisting of persons subject to the Air Force Act, 1950, the Army Act, 1950 and the Navy Act, 1957 or any two of the said Acts.
- **Centre to constitute ISO:** which has personnel belonging to at least two of the three services: the army, the navy, and the air force. This may also include a joint service command.
- **Empowers the Commander-in-Chief:** The **Chief is empowered to take disciplinary and administrative actions** over personnel serving in Inter-services Organisations **in accordance with their respective service acts.**
- **Continuation of existing Organizations:** Already existing ISO and their respective Commanders to continue their functions as per this bill.



- Existing ISO includes the **Andaman and Nicobar Command, the Defence Space Agency, and the National Defence Academy.**
- **Superintendence of Central Government:** The ISO are placed under the oversight of the Central Government, allowing it to issue directions as needed for national security or general administration.
- **Other forces under central government:** Centre may notify any force raised and maintained in India to which the Bill will apply.
- **Expeditious disposal of cases & greater integration:** The provisions expedite the disposal of the cases and provide better integration and jointmanship (**theaterisation**) amongst Armed Forces personnel.

To know more about the **Theaterisation of Armed Forces**, please refer to March 2023 Monthly Current Affairs.

## 4.4. NEWS IN SHORTS

### 4.4.1. MOBILE USER PROTECTION REFORMS

- **Ministry of Communications** introduced two **Mobile User Protection** reforms which will supplement the **Sanchar Saathi** portal.
- **Reforms**
  - **Point-of-Sale (POS) Registration Reforms-** mandatory registration of franchisees, Agents, and Distributors (PoS) by Licensees, thus eliminating the rogue PoS who by fraudulent practices issue SIMs to anti-social/anti-national elements
  - **KYC Reforms-** demographic details will mandatorily be captured by scanning QR code of printed Aadhaar.
- **Sanchar Saathi's portal** empowers mobile subscribers to: Find out mobile connections registered in their name, and report stolen/ lost mobile handsets & block them etc.

### 4.4.2. ACOUSTIC SIDE CHANNEL ATTACKS (ASCA)

- Use of **laptops** has **increased** the scope of **ASCAs** as laptop models have the same keyboard which eases the interpretation by AI-enabled deep learning.
- ASCA is a type of cyberattack wherein **Artificial Intelligence (AI)** can be used to **decode passwords** by **analyzing the sound produced by keystrokes.**
- **SCAs** are a method of **hacking a cryptographic algorithm based on the analysis of auxiliary systems** (electromagnetic waves, power consumption, sound from keyboard, printer, etc.) used in the encryption method.

### 4.4.3. SPIKE NON-LINE OF SIGHT (NLOS) ANTI-TANK GUIDED MISSILE

- Indian Air Force has received the Israeli Spike NLOS Anti-Tank Guided Missiles.
- Spike NLOS will be **integrated with Russian-origin fleet of Mi-17V5 helicopters.**

- It is developed and designed by Israeli company Rafael Advanced Defense Systems. It belongs to **6th Generation of Spike missiles.**

#### ● Features

- **Capable of destroying enemy targets hidden** behind mountains from long ranges.
- **Effective range is 25km.**
- **Lightweight, fire-and-forget tactical precision-guided missiles** using electro-optical and fibre-optic technologies.

### 4.4.4. SWATHI WEAPON LOCATING RADAR MOUNTAINS (WLR-M)

- Indian Army has inducted **Swathi WLR-M to locate hostile artillery and enhance combat potential.**
  - It is advanced **electronically scanned phased array radar**, specifically designed for **operations in mountainous and high-altitude areas.**
  - It was developed by Bharat Electronics Limited (BEL) in Bengaluru.
  - Swathi radar also comes in **WLR-Plains version.**
- **WLR uses advanced signal processing techniques to detect and track mortars, rocket launchers and fire trajectories** for more accurate artillery strikes.
  - Its hallmark is **high mobility and swift deployment capabilities**, allowing it to adapt to changing operational requirements efficiently.

### 4.4.5. ASTRA MISSILE

- Light Combat Aircraft Tejas, has successfully been test fired the ASTRA missile.
  - It is a **Beyond Visual Range Air - to - Air missile**, indigenously developed by **DRDO.**
- **Key Features:**
  - **Range:** 80-110 kms for version Mk1 and 160kms for version Mk2.
  - **Altitude:** up to 20 km.
  - **Max Speed:** Mach 4.5

#### 4.4.6. 3D-PRINTED BOMBS

- Ukraine has recently turned to **3D-printed bombs** as a **solution to combat ammunition shortages** and sustain their counteroffensive efforts.
- Ukraine's weapons makers are finding **various models of improvised ammunition** that are **3D printed at home and abroad**.
  - These **3D-printed casings** are **produced and then filled with C4 explosives and shrapnel** before being deployed on the battlefield.
- They have been nicknamed "**candy bombs**".

- Candy bombs are **cheap and effective**. Also, it can be readily **produced in different sizes** which helps drone operators make the best use of a given model's payload capacity.

#### 4.4.7. MILITARY EXERCISES

- **AUSINDEX-23** is a **biennial maritime exercise** between **Indian Navy** and **Royal Australian Navy**.
- **BRIGHT STAR-23** is a **biennial multilateral tri-service exercise** held in Egypt. For the first time, **Indian Air Force** is participating in it.
  - Other participating countries include **US, Saudi Arabia, Greece, and Qatar**.

# CSAT

## कलासेस

# 2024

ENGLISH MEDIUM  
25 Aug | 5 PM

हिन्दी माध्यम  
31 Aug | 5 PM



ऑफलाइन

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# 5. ENVIRONMENT

## 5.1. GLOBAL BIODIVERSITY FRAMEWORK FUND (GBFF)

### Why in the news?

GBFF was recently ratified and launched at the Seventh Assembly of the Global Environment Facility.

### About GBFF

- **Purpose:** GBFF aims to finance the implementation of the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**.
- **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.
  - **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 invited to serve as the Trustee of the GBFF.
  - GBFF will be established similar to the **Capacity-Building Initiative for Transparency Trust Fund**, **Least Developed Countries Fund**, **Special Climate Change Fund**, and **Nagoya Protocol Implementation Fund**.
- **Fund allocations:**
  - **20% of the funds** would support Indigenous-led initiatives to protect and conserve biodiversity.
  - **Prioritise support for Small Island Developing States and LDCs**, which will receive **more than a third of the fund's resources**.
  - **Funding Sources** are governments, philanthropy, the private sector, international financial institutions, etc.

Kunming-Montreal Global Biodiversity Framework (KMGBF)	
<ul style="list-style-type: none"> <li>• KMGBF was <b>adopted in 2022 at COP 15 (held in Montreal)</b> to the <b>UN Convention on Biological Diversity</b>.</li> <li>• It replaced the <b>Aichi Biodiversity Targets</b> that <b>expired in 2020</b>.</li> <li>• <b>It is not legally binding</b>.</li> <li>• It sets out <b>4 goals for 2050 and 23 targets for 2030</b>.</li> </ul>	
<b>4 overarching goals to be achieved by 2050 focus on</b>	<ol style="list-style-type: none"> <li>1. To halt human-induced species extinction</li> <li>2. Equitable sharing of benefits</li> <li>3. Sustainable use of biodiversity</li> <li>4. Closing the biodiversity finance gap of \$700 billion per year.</li> </ol>
<b>23 action-oriented global targets for urgent action over the decade to 2030</b>	<b>Key targets</b> <ul style="list-style-type: none"> <li>• 30% of land, inland water, marine and coastal ecosystems will be protected by 2030 (<b>30x30 Deal</b>).</li> <li>• Reducing the rate of introduction of invasive alien species by 2050.</li> <li>• Cutting <b>global food waste by half</b>.</li> <li>• Reducing the loss of areas of <b>high biodiversity importance</b> to zero.</li> <li>• Reducing by \$500 billion <b>annual harmful government subsidies</b>.</li> <li>• <b>Mobilizing investment</b> close to the biodiversity funding gap by \$200 billion in year.</li> </ul>

### Significance of GBFF

- **A new source of funding:** To halt and reverse biodiversity loss by 2030.
- **Promise of including indigenous people:** Approximately 25% of the Earth's surface and ocean areas are managed by indigenous peoples and local communities (IPLCs), and these areas hold 80% of the Earth's biodiversity.
  - **GBFF emphasises respect for the rights of indigenous communities** that traditionally protect forests and biodiversity and their involvement in conservation efforts.
- **Aligned with UN Sustainable Development Goals:** 3 of which directly deal with the environment and thus with biodiversity: **Goal 13 on climate action**, **Goal 14 on life below water** and **Goal 15 on life on land**.

### Conclusion

**Need of the hour** is for **all the countries, multilateral development banks, private sectors and philanthropists** to contribute immediately and significantly to the **GBFF** to make it fully operational to help implement the **ambitious targets set in Montreal COP 15**.





# Global Environment Facility (GEF)



**Genesis** It was established in 1991 as a **multilateral environmental fund** to achieve global environmental benefits.



**Objective** As a **financial mechanism** provides **grant funds** to developing countries for projects covering 4 focal areas: **climate change, biodiversity, international waters and ozone depletion.**



**Implementing agencies** World Bank, the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP).



**Membership** GEF has **185 member countries**, including India.



## Other Key information

- GEF Assembly **meets every three to four years** to review general policies.
- GEF serves as "**financial mechanism**" to **five conventions**
  1. Convention on Biological Diversity (CBD),
  2. United Nations Framework Convention on Climate Change (UNFCCC),
  3. Stockholm Convention on Persistent Organic Pollutants (POPs),
  4. UN Convention to Combat Desertification (UNCCD), and
  5. Minamata Convention on Mercury.
- GEF, although not linked formally to the **Montreal Protocol**, supports implementation of the **Montreal Protocol** in **Countries with Economies in Transition.**

## 5.2. UNREGULATED TOURISM IN THE INDIAN HIMALAYAN REGION (IHR)

### Why in the news?

Recently, a Parliamentary Standing Committee has recommended the government to prepare a **practical action plan** with clear timelines to put a check on destructive activities in IHR.

### More on news

- The Parliamentary Standing Committee on Science and Technology, Environment, Forest and Climate Change highlighted the **tremendous increase of tourist activities** in IHR has led to **over-exploitation of natural resources** and **illegal construction**.
  - This includes home stays, guest houses, resorts, hotels, restaurants and other encroachments.

### Specific vulnerabilities of the IHR

- **Geo-physical:** Himalayas are **tectonically active** and are mostly made-up of **unconsolidated and semi-consolidated deposits**.
  - **Under-cutting by river currents** in valleys like Alaknanda, Bhagirathi, Mandakini, etc.
  - **Hill washing and percolation of waters** due to rain, cloud-bursts, and melting of snow resulting in **land subsidence** like the one witnessed in Joshimath, Uttarakhand earlier this year.
- **Socio-economic: Deforestation** for agriculture, grazing, construction, etc., on hill slopes giving rise to avalanches, landslides, etc.
  - **Obstruction of natural flow of water** due to construction various mega hydel Power Projects, like Tehri Dam Reservoir in Tehri Garhwal district.
- **Rising Tourism:** IHR records about **100 million tourists every year** and the number is **expected to increase to 240 million by 2025**, putting huge pressure on resources.

- As per Niti Aayog, Tourism **contributes more than 10% of the Gross State Domestic Product (GSDP) in many states** such as Uttarakhand, West Bengal, Tripura, Assam, etc.

### Challenges of unregulated tourism in the IHR

- **Waste generation:** According to Niti Aayog's report in 2018, tourism in IHR States generates about 8.395 million tonnes per year (MT/Y) of solid waste.
  - **Unorganized waste collection, segregation, disposal, and recycling** further aggravated the problem.
  - It also leads to **degradation of watersheds and water sources**.
- **Forests and biodiversity:** Loss of natural forest covers for building various tourism infrastructures such as accommodation, transport, etc.
  - Loss of natural resources impacting **biodiversity and ecosystem services**.
- **Landscape:** Replacement of **traditional eco-friendly and aesthetic infrastructure** with inappropriate, unsightly and dangerous constructions.
- **Seasonality of tourism:** High fluctuations in tourism activities in different seasons lead to various problems like overcrowding, lack of services, etc.
- **Socio-cultural:** Erosion of cultural fabric and social values of collectivism due to mass tourism.

#### Why Shimla is crumbling? – A Case Study

- Lack of **climate-smart infrastructure development**.
  - Like the Himachal Pradesh High Court Lawyers Chambers and the new Indira Gandhi Medical College has been **constructed over substantial water springs and channels**.
- Further, **planning for Shimla** is overseen by the Town and Country Planning Department (Public Works Department, Himachal Pradesh) which operates **without democratic oversight**.
- Also, **Shimla Development Plan (SDP)**, which also **lacks any climate action plan**, is currently **subjudice before the Supreme Court**.

### Way Forward

- **Planning, implementation and monitoring:** A **multi-year strategy for sustainable tourism** should be formulated that covers environmental, economic, social, health, and safety issues.
  - It should be done in the spirit of **local community partnerships**.
- **Policy and regulations:** Promote zero waste destination by enforcing **Solid Waste Management Rules, 2016**, and **Plastic Waste Management Rules, 2016**.
  - **Environmental audit** of tourism service providers based on environment efficiency and carbon generation and certification.
  - **Common certification scheme and eco-labelling** for tourism ventures in line with environmental parameters can help to reduce pollution.
  - **Clear zoning of landscape** (Land Use Plan based on maps and stakeholder interests) will assist in monitoring and guide site specific interventions if and when required
- **Institutions and Processes:** Inter-departmental convergence to ensure integrated destination and infrastructure planning and implementation.
  - **Active monitoring and public reporting** of environmental, economic, social, and tourism strategies, milestones and issues in sync with SDG Targets and Indicators.
  - **Designing climate-smart infrastructure** to redirect investment away from high-risk areas, project and policy appraisal through **strategic Environmental Assessment, climate risk disclosure**, 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:** Prepare tourism satellite accounts of IHR, multi-hazard zoning, geomorphological mapping along major river valleys, etc., for effective planning.
- **Capacity building:** Design and deliver an **IHR specific Awareness and sensitization package** through proactive media campaign and tourism information centres.

#### Initiatives undertaken to promote Sustainable Tourism

- **National Strategy for Sustainable Tourism:** To mainstream sustainability in Indian tourism sector and ensure a more resilient, inclusive, carbon neutral and resource efficient tourism
- **Swadesh Darshan 2.0:** Includes a vision of sustainable and responsible tourism under various projects.
- **Swachh Paryatan Mobile Application:** To allow people to report any hygiene issues at tourist places.

## 5.3. WATER TRADING

### Why in the news?

Recently, NITI Aayog released a document on **water trading mechanisms to promote the reuse of treated wastewater.**

### About Water Trading Mechanism

- **Water Trading** is a **water market mechanism** that considers **water as a commodity** rather than a public good.
  - It can be **traded amongst users according to their needs.**
- **Mechanism:** A **Water company**, rather than creating its own water source, can **buy the water** from a **third party** and sell it to the users.
- **Enabling elements for Water Trading**
  - **Ownership of water** - should be indisputable.
  - **Water entitlements**- could be transferred.
  - **Water Reuse Certificates (WRCs)** - as tradable permits.
    - ✓ Under the WRC trading system, water users across sectors, including **municipal/residential, industrial and agricultural sectors**, shall be registered and **get individual targets for water reuse.**
    - ✓ **Water users having WRCs may sell them in the open market**, allowing other water users to bridge the gap **between their wastewater reuse targets.**

### Need for reuse of treated wastewater through water trading

- **Rising pace of urbanisation:** Only about **40% of urban wastewater is treated in India**, and even that is not being reused.
- **Unequal spatial distribution:** **Wide temporal and spatial variations** in the distribution of water.
  - **For example**, India receives more than 80 % of the rainfall during four months of the year.
- **Private hand in water management:** The **National Water Policy of 2002 & 2012** has proposed a private hand in water management and **has emphasised public-private partnership.**
- **Rising water pollution:** **Wastewater, including agricultural runoff**, is the leading cause of water pollution.
  - It is intricately linked to human and ecosystem health, **with over 80% of global wastewater estimated to enter water bodies untreated.** (UN World Water Report 2023)
- **Tackling water scarcity:** Around **80% of people living under water stress lived in Asia**, in particular, northeast China, as well as **India.** (UN World Water Report 2023)
- **Low water use efficiency in Indian agriculture:** Around **89% of groundwater extracted** is used for irrigation, and crops such as **paddy and sugarcane consume more than 60% of irrigation water.**
  - India is also a large **virtual net export of water** because of agricultural products export.

**Do you know?**    
**Virtual water** is the water hidden in the products, services and processes people buy and use every day.

### Challenges

- **Fixing price:** **Treating the wastewater** and supplying it to the **farm fields or to the industrial units** will involve certain costs which may not be competitive with the **cost of fresh water.**
  - As fresh water is available at a **substantially low or sometimes even at no cost.**
- **Storage:** Since the process of wastewater generation is continuous, the treatment process also should be continuous. **However, the demand may not remain constant throughout the year.**
  - **For example**, the crops may not require irrigation for a certain period; demands in industrial units may also vary. This would require either storage of treated wastewater or discharging the treated water to other freshwater sources.
- **Identification/creation of demand:** To make water/treated wastewater a tradable commodity, it is necessary to have a demand.
- **Assured supply:** **Maintenance of plant, disruption in sewage network, quality problems in inlet sewage** or treated sewage, disruption in the distribution network, etc. could interrupt supply.

- **Water as a fundamental human right:** In India, water is neither considered a commodity **nor possesses any significant economic value**.
  - This is mainly because of the due consideration of the **essentiality of water** as a fundamental human right.

#### Way forward

- **Formation of Independent Regulatory Authority (IRAs)** with statutory powers to determine **water allocation** and **pricing of treated wastewater**.
  - Today, **12 states in India have enacted Acts to form IRAs**, but they mostly have the power to **regulate water tariffs in the irrigation sector**.
- **Creation of a trading platform** and induction of all stakeholders into it.
  - **Fixing the reuse target** and finalising the norms of treated wastewater quality along with credits and value of **Water Reuse Certificates (WRCs)**.
- **Identification of Industrial Clusters, Municipal/Residential units, Agriculture lands**, and Environmental needs where the treated wastewater could be reused.
- **Preparation of site-specific plans for reuse:** GIS tools could be used for initial planning, and **social mobilisation through NGOs** would be required to **overcome the stigma** of the use of treated wastewater.
- **Monitoring mechanism:** Establishment of **regular monitoring mechanisms and Social impact assessment** under the supervision of IRAs.
- **Working towards Water Neutrality:** **Water Neutrality** concept advocates that the **total water demand should be the same after a new development is built as it was before**.
  - Promoting water reuse can aid in achieving water neutrality.

#### World's Best Practices in Water Trading

- **Australia:** Murray Darling Basin has proved that water trading is one of the best methods to use water in an efficient manner.
  - Water trading helps farmers make more productive use of water and contributes to sustainable water management.
- **Spain:** Water market exchanges alleviated the conditions of those basins where water scarcity was most severe.
- **South Africa:** One of the most advanced water frameworks in the world. South Africa's system enables existing water rights to be reallocated.

#### 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 of cereals, pulses, vegetables, fruits, oilseeds, etc.
- In addition to water conservation, it aims to **improve soil health** and to **maintain dynamic equilibrium** of the agro-ecosystem.

#### Various measures taken

- **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 crop to alternate crops**.
- **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 litres 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 & India's food security**.
- **Net return to a farmer** favours cultivation of paddy over maize in the Green Revolution belt.
- **Lack of awareness** among farmers about the benefits of crop diversification.



## 5.4. COASTAL AQUACULTURE AUTHORITY (AMENDMENT) ACT, 2023

### Why in the news?

Recently, this Coastal Aquaculture Authority (Amendment) Act, 2023, was adopted, which amends the earlier 2005 Act.

### Background

- **Coastal Aquaculture Authority Act 2005** was enacted to **provide for the establishment of a Coastal Aquaculture Authority** for regulating the activities connected with **coastal aquaculture in the coastal areas**.
  - It aimed to **protect the coastal environment while promoting the orderly growth of coastal aquaculture farming** in coastal areas.
  - It **defines coastal aquaculture** as culturing, under controlled conditions in ponds, pens, enclosures or otherwise, in coastal areas of shrimp, prawns, fish or any other aquatic life in saline or brackish water **but does not include freshwater aquaculture**.
  - It also facilitates the **continued operation of coastal aquaculture within the Coastal Regulatory Zone area** and beyond.
  - It **penalised unregistered farms or farms in prohibited areas**.
- In 2005, **coastal aquaculture activity was essentially shrimp farming**.
  - **Now, newer forms of environment-friendly coastal aquaculture** have come up, which can be done in coastal areas and mostly within CRZ.
- However, there have been demands **to remove the ambiguities and amend some of the provisions of the 2005 Act** to make this legislation progressive and decrease the regulatory burden.

### About Coastal Aquaculture Authority (Amendment) Act, 2023

- **Broaden the definition of “coastal aquaculture”**: Comprehensively covers all activities of coastal aquaculture, removing the ambiguity existing between the farm and other verticals of coastal aquaculture.
  - New coastal aquaculture, such as **cage culture, seaweed culture, bi-valve culture, marine ornamental fish culture and pearl oyster culture**, are promoted.
- **Registration granted under the Coastal Aquaculture Authority Act** shall prevail and be treated as **valid permission under CRZ Notification**.
- **Additional role of Coastal Aquaculture Authority**:
  - **fix standards for inputs and discharge of effluents** from aquaculture units,
  - **prohibit the use of certain inputs** to prevent harm to the environment,
  - **monitor and regulate units, inputs, and emissions**.
- **Decriminalises and fixed penalties** if coastal aquaculture is carried out illegally
- **Permitting certain aquaculture activities in CRZ areas**: The Act permits hatcheries, nucleus breeding centres, and broodstock multiplication centres to be established in no-development zones (NDZ) of seas and buffer zones of creeks/rivers/ backwaters.
- **Prevent the use of antibiotics and pharmacologically active substances** that harm human health in coastal aquaculture.



### Data Bank

- **3rd largest** fish producer in world.
- **2nd largest** aquaculture producing nation in the world.
- **Doubled** India's seafood exports from between 2013 to 2023.
- **Frozen shrimp** retains the top position as the major export seafood item.
- **USA** is the largest importer of Indian seafood followed by China and EU.

### About Coastal Regulation Zone Notification 2019

- As per this notification, **certain coastal areas were declared as coastal regulation zone**, wherein setting up of industries and expansion of industries are prohibited activities and other developmental activities/projects are regulated/ permitted as per provisions of the said notification.
- The notification also **provides for ‘No Development Zones’ (NDZ) along various categories of coastal areas** to protect India's coastline from encroachment, erosion and accretion.
- CRZ notification is issued by the central government under the **Environment Protection Act, 1986**.

- **Promote biosecurity:** i.e. any measure adopted to analyse, manage and prevent the risk of introduction or spread of harmful organisms within the coastal aquaculture unit and to **minimise the risk of transmission of infectious diseases**.

### Significance of the CAA (Amendment) Act, 2023

- **Sustainable growth of Coastal areas:** Promote production, productivity and exports, traceability and increased competitiveness and entrepreneurship.
- **Empowering Authority:** with more power to regulate activities and enforce environmental compliance, **including the Polluter Pays Principle**.
- **Ease of doing business:** as it decriminalises the offences under the Act.
  - It also enables lakhs of small marginal aquaculture farmers to **avoid the possible need for obtaining CRZ clearances from multiple agencies**.
- **Promoting new Environment-friendly coastal aquaculture:** such as cage culture, seaweed culture, etc.
- **Employment Generation:** on a large scale for coastal fisher communities, especially fisherwomen;
- **Developing dedicated facilities:** in areas having direct access to seawater to produce genetically improved and disease-free broodstocks and seeds for use in coastal aquaculture.
- **Improve Export:** Prohibiting the use of antibiotics pharmacologically will help to reduce the impact of non-tariff barriers under WTO, hence improving exports.

### Issues with the Act

- **Infective work by Coastal Aquaculture Authority:** Due to a deficiency in skilled manpower and infrastructure facilities in the Authority (as noted by the CAG report).
- **Promoting intensive coastal aquaculture:** which may have adverse impacts on the environment, such as salinisation of land/wells and obstruction of natural flood water drainage.

#### Initiatives of Government to promote Aquaculture

- **Marine Products Export Development Authority** is a statutory body established in 1972 under the Ministry of Commerce & Industry to promote marine product export.
- **Blue Revolution** in India demonstrated importance of Fisheries and Aquaculture sector.
- **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** steps to intensify and diversify inland fisheries and aquaculture with focus on diversification of species, introduction of new species.

### Conclusion

The Coastal Aquaculture Authority (Amendment) Act of 2023 is the appropriate step toward reviving and modernising coastal aquaculture in the nation and making it a major seafood exporter worldwide. However, there may also be a need to balance promoting aquaculture activities and minimising the environmental damage from such activities.

## 5.5. AGROFORESTRY

### Why in the news?

Recently, the Centre released a **fact sheet to promote agroforestry prepared by the Indian Council of Forestry Research and Education (ICFRE)**.

### More about News

- The report released details of **cultivating 36 specific species, including bamboo**, that are suitable for agroforestry systems and home gardens.
- The 36 species include **Leucaena leucocephala**, or **subabul**, and various varieties of eucalyptus.
  - **Subabul is considered an invasive species** that has been reported as a weed in more than 20 countries, according to an International Union for Conservation of Nature (IUCN) database.
  - **Eucalyptus is considered highly water-intensive**.



## About Agroforestry

- Agroforestry is a **combination of practicing agriculture and forestry together**.
  - It focuses **on the interaction and interdependence of various elements in nature**.
- **Components of agroforestry:** Crops, trees, and livestock.
- **Agroforestry systems:** These are classified based on the type of component:
  - Agri silviculture (crops + trees),
  - Silvopastoral (pasture/livestock + trees); and
  - Agrosilvopastoral (crops + pasture + trees).
- **Attributes of the Agroforestry system**
  - **Productivity:** Production of preferred goods and increasing productivity of land
  - **Sustainability:** Conserving the production potential
  - **Adoptability:** Acceptance of the prescribed practice

### Know the term

#### Agro-climatic zone

- It is a **land unit in terms of major climates**, suitable for a certain range of crops.
- It aims at scientific management of regional resources to meet the food, fiber, fodder and fuel wood **without adversely affecting the status of natural resources and environment**.

## Significance of the Agroforestry

- **Farm profitability:** The combined output of trees, crops, and livestock per unit area is greater than the combined output of any one component.
- **Resource sustainability:** It aids in the preservation and protection of natural resources by reducing pollution, managing soil erosion, and establishing wildlife habitats.
- **Decrease input cost:** By generating mulch/leaf litter as manure and bio-pesticides from tree components.
- **Biodiversity conservation:** Combining trees, crops, and livestock creates a more diverse ecosystem, supporting a broader range of species.
- **Food security:** Helps improve health and nutrition due to increased diversity and quality of food outputs.
- **Increasing income of farmers:** New products from agroforestry increase the farming enterprise's financial flexibility and generate employment opportunities.
- **Carbon sequestration:** Agroforestry is involved in capturing carbon and long-term storage of atmospheric carbon dioxide.

### Challenges with Agroforestry

- Shortage of **superior seed varieties**
- Trees interfering with **agricultural crop yield**
- Insufficient research on agroforestry models suitable for the **diverse agro-climatic regions**
- Long tree gestation** periods resulting in delayed investment returns
- Lack of market mechanisms** for tree grown
- A dearth of remuneration** for under-taking tree cultivation

## Way forward for scaling agroforestry

- **Development of new agroforestry models** for different agro-climatic zones.
- **Ensuring the availability of certified planting material** to the farmers and other users.
- **Research and development:** Participatory research on larger agroforestry models viable across different agroecological regions.
- **Improving market access to farmers:** Development of industries and/or secondary processing units near the agroforestry zones.
- **Assessing impact:** Research on ecological and social impacts on adoption of agroforestry.
- **Extension service:** Improve the delivery of technology know-how to the farmers through extension programs involving research institutions and industries.

### Government Initiatives for Agroforestry

- **Sub-Mission on Agroforestry (Har Medh par Ped) Scheme:** Launched in 2016-17 to encourage tree plantation on farmland along with crops.
- **Mission for Integrated Development of Horticulture (MIDH):** It has been implemented since 2014-15 for holistic growth of horticulture covering fruits, vegetables, mushrooms, spices, etc.

- **National Agroforestry Policy, 2014:** To encourage and expand tree plantation in a complementarity and integrated manner with crops and livestock.
- Exempted many tree species from the **Felling and Transit rules**, and **removed bamboo from the category of forest produce** to enable large-scale cultivation.

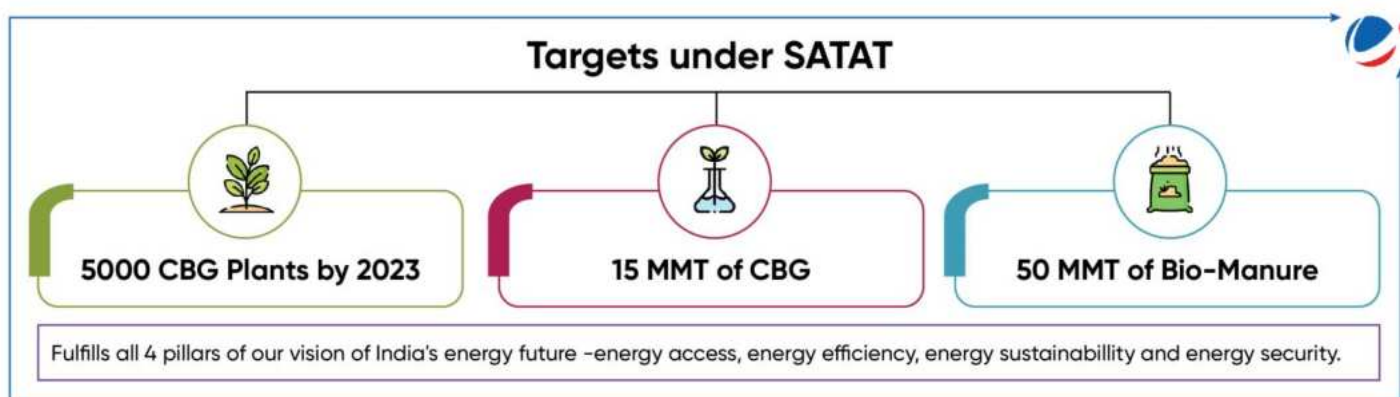
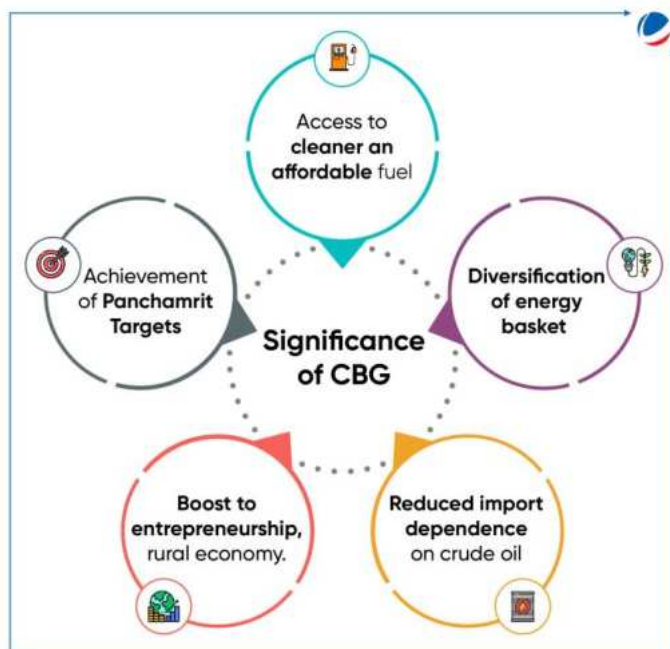
## 5.6. COMPRESSED BIO-GAS (CBG)

### Why in the news?

Parliamentary Standing Committee on Petroleum and Natural Gas submitted an action taken report on its earlier recommendations on the subject '**Review of Implementation of CBG (SATAT)**'.

### About Sustainable Alternative Towards Affordable Transportation (SATAT)

- **Launch: 2018.**
- **Objective:** To set up **Compressed Bio-Gas (CBG) production plants** and make available CBG in the **market** for use in automotive fuels.
  - Bio-gas is produced naturally through the **anaerobic decomposition of biomass**, such as agricultural residue, municipal solid waste, sugarcane press mud, etc.
  - ✓ CBG is obtained after **purification and compression of bio-gas**, which has a high **methane content (>90%)** and **higher calorific value (47-52 MJ/kg)**.
  - ✓ Other components of CBG include – **CO<sub>2</sub> (<4%)**, **Hydrogen Sulphide (<16 ppm)**, **Nitrogen (<0.5%)**, **Oxygen (<0.5%)**, and **Moisture (<5mg/m<sup>3</sup>)**.
- **Nodal Ministry:** Ministry of Petroleum and Natural Gas (MoPNG).



### Challenges in Implementation

- **Governance-related issues:** Limited technical capabilities of the municipal bodies act as a hindrance.
  - **Multiple regulatory approvals** and involvement of various ministries, including MoEFCC, MoPNG, MoNRE, etc., hinder entrepreneurs.
  - **Discontinuation of Central Financial Assistance (CFA)** since April 2021 for extending support to new and renewable energy projects.
  - **Lack of interest among Oil PSUs** in setting up CBG projects despite domestic natural gas production being a mandate of the upstream oil PSUs
- **Unregulated bio-mass supply chain:** Limited timeframe of 30–40 days for gathering agricultural feedstock and the unpredictability of feedstock prices.



- **Inefficient source segregation of** Municipal Solid Waste leads to the contamination of the feedstock used in the biogas production process.
- **Distribution challenge:** The differential tax structure of Compressed Natural Gas and CBG acts as a hurdle in the synchronisation of CBG with the City Gas Distribution (CGD) network.
- **Market:** No buyers for fermented organic manure on which CBG companies base 15-20% of their revenue.
  - Lack of **bio-CNG consumers in rural areas** due to limited availability of CNG vehicles.
  - Compressed Bio-Gas (CBG) projects are **not being implemented at a desired rate** (only about 40 CBG plants have been set up.)

#### 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.

#### Way Forward

- **Coordination mechanism:** Convene meetings of the **National Bio-fuel Coordination Committee (NBCC)** regularly to sort implementation issues.
- **Financial assistance:** Need to move towards **Generation Based Incentive (GBI)** instead of Capex-based subsidy for CBG plants.
  - Setting up a **financial institution in consultation with Oil and Gas PSUs** for all bio-fuel and clean energy projects.
  - Setting up a **Bio Fuel Infrastructure Fund** and **Credit Guarantee Fund** to expedite the development of the CBG sector.
  - Provide **fiscal support** for the development of **pipeline infrastructure for connecting CBG projects with the CGD network**.
- **Governance reforms**
  - **Simplify and digitise regulatory approvals** by creating **single window clearance** for disbursement of subsidies.
  - **Capacity building of Urban Local Bodies** and involving the **PPP model** to ensure effective waste segregation in municipalities.
  - **Restricting or regulating the export of agricultural biomass** to ensure local bioenergy industries have affordable access to feedstock
- **Technology:** Use of AI-based sensors to analyse the quality of feedstock, enable vehicle tracking, etc., to establish a sound biomass supply chain.

## 5.7. TIDAL ENERGY

#### Why in the news?

Parliamentary Standing Committee on Energy submitted a report on 'Tidal Power Development in India.'

#### More on News

- There are three **main types of ocean energy** – **Wave, Tidal** and **Ocean**.
- **The committee stated that the estimated potential** of tidal and wave energy in India are 12455 MW and 41300 MW, respectively.
  - The potential areas with low/medium tidal wave strength are:

#### Other Types of Ocean Energy

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

- ✓ Gulf of Khambat, Gulf of Kutch & southern regions in Gujarat.
- ✓ Palk Bay- Mannar Channel in Tamil Nadu.
- ✓ Hoogly river, South Haldia & Sunderbans in West Bengal.
- **Potential of Ocean-Thermal energy has not been estimated** till date.

## Tidal Energy

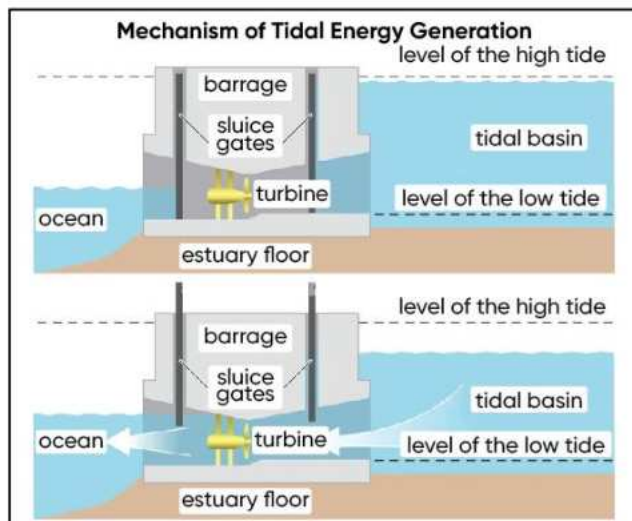


**Power produced by the natural rise and fall of tides** caused by the gravitational interaction between the Earth-Sun-Moon.

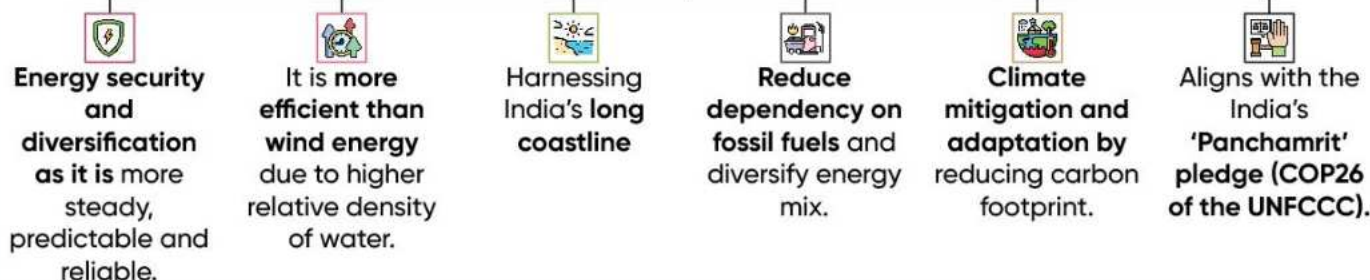


**Two forms of potential tidal energy harnessing methodologies:**

- **Tidal Barrages:** Power is generated from tidal energy through flood generation, ebb generation and a combination of flood and ebb generation.
- **Tidal Stream Turbines:** Tidal energy is harnessed from tidal streams by means of tidal stream turbines.



### Significance of Tidal Energy



### Challenges

- **Technological:** Low **turbine efficiency** and high equipment costs due to limited scalability of manufacturing.
  - **Unpredictable environmental conditions** and lack of implementation experience.
  - **Corrosion:** Saltwater is highly corrosive, which requires extra care in design, construction and installation to overcome the effects of corrosion.
  - **Bio-fouling:** Small animals and plant life can attach to the moving parts of underwater devices, creating the potential for costly breakdowns and maintenance.
- **Financial:** Capital intensive and **higher upfront installation cost** compared to conventional coal-based energy.
  - Absence of adequate **risk-sharing and mitigation mechanisms** reduces project profitability.
  - **Lack of interest among financial institutions** hinders the mobilisation of funds.
- **Environmental:** Reduced flushing and erosion can change the vegetation of the area and disrupt the ecological balance.
  - Presence of **installed devices, electromagnetic effect, acoustic effect**, etc., can affect the movement of migratory birds; disturb the sensory system of marine species, among others.

### Way Forward

- **Reassessment of various forms of ocean energy:** To explore the practically exploitable potential.

- **Site-specific tidal power development cost** also needs to be reassessed to consider economic viability and long-term benefits.
- **Set up demonstration/ pilot projects:** To showcase proof-of-concept and commercial viability of tidal power.
- **Non-solar Renewable Purchase Obligations (RPOs):** Ministry should follow-up on inclusion of ocean energy under non-solar RPOs to ensure development of commercial tidal projects.
  - In 2019, government clarified that various forms of ocean energy shall be eligible for meeting non-solar RPOs.
- **Environmental Impact Assessment:** Pragmatic assessment of environmental impact and ecological sustainability of ocean energy projects.
  - **Evaluation of global experience** (particularly, **two projects from France and South Korea**, which constitutes about 90% of installed tidal power in the world).
- **De-risking financing options:** Issuance of tax free bonds by renewable financing institutions like IREDA, for on-lending to renewable sector, improvement in soft loans scheme for refinance, etc.

## 5.8. NEWS IN SHORTS

### 5.8.1. URBAN RIVER MANAGEMENT PLANS (URMPS)

- **Committee of National Mission for Clean Ganga (NMCG)** approves project for preparation of URMPs for 60 cities.
- Project is **part of River-Cities Alliance (RCA)** under **Namami Gange**.
  - RCA, started in 2021, is a **joint initiative of Ministry of Jal Shakti (MoJS) & Ministry of Housing and Urban Affairs (MoHUA)** with a vision to **connect river cities and focus on sustainable river centric development**.
  - Project will work in two phases. **First phase** would cover **25 cities from 5 main stem Ganga basin states** i.e., Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal.
    - **Main stem** is the principal channel of a drainage system into which other smaller streams or rivers flow.
  - It will be **funded by World Bank**.
- **Need for Urban River Management**
  - **Ensure effective regulations of activities** in the floodplain.
  - **Water pollution** from sources like sewage draining and grey water, erosion due to deforestation etc.
  - **Lack of specific land-use category or legislation** defining 'River Regulation/Riparian Zone'.
  - **Religious practices** such as mass bathing, idol immersion, cremation etc.
- **Interventions by URMPs**
  - **Inculcating river-sensitive behaviour** among citizens.
  - **Develop eco-friendly riverfront** projects.
  - **Rejuvenate waterbodies** and wetlands in the city.
  - Ensure maximum good quality return flow from the city into the river.
  - Leverage on economic potential of the river.



### 5.8.2. FLOODWATCH MOBILE APPLICATION

- **Central Water Commission (CWC)** has launched the mobile application, **FloodWatch**.
- FloodWatch provides **real-time flood situations in the country and flood forecasts to the public**.
  - It will provide **State-wise/Basin-wise Flood Forecast**.
- FloodWatch app **utilises advanced technologies such as satellite data analysis, mathematical modelling,**

and real-time monitoring to deliver accurate and timely flood forecasts.

### 5.8.3. MINAMATA CONVENTION ON MERCURY

- Minamata Convention on Mercury, adopted in 2013 at Geneva, is **first global legally binding treaty to protect human health and environment** from adverse effects of mercury.
  - It is named after the **city in Japan that became the epicentre of Minamata disease**, a neurological disease caused by severe mercury poisoning, in 1950s.
  - It came **into force in 2017**. Presently, there are 144 Parties and 128 Signatories to it.
  - India ratified it in 2018** with **flexibility for continued use of mercury-based products** and processes involving mercury compounds **up to 2025**.
- Minamata Convention requires that party nations**
  - Reduce and where feasible eliminate use and release of mercury** from Artisanal and Small-Scale Gold Mining.
  - Control mercury air emissions** from coal fired power plants, coal-fired industrial boilers etc.
  - Phase-out or reduce mercury use** in products like **batteries, switches, lights, cosmetics, pesticides, dental amalgam**.
  - Addresses supply and trade of mercury**; safer storage and disposal, and strategies to address contaminated sites.
- Mercury is a **naturally occurring element** that is **found in air, water and soil**
  - It may have toxic effects on **nervous system, thyroid, kidneys, lungs, immune system, eyes, gums and skin**.
  - It is considered by WHO as **one of the top ten chemicals of major public health concern**.

### 5.8.4. PLASTIC OVERSHOOT DAY REPORT

- According to the report **India contributed 16.7 days** in 157 days of **World Plastic Overshoot Days in 2023**.
- Plastic Overshoot Day** refers to the day when the **amount of plastic waste surpasses the capability of waste management systems** to effectively manage.
  - It is based on the **country's Mismanaged Waste Index (MWI)** i.e., the ratio of the **mismanaged waste and the total waste**.
- Other key Findings on India**
  - Categorized as **'The Waste Sponges'** referring to a **low consumption yet a high level of plastic pollution**.

- ✓ Annual per capita plastic **consumption** is **5.3 kg/capita/year** (among the lowest in the world).
- ✓ Ranks **4th in the MWI**, with **98.55 % of generated waste being mismanaged**

- Mostly due to the **disposal of collected plastic in unsanitary landfills and dumpsites**.
  - 330 764 tons of microplastic** generated from tire abrasion, shedding of textile fibers, and paint, etc. **released into waterways**.
  - 1.33 % of its total plastic waste was imported**, while the country **exported 0.8 % of its total waste**.
- Initiatives by India: 1000 Cities to become 3-Star Garbage Free** by October 2024, Mission LiFe, Plastic Waste Management Rule, etc.



### 5.8.5. EARTH OVERSHOOT DAY

- August 2**, is observed as the **Earth Overshoot Day for year 2023**.
- Earth Overshoot Day** is marked as the date **when humanity's demand for ecological resources and services each year exceeds what Earth can regenerate in that year**.
  - It is measure by **Global Footprint Network** (international research organization) each year since **1971**.
  - It is calculated by **multiplying the planet's biocapacity** (the quantity of ecological resources Earth can generate each year) by **humanity's Ecological Footprint** (humanity's demand for that year) **by 365**.

### 5.8.6. BELEM DECLARATION

- Member countries of Amazon Cooperation Treaty Organization (ACTO) signed the **Belém Declaration in the Brazilian city of Belém**.
  - ACTO is an **intergovernmental socio-environmental block** formed by signing of the **Amazon Cooperation Treaty**.



- **Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela** are its members.
- **Belém Declaration** calls for ensuring **participation of Indigenous Peoples in decision-making**
- It also commits to launching the **Amazon Alliance to Combat Deforestation**.
- However, member countries could not **agree on the goal to protect the Amazon rainforest**.

#### 5.8.7. DEBT-FOR-NATURE SWAP

- **Gabon** has recently **announced a \$500 million debt-for-nature swap** deal for marine conservation.
- **About Debt-for-nature swap**
  - It is **an agreement where a creditor forgoes a portion of debtor's foreign debt or provides debt relief** in exchange for **debtor's commitment to invest in a specific environmental project**.
  - It can be **bilateral or multi-party**.
- **Significance:** Mainstreaming the **environment in government policies**, better **adaptation and mitigation** to climate change, Free up fiscal resources for government.

#### 5.8.8. EXPORT POLICY OF RED SANDERS WOOD

- **Directorate General of Foreign Trade (DGFT)**, under the **Ministry of Commerce and Industry** amended export policy of red sanders wood sourced from privately cultivated land.
  - The amendments were issued under the power conferred by the **Foreign Trade (Development & Regulation) Act, 1992** and **Foreign Trade Policy 2023**.
- **Recent amendment allows an annual export quota** for artificially propagated red sanders **and zero export quota** for wild specimens of red sanders.
- Under the foreign trade policy **import** of Red Sanders is **prohibited**, while its **export** is **restricted**.
  - **Earlier DGFT in 2019** had revised its export policy to **permit export of Red Sanders**, in **log form and roots**, if it is **exclusively obtained from private cultivated land (including pattaland)**.
- **About Red Sanders**
  - Flora endemic to a distinct tract of forests in **Eastern Ghats**.
  - **Very slow-growing tree species** that attains maturity after 25 – 40 years.
  - **Resistant to droughts**.
  - Locally known as Yerra Chandanam, Rakta Chandanam.
  - **Its therapeutic properties** are responsible for its **high demand across Asia, particularly China**, for

use in cosmetics, medicinal products, and high-end furniture/woodcraft.

- **Conservation Status**
  - **IUCN Status:** Endangered
  - **Wildlife (Protection) Act, 1972, India:** Schedule IV
  - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Status:** Appendix II

#### 5.8.9. DHOLPUR-KARALI TIGER RESERVE (DKTR)

- National Tiger Conservation Authority (NTCA) accords **final approval** to DKTR.
- Now, after being notified by the State government DKTR will become the **54<sup>th</sup> Tiger Reserve (TR) of India** and 5<sup>th</sup> of Rajasthan.
  - **Ranthambore, Sariska, Mukundra Hills and Ramgarh Vishdhari** are the remaining four TRs in Rajasthan.
  - TRs are **notified by State Governments** on the **advice of NTCA** under **Section 38V of the Wildlife (Protection) or WPA Act, 1972**.
- A TR, considered as **critical for tiger conservation**, consists of **two parts**:
  - **Core or critical tiger habitat:** National Park or Sanctuary status
  - **Buffer or peripheral area:** A lesser degree of habitat protection is required
- **Key initiatives to protect tiger**
  - **Project Tiger** launched in 1973 is a **Centrally Sponsored Scheme of MoEFCC**.
  - **Tiger Conservation Plan and Tiger Conservation Foundation** to be prepared by the state government under WPA for **tiger reserve management**.
  - **TRAFFIC** to facilitate improvements in India's **anti-poaching efforts**.
  - **Leveraging technology**
    - ✓ **M-STrIPES** (Monitoring System for Tigers Intensive-Protection & Ecological Status): An android app for monitoring.
    - ✓ **Project 'E-Bird Technology for Tiger Conservation'**: Unmanned Aerial Vehicles as a Surveillance and Monitoring tool.
    - ✓ **Conservation Genetics:** Used in low **tiger density areas to detect tiger presence**.
- In a related development MoEFCC cleared the **NTCA's in-principle approval to declare Kumbhalgarh Wildlife Sanctuary (in Rajasthan) as a tiger reserve**.



#### 5.8.10. IUCN'S INTEGRATED TIGER HABITAT CONSERVATION PROGRAMME (ITHCP) OR TIGER PROGRAM

- ITHCP has launched a Call for **Concept Notes for Phase IV of Program**.
  - Phase IV will **expand its focus to include other Pantherine species**, in particular leopards and clouded leopards.
- ITHCP, launched in 2014, is a **strategic funding mechanism** supported by German Federal Ministry for Economic Cooperation and Development (BMZ).
  - It is contributing to **Global Tiger Recovery Programme**, a global effort to double tiger numbers in wild by 2022.

#### 5.8.11. STATE OF INDIA'S BIRDS 2023' REPORT

- Report was released by **Wildlife Institute of India (WII) and Zoological Survey of India (ZSI)**.
- Report is a **periodic assessment of the distribution range, trends in abundance and conservation status** of India's key bird species.
- **Key highlights:**
  - **Bird species richness has reduced** because of **commercial monoculture plantations, urbanisation, infrastructural development, climate change, etc.**
  - **Long-distance migrants have declined** the most, by over 50%.
    - ✓ **Shorebirds that breed in the Arctic** have been **particularly affected** (declining by close to 80%).
  - Several bird species such as the **Indian Peafowl, Rock Pigeon, Asian Koel and House Crow** are showing an increasing trend.
- **Key birds and their habitat**
  - **Endangered**
    - ✓ **Indian Skimmer:** Around Chambal, Ganga,

- **Mahanadi, Yamuna, and Son**
  - ✓ **Black-bellied Tern:** Around Chambal, Mahanadi, Ganga, Son, Godavari, and Yamuna
- **Critically Endangered**
  - ✓ **Great Indian Bustard:** Rajasthan, Gujarat
  - ✓ **Bengal Florican:** Restricted to the Himalayan Terai and grasslands of northeastern India (Uttar Pradesh, Assam, Arunachal Pradesh)
  - ✓ **Baer's Pochard:** Wetlands of Assam and Manipur
- ZSI was established in **1916** by the **Ministry of Environment, Forest and Climate Change (MoEFCC)** to **explore the faunal diversity** of the country.



#### 5.8.12. REPORT ON 'INCLUSIVE CONSERVATION INITIATIVE (ICI)'

- The report was released by **Global Environment Facility (GEF) and Conservation International (CI)**.
- **Key highlights**
  - 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 managed.
  - **Less than 1% of climate change mitigation and adaptation funding** is directed to **IPLC** (indigenous people and local communities)
  - 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.
- **About ICI**
  - **Background:** Endorsed by GEF in 2022
  - **Aim:** To support IPLC to secure and enhance their stewardship over **landscapes, seascapes and territories with high biodiversity** and irreplaceable ecosystems.
  - **4 components**
    - ✓ **Local Action** to **deliver Global Environmental Benefits**
    - ✓ **Global IPLC Capacity Building**
    - ✓ **IPLC Leadership** in **International Environmental Policy**

- ✓ **Inclusive Conservation Knowledge to Action**
- **Other initiatives for inclusive conservation**
  - **Global Biodiversity Framework Fund** proposed by GEF.
  - **India:** Formation of **Community Reserves** and recognition to the **Sacred Grove under Wildlife (Protection) Act, 2002; Recognition of Forest Rights Act, 2006.**
- **CI** is a **Virginia (USA) based non-profit organization** that works to **protect nature that introduced quantitative threshold for biodiversity hotspots.**

### 5.8.13. THAROSAURUS INDICUS

- It is a **long-necked, plant-eating dicraeosaurid dinosaur** found in Jaisalmer, Rajasthan by India Scientists.
- It is **167 million years old** and belongs to a **new species, unknown to scientists** thus far.
  - Theories so far had suggested that the **oldest dicraeosaurid was from China (about 166-164 million years old).**
  - Also, fossils of dicraeosaurid dinosaurs have been found previously in **North and South Americas, Africa and China.**
- It is named after the **'Thar desert'** of Rajasthan where it was found.

### 5.8.14. METHYLOTUVIMICROBIUM BURYATENSE 5GB1C

- **Methylovumicrobium buryatense 5GB1C** is a **methanotroph (methane-eating microorganism) bacterial strain.**
  - It can potentially **remove methane from major emission sites** like landfills, paddy fields, and oil and gas wells.
  - Harnessing this bacteria on a large scale can **keep 240 million tonnes of methane from reaching the atmosphere by 2050.**

- Bacteria **produce biomass** after consuming methane, which can be used as feed in aquaculture.
- **Methane** is over **85 times more potent than carbon dioxide** on a 20-year timescale and responsible for nearly **30% of total global warming.**

### 5.8.15. TURTLES AND TORTOISES

- **Pilibhit Tiger Reserve (Uttar Pradesh)** and **Turtle Survival Alliance (NGO)** joined hands for **turtles and tortoises conservation.**
- Turtles and tortoises **both are reptiles.**
- **Turtles**
  - They live in **water some or nearly all of the time.**
  - **Omnivorous.**
  - They have **thinner, more water-dynamic shells.**
  - They have more **flipper like legs, or webbed feet.**
- **Tortoises:**
  - **Land creatures** (found in deserts to wet tropical forest)
  - **Generally vegetarians**
  - They have **rounded and domed shells**
  - They have **club-like forelegs and 'elephantine' hind legs**

### 5.8.16. FUJIWHARA EFFECT

- As per the National Weather Service, **when two hurricanes or cyclones spinning in same direction, come close to each other, they begin 'an intense dance around their common center'.**
  - This interaction between two cyclones is called the **Fujiwhara effect.**
  - In rare instances, if **two cyclones are intense, they may merge with one another** leading to the **formation of a mega cyclone** capable of wreaking havoc along coastlines.
  - It was **observed for the first time over western Pacific Ocean**, when typhoons Marie and Kathy merged in 1964.
  - It was **first Identified by Sakuhei Fujiwhara in 1921 in Japan.**



**SMART QUIZ**

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



## 6. SOCIAL ISSUES

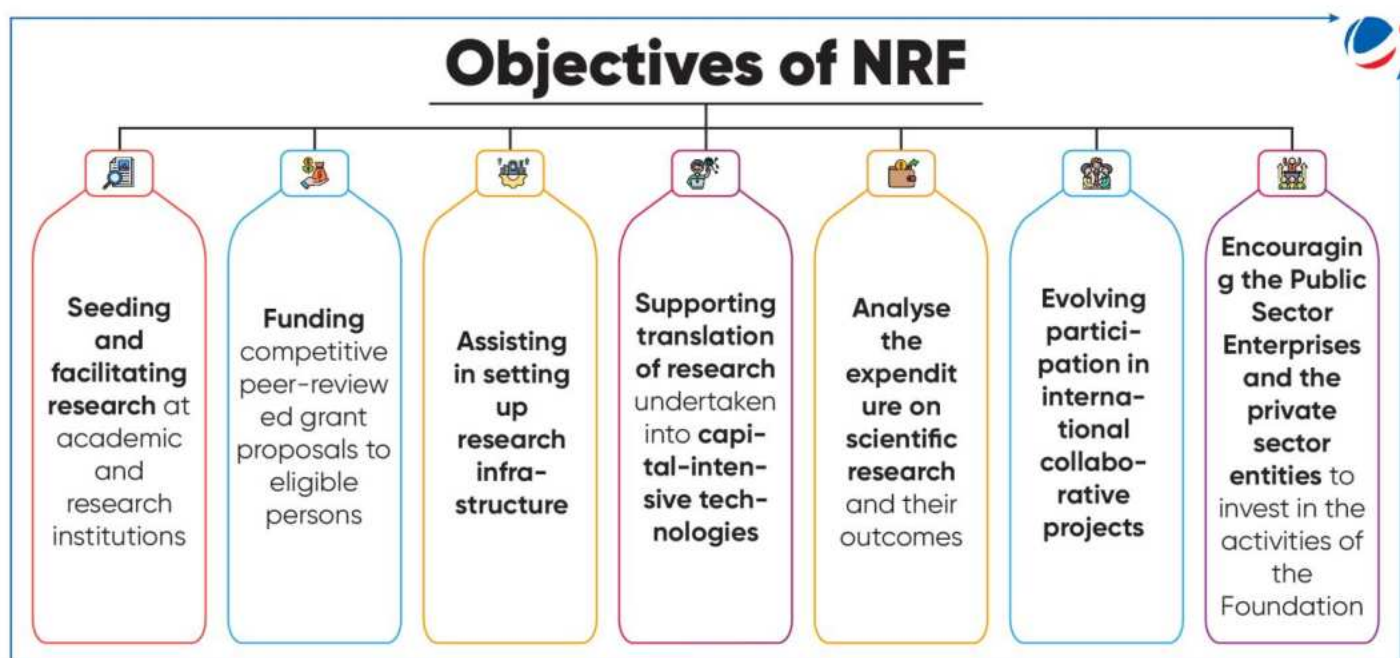
### 6.1. ANUSANDHAN NATIONAL RESEARCH FOUNDATION (NRF) ACT, 2023

#### Why in the news?

Recently, the President of India has granted assent to the **Anusandhan National Research Foundation (NRF) Bill, 2023**.

#### Key highlights of the Act

- **Establish the Anusandhan NRF to:**
  - Provide strategic direction for research, innovation and entrepreneurship in the fields of
    - ✓ natural sciences, including mathematical sciences, engineering and technology, environmental and earth sciences, health and agriculture, and
    - ✓ scientific and technological interfaces of humanities and social sciences.
  - Promote, monitor and provide support as required for such research.



- **A Governing Board provide strategic direction** to the Foundation and monitors the implementation of the objectives of the Foundation.
  - It shall consist of
    - ✓ **President:** Prime Minister (ex-officio)
    - ✓ **Vice-Presidents:** Union Minister of Science & Technology & Union Minister of Education (ex-officio)
    - ✓ **Members:** Eminent researchers and professionals across disciplines.
  - The President of the Governing Board shall **constitute an Executive Council to implement the provisions of the Act.**
    - ✓ The **Principal Scientific Advisor** to the Government of India is the **ex officio Chairperson**.
- **The Department of Science and Technology (DST) will be the administrative Department** of NRF.
- **Funds for NRF**
  - **The Foundation will be financed through:**
    - ✓ grants and loans from the central government,
    - ✓ donations to the fund,
    - ✓ income from investments of the amounts received by the Foundation, and
    - ✓ all amounts with the Fund for Science and Engineering Research set up under the 2008 Act.
  - **The Governing Board shall constitute the following Funds**



- ✓ **Anusandhan National Research Foundation Fund** for salaries, allowances, and administrative purposes
- ✓ **Innovation Fund** for funding outstanding creativity in the areas supported by the Foundation.
- ✓ **Science and Engineering Research Fund** for the continuation of projects initiated under the 2008 Act
- ✓ **One or more special-purpose funds** for any specific project or research.
- **Repeals Science and Engineering Research Board (SERB)** and subsumes it into NRF.
- **Anusandhan NRF is modelled on the US National Science Foundation (NSF).**

#### What is the significance of NRF?

- **Increase funding:** NRF will create a policy framework and regulatory processes to **foster collaborations and increase funding for scientific R&D** in the country, both from government and private sources.
  - The government has announced a **Rs 50,000 crore budget for the NRF**, to be disbursed over five years (2023-28). Union government is contributing Rs 14,000 crore during the period, and ₹36,000 Cr of the research funding is to come from the private sector.
- **Address disparity:** Research institutes like IITs and IISc receive significant funding due to their infrastructure and rankings, thus enabling better facilities.
  - The NRF was **proposed in the 2020 National Education Policy** to build research capacity across India's academic centres rather than supporting the few that are already carrying out research.
- **Building research capacity:** NRF will **harness the talent of outstanding serving and retired researchers to mentor and foster research at state and other universities and colleges** where research needs to be germinated or is at a nascent stage.
- **Support multidisciplinary projects:** NRF will provide an opportunity for academia, industry, and research institutions to **work together on the country's priority areas** like sustainable infrastructure, clean energy transition, etc.
- **Research in social sciences:** NRF **promotes research in natural sciences, humanities, social sciences and art** which is considered vital for inculcating creativity, critical thinking and communication skills.

#### Concerns associated with the Act.

- **Structural voids unfilled:** The NRF Act focuses on **project funding rather than providing comprehensive research block funding to universities** and research institutions. The ongoing challenge of sustaining teacher recruitment for research pursuits remains unresolved.
- **Lack of stakeholder:** It **lacks clarity on involving economic and social ministries and central Public Sector Enterprises (CPSEs) in decision-making** in NRF decisions whose contribution is vital for meaningful research with societal value.
- **Challenge to cooperative Federalism:** A detailed project report issued for the NRF has plans to offer large support to the state universities. However, the **Act does not incorporate the perspectives of state councils of higher education** and research in the decision-making body.

#### Way forward

- **Prioritising research:** NRF should **give priority to projects directed towards higher education institutions, government research institutions, civil society organisations**, cooperative industrial R&D and projects catering to technology development for economic, social and ecological justice.
- **Ensure transparency:** Modalities of seeding and promoting research by providing funds to less-endowed institutions and monitoring outcomes should be transparent.
- **Prioritising Inclusivity:** It is important to ensure that basic research and small-scale research proposals are not brushed aside.
- **Wider Consultation:** The evaluation process of NRF should encompass public engagement before proposal approval. This entails **creating a system to openly share proposal abstracts and engage the scientific community** and research users for feedback.
- **Address Loopholes:** Steps should be taken to **address the structural issues** like a low number of researchers and focus on block funding to increase the effectiveness of research in the country.

#### Case Study: How NSF has transformed Science and Technology in the USA

- **Weather forecasting:** NSF-supported scientists are improving weather forecasting in the US by **studying atmospheric phenomena such as Madden-Julian Oscillation (MJO).**

- **Social:** NSF invests in **education and training programs**, ensuring the generation of ideas to solve pressing global challenges in science and engineering.
- **Scientific development:** NSF invests in **supercomputers, ground-based telescopes, research stations in the Arctic and Antarctic**, and state-of-the-art tools to sustain the nation's scientific enterprise.
- **Collaboration:** NSF supports **research partnerships between colleges, universities, industry, non-profits, government and other organizations** within the US and across the globe.
  - These investments focus on sparking new ideas and creative approaches that can **accelerate discovery and transform knowledge** into tangible benefits to society.
- **Communication:** NSF played an important role in supporting research relevant to the **development of the non-fibre components and devices needed in a fibre-optic communication system**.

## 6.2. NATIONAL CURRICULUM FRAMEWORK FOR SCHOOL EDUCATION (NCF-SE)

### Why in the news?

**Ministry of Education** recently released NCF-SE, which was prepared by the National Council of Educational Research and Training (NCERT).

### About National Curriculum Framework for School Education (NCF-SE)

- NCF-SE aims to positively transform the school education system of India through positive changes in the curriculum, including **pedagogy**.
  - **Pedagogy** is the method and practice of teaching used in classrooms by the Teacher to help students learn.
- It is the **curriculum framework for the 5+3+3+4 design of schooling** as proposed by the National Education Policy 2020 (NEP 2020).
- The **NCF-SE was last revised in 2005**, and the existing sets of NCERT textbooks were prepared using it.
- **The National Steering Committee**, under the chairmanship of **Prof. K Kasturirangan**, was formed to create a **curriculum aligned with the NEP 2020**.
  - NEP 2020 recommended the formulation of a new and comprehensive **NCF-SE and State Curriculum Frameworks (SCFs)**.

## National Education Policy 2020

### Aims

- 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**.

### Features

- 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

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

### Key Highlights of NCF-SE

- **Curriculum framework:** NCF-SE designed it in a 5+3+3+4 (in terms of ages) for schooling in place of the present schooling structure of 4 stages.

- **Existing four stages based on age groups:** Foundational Stage for ages 3-8, Preparatory Stage for ages 8-11, Middle Stage for ages 11-14, and Secondary Stage for ages 14-18.
- **Board examinations:** For Grades 10 and 12, all students will be allowed to take Board examinations **on at least two occasions** during any given school year, with only the best score being retained.
- **Pattern of study:** should move to a **semester design** instead of an annual exam.
- **Multilingualism and Indian Languages:** All students are to be proficient in at least three languages, at least two of which are native to India.
- **Flexibility and Choice in the Secondary Stage:** No hard separations between academic and vocational subjects or between science, social science, art, and physical education.
  - Students can choose interesting combinations of subjects to receive their **school-leaving certificates**.
- **Vocational Education:** Proposes engagement in the three different forms of work – work with life forms (agriculture, animal husbandry), work with materials and machines, and work in human services.
- **Rooted in India:** Contributions to the knowledge in various disciplines by Indians from ancient to contemporary times have been integrated into the curricular goals of all school subjects.
- **Capacities for Scientific Inquiry:** Science Education emphasises the development of capacities for scientific inquiry along with acquiring knowledge of fundamental theories, laws, etc.
- **Interdisciplinary Areas of Study:** It has been introduced as a separate subject of study in the Secondary Stage.
- **Environmental Education:** It is given due emphasis across all stages of schooling, culminating in a separate area of study in the Secondary Stage.
- **Other features:**
  - Renewed emphasis on **Art and Physical Education & Well-being**.
  - Principles to ensure **equity and inclusion in all its aspects**.
  - Multidisciplinary education to develop an integrated and holistic perspective and learning.
  - **School culture and practises** are to be developed

#### Need of NCF-SE

- **Contemporary Framework and National Standard across India:** Enabling harmony and cogency in school education across Indian states while recognising that **school education is the domain of states**.
- **Knowledge-based approach:** The current educational system is focused on creating exam-focused individuals rather than fostering a knowledge-based approach.
- **Improving Quality of Teachers:** The curriculum for the specialisations within the Integrated Teacher Education Programme (ITEP) is based on the curriculum and pedagogy of the NCF to improve the quality of teachers.
- **Involving new techniques:** Such as reading and writing on screen-based devices, are the rising norms among people.
- **Holistic growth of Students:** The curriculum for the four stages of schooling is designed based on considerations of child development, conceptual development, and the appropriate modes of inquiry at each age range.

#### Concerns with NCF-SE

- **Over-centralised curriculum design:** As it is contrary to the **concurrent nature of education in the federal structure** and the role of states in ensuring cultural diversity and equity.
- **Logistical challenges:** Conducting the Board exam twice a year requires a feasibility and logistics check.
  - Also, students might get under stress twice due to the board exam in the same year.
- **Manpower shortage:** Low availability of language teachers, and manpower shortage exists more in government and aided schools.
- **Limitation of Schools:** Many schools might not be in a position to offer the entire range of disciplines in Grades 11 and 12.

#### Way forward

- **Higher education revamping** for syncing with the new framework enabling easier transformation from school.
- **Stopping Discriminatory and Exclusion practices in Schools** which hampers the student's ability to choose the subject as per his/her choice.
- **Improving student-teacher ratio:** According to the Ministry of Education, in Primary Schools, the pupil-teacher ratio, which was at 43 in 2010-11, has come down to 26.3 in 2020- 21.

- **Increase in Public investment:** Total expenditure on education for the year 2020-21 is 4.64%. However, it is still below the target of **6% of GDP** under NEP 2020.

## 6.3. NATIONAL SOCIAL ASSISTANCE PROGRAMME (NSAP)

### Why in the news?

The Comptroller and Auditor General of India (CAG) recently presented a report on the Performance Audit of NSAP from 2017-18 to 2020-21.

### About the National Social Assistance Programme (NSAP)

- **Type: Centrally Sponsored Scheme** (Ministry of Rural Development).
- **Constitutional Mandate:** Article 41 directs the State to **provide public assistance** to certain categories of citizens.
- **Objectives:** Ensuring **minimum national standard for social assistance in addition** to other benefits by States.
- **Beneficiaries identification:** **Socio-Economic Caste Census** or SECC 2011 (BPL list until SECC was prepared).
  - Covers beneficiaries in **both rural as well as urban areas** in all States and UTs.
- **Umbrella scheme:** The Scheme was launched in 1995 and **includes five sub-schemes** (3 related to pension and two non-pension).
- **Pension Assistance:**
  - **Indira Gandhi National Old Age Pension Scheme (IGNOAPS):** BPL persons **aged 60-79 years** are entitled to a monthly pension of **Rs. 200** and **Rs.500 thereafter (after the age of 80 years)**.
  - **Indira Gandhi National Widow Pension Scheme (IGNWPS):** BPL **widows aged 40-59 years** are entitled to a monthly pension of **Rs. 200**.
  - **Indira Gandhi National Disability Pension Scheme (IGNDPS):** BPL persons **aged 18-59 years** with **severe and multiple disabilities** are entitled to a monthly pension of **Rs. 200**.
- **Non-pensions assistance:**
  - **National Family Benefit Scheme (NFBS):** BPL household is entitled to a **one-time assistance amounting to Rs. 10,000** on the **death of primary breadwinner** aged between **18 and 64 years**.
  - **Annapurna scheme:** **10 kg of food grains per month** are provided **free of cost** to those **senior citizens** who, though eligible, have **remained uncovered under IGNOAPS**.
- **Monitoring:** **Social Audit** and annual verification by **National Level Monitors (NLMs)**.

### Key issues highlighted

- **Implementation:**
  - Schemes, particularly NFBS, are **being partially implemented** in some of the States/UTs.
  - Implementation in **demand-driven mode** (benefits were provided to only those who applied for it) even though the scheme **aims for universal coverage**.
- **Beneficiaries:**
  - **Identification** of beneficiaries is **based on the BPL list** even after the finalisation of **SECC data**.
  - Lack of IEC activities resulted in **delayed coverage/non-coverage of eligible beneficiaries**.
  - **Ineffective checks** at the ground level **for weeding out ineligible beneficiaries**.
- **Disbursement of benefits**
  - **Scheme is not fully DBT compliant**, leading to over-payments, short-payments, etc.
- **Financial mismanagement:**
  - **Funds were lying idle or diverted** for campaigning for other schemes.
  - In many states, expenditures **incurred on inadmissible items** like payment of honoraria, wages, etc.
- **Monitoring and evaluation**
  - **Infrequent meetings** of the **National Social Assistance Advisory Committee (NSAAC)**.
  - **No State Level Monitoring Committee** in 30 States/UTs.
  - **Absence of Social audit** and **Institutional grievance redressal mechanism** as per NSAP Guidelines in most states.



## Key Recommendations

- **Specific measures for cleaning/weeding out ineligible beneficiaries**, stopping pensions after the death of beneficiaries and verification/authentication of beneficiary data may be instituted.
- **NSAP funds may be utilised for timely payment of pension** and family benefits, avoiding idling, diversion and inadmissible expenditure of NSAP funds.
- **System-based checks may be instituted** to avoid overpayment, short payment, multiple payments and delays in payment of pensions.
- **Pension may be paid on a monthly basis** through a bank/post office account integrated with Aadhaar/biometric authentication.
- **Robust social audit and grievance redressal mechanisms** may be established to ensure transparency and accountability.

## 6.4. AYUSHMAN BHARAT - PRADHAN MANTRI JAN AROGYA YOJANA (AB-PMJAY)

### Why in the news?

Recently, the **Comptroller and Auditor General of India (CAG)** presented a report on Performance AB-PMJAY.

### More on news

- 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**.

AB-PMJAY: Quick Facts			
Type	Purpose	Background	2 Components
 <b>Centrally Sponsored Scheme</b> (Ministry of Health and Family Welfare)	 To achieve the vision of <b>Universal Health Coverage (UHC)</b>	 Recommended by the <b>National Health Policy 2017</b>	 ► <b>Health and Wellness Centres (HWCs)</b> ► <b>PM Jan Arogya Yojana (PM-JAY)</b>

For more details of the scheme, refer to the Appendix at the end of the document.

### Key issues highlighted in the report

- **Inadequate 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**.
- **Irregularities in identification:**
  - Of the total registered beneficiaries, **less than 30%** (2.08 crore) were identified from the **SECC-2011 database**.
    - ✓ SECC database **does not account for economic development** and employment opportunities since then.
  - Also, there were **errors in the beneficiary database**, like invalid names and dates of birth, duplicate PMJAY IDs, etc.
- **Empanelled Health Care Providers (EHCPs):**
  - Many EHCPs **did not meet the minimum criteria and quality** of support system and infrastructure.
  - **Many beneficiaries** were **charged** 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** (Andhra Pradesh, Arunachal Pradesh, Rajasthan, Karnataka, Maharashtra and Tamil Nadu).
- **Monitoring and Grievance Redressal:**
  - Many states did **not adopt the Whistle Blower Policy** to receive complaints relating to allegations of corruption, fraud, etc.
  - Absence of **Anti-Fraud Cells, Claim Review Committees**, etc. in several States/UT.
  - **Less than 10%** of grievances **were redressed** within a turnaround time of 15 days.

### Key Recommendation

- **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:**
  - Put a suitable mechanism for the **identification and validation of beneficiaries' data** to increase 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**.
  - **Invest in public hospitals** and devise mechanisms to **curb instances of out-of-pocket payments** by the beneficiaries.
- **Financial Management:**
  - Ensure **SHAs** have **designated escrow accounts** for PMJAY to receive their upfront share without 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.

## 6.5. TRIBAL HEALTH

### Why in the news?

Recently, the Standing Committee on Empowerment of Women submitted a report in Lok Sabha titled **"Health Facilities for Tribal Women"**.

### Key findings of the report

- **Child marriage, early motherhood, low body mass index and high incidence of anaemia** cause "high mortality rates among tribal women".

### Data Bank

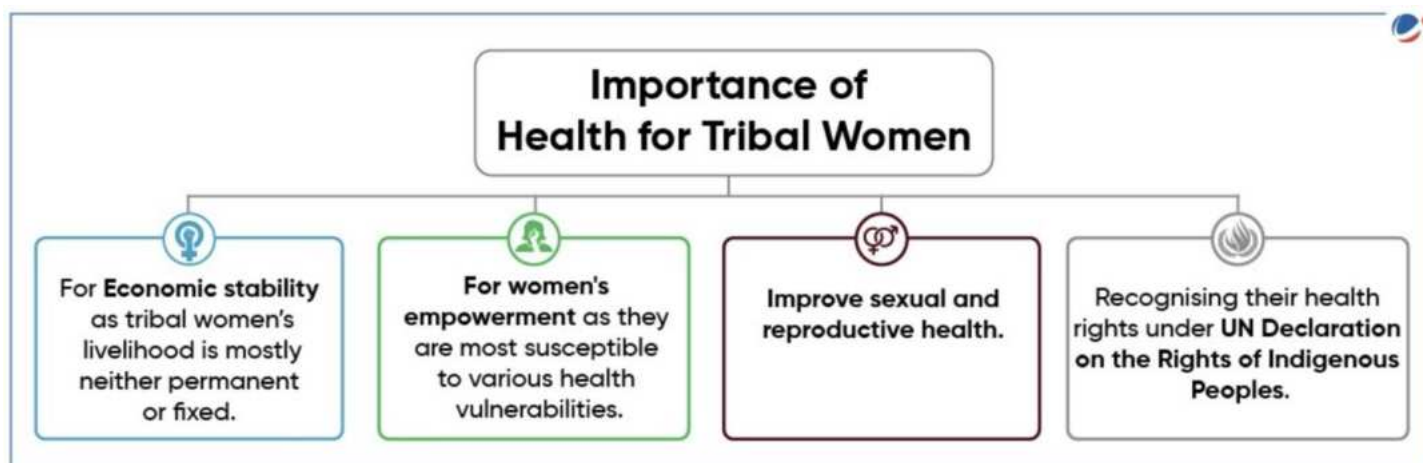
As per Health facilities for Tribal Women report

- **25.5%** of tribal women are underweight
- **64.5%** prevalence of anemia in tribal women
- **990**, the sex ratio in tribal areas was better than the national average of 943.

- **Insufficient data on tribal healthcare and welfare**, especially the data relating to tribal women and girls.
- **Teenage pregnancy** is highest among STs in all social groups.
- Tribal people, including **tribal women, carry a triple burden of diseases** that are communicable, Nutritional, and Non-communicable diseases.

### Tribals in India

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



### Challenges faced by the healthcare system for the tribal health

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

### Way forward

- **Parliamentary panel suggested:**
  - **Creation of a Separate database on all aspects of tribal healthcare:** by the Ministry of Tribal Affairs for better assessment of welfare measures.
  - **Better infrastructure, like building all-weather roads, etc.,** so that the tribal population, including pregnant women, can access healthcare facilities in time.
  - **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.
- **Integration of traditional medicine:** The Ministry of Tribal Affairs should coordinate with the Ayush Ministry to integrate traditional healers and promote modern medicine.
- **Reforming governance structure for tribal health.**

### Initiatives under the National Health Mission for beneficiaries in tribal areas

The NHM envisages the achievement of **universal access to equitable, affordable & quality healthcare** services that are accountable and responsive to people's needs.

- **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.
- The population norms for setting up Health Facilities in **vulnerable areas are relaxed**.
- 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 majority districts** whose composite health index is below the State average are identified as High Priority Districts (HPDs) and **receive more resources per capita**.

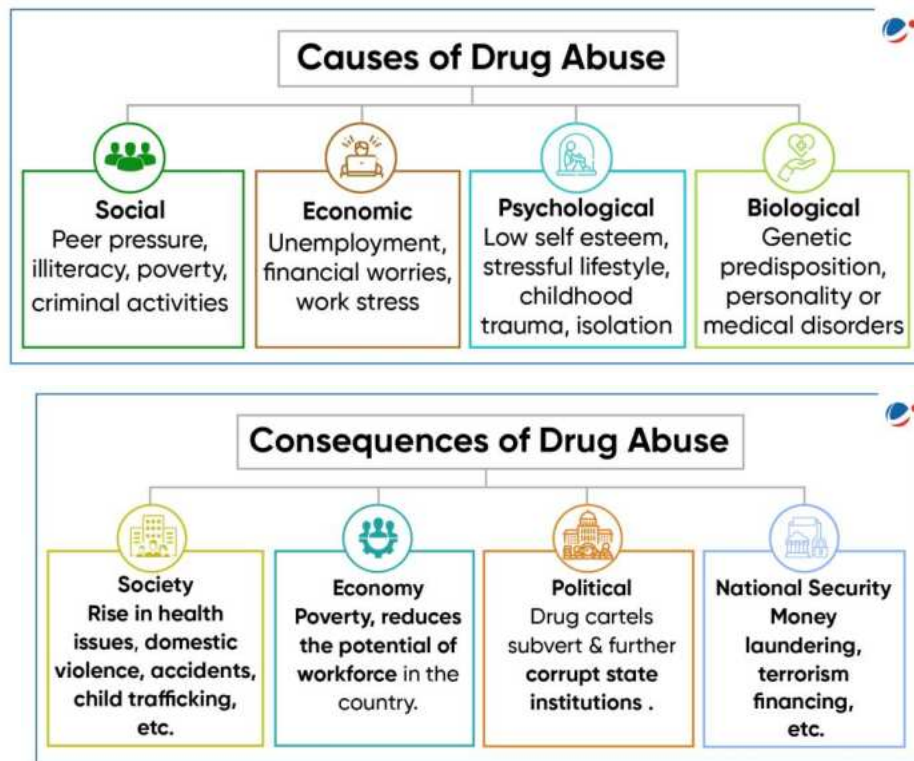
## 6.6. DRUG ABUSE IN INDIA

### Why in the news?

Parliament Standing Committee on Social Justice and Empowerment submitted the report on **'Drug Abuse among Young Persons - Problems and Solutions.'**

### About drug abuse in India

- **Alcohol, cannabis, opium, and heroin** are the **major drugs abused** in India.
- **Around 37 crore persons consume Alcohol** (the most common) and various **psychotropic substances** in India.
- **Around 13%** of the people involved in drug and substance abuse in India **are below 20 years old**.
- **Adolescence is a critical-risk period** for the initiation of substance use.
  - **Children affected** by substance abuse are considered as children in need of care and protection under the **JJ Act 2015** or Juvenile Justice (Care and Protection of Children) Act 2015.
- **Prevalence across states:** Assam, Mizoram, Chhattisgarh, Gujarat, Haryana, Bihar, Delhi, Odisha, Punjab, Rajasthan, Telangana, etc. are among the most affected states.



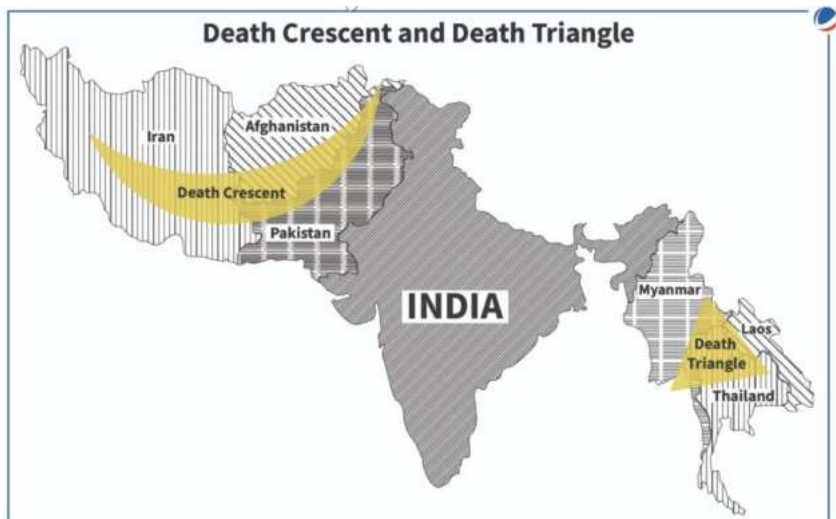
### Steps taken in India to prevent drug abuse

- **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 Mukh Bharat Abhiyaan (NMBA):** Launched in **272 most vulnerable districts** under which a massive community outreach is being done.
- **e-portal called 'SIMS' (Seizure Information Management System)** for cases involving large seizures.



## Issues in Curbing Drug Abuse in India

- **India is a hub for drug trafficking:** This is because **India is sandwiched** between the **Death Triangle and the Death Crescent**, the major opium production regions in the world.
  - **Porous borders** are also one of the issues.
- **Proximity to sea:** 70% of the illegal drugs smuggled into India are through **sea routes** in the Arabian Sea and the Bay of Bengal.
- **Technology advancements:** Drug trafficking is happening **through the dark net using cryptocurrency**.
- **Criminalising drug abuse:** It brings social stigma to drug addicts who in turn **avoid seeking any kind of medical help**.
- **Treatment gap:** Inadequate Health facilities to deal with the consequences of drug dependency.
- **Other**
  - Inadequate penetration of **District De-addiction Centers (DDAC)** under **NAPDRR**.
  - **No study** has been undertaken to **assess the impact** of drug abuse **on society**.
  - **Decreasing financial allocations** on preventive education and awareness generation programmes.
  - **Delay in providing training** of Master Trainers under **Navchetna Programme** (Life Skills and Drug Education for School Children).



## Way Forward

- **Informed policy making:** **Periodic surveys** on drug abuse situations by National Drug Dependence Treatment Centres (NDDTC) establish an **impact assessment mechanism** for **NAPDRR**.
- **Legal actions:** A conducive legal and policy environment is needed to help control drug problems.
- **Awareness programme:** should include issues surrounding **drug addiction** in the **education curriculum** and **rope in local bodies, NGOs, etc.**
- **Minimising the stigma:** **Drug abuse** should also be seen as a **substance use disorder**, a bio-psychosocial health condition and not just moral failings.
- **District action plans:** Launch it **in all districts** in collaboration with security agencies, civil society and citizens to **counter drug trafficking**.
- **Fulfil treatment gap:** **Provide** scientific evidence-based treatment for people with substance use disorders at an adequate scale.
- **Reducing drug trafficking:** Use modern technology to detect and prevent drug trafficking, Regular **meetings and reviews** of the **Apex Committee of Narcotics Coordination Centre** (under the Ministry of Home Affairs), etc.

## 6.7. WHO REPORT ON THE GLOBAL TOBACCO EPIDEMIC, 2023

### Why in the news?

WHO has released its **ninth report on the Global Tobacco Epidemic**, which **tracks the progress made by countries in tobacco control** since 2008.

### Key Findings

- **Population under MPOWER:** 71% of the world population is now protected by at least one MPOWER measure.
- **Electronic nicotine delivery systems (ENDS):** **2 billion people are still unprotected** by any regulatory restrictions on ENDS.
- **Tobacco deaths:** Of the **estimated 8.7 million tobacco-related deaths** each year, **1.3 million are of non-smokers** exposed to second-hand smoke.

- **India related:**

- India excels in **putting warning labels on tobacco products** and **tobacco dependence treatments**.
- **Bengaluru is progressing significantly** in tobacco control due to hundreds of enforcement drives, and the efforts have led to a **27% reduction in smoking in public places**.

#### About MPOWER

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



#### Tobacco in India

- It is a drought-tolerant, **hardy and short-duration crop** which can be grown on soils where other crops cannot be cultivated profitably.
- There are **10 distinct tobacco types grown in around 15 states**, which include cigarette (flue-cured Virginia (FCV), Burley, Oriental) and non-cigarette types (Bidi, Chewing, Hookah, Natu, Cheroot, Cigar and HDBRG).
- 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.
- **Tobacco consumption leads to harmful consequences** like infectious diseases, environmental impacts like deforestation due to its cultivation, economic & social costs, etc.



#### Government initiatives to reduce tobacco usage

- **Cigarette and Other Tobacco Products Act (COTPA) 2003:**
  - The act regulates the advertisement, promotion and sponsorship of tobacco products.
  - It **prohibits smoking in public places**.
  - Makes it **mandatory to use pictorial health warnings** on tobacco products, the size of the graphic depiction of health warnings was increased to 85% of the box since April 2016.
  - It also **sets rules for the sale of tobacco products to minors**.
- **National Tobacco Control Programme:** Initiated in 2007-08 to create awareness about the harmful effects of tobacco consumption and to reduce its production and supply.
- **National Health Policy 2017:** It aims to reduce tobacco usage in the country to 30% by 2025.
- **The Prohibition of Electronic Cigarettes Act, 2019:** It prohibits the Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement of E-Cigarettes in the country.
  - 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 in OTT platforms:** 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.

## 6.8. NEWS IN SHORTS

### 6.8.1. MEDICAL TERMINATION OF PREGNANCY (MTP) ACT

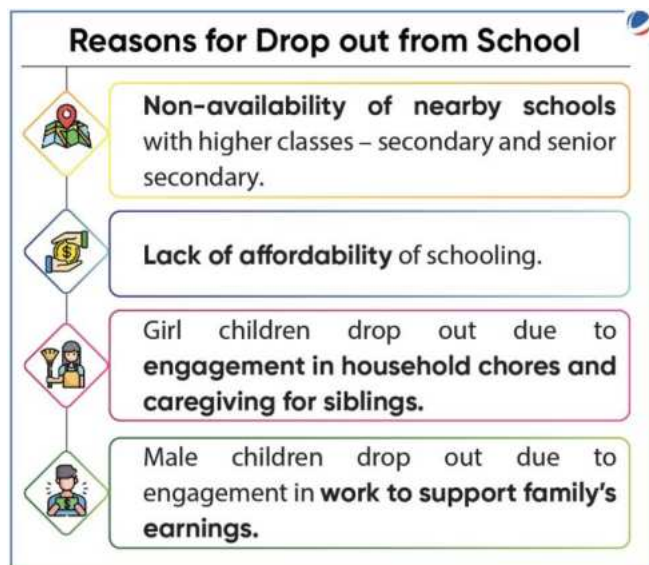
- Supreme Court (SC) allows **rape survivor to terminate pregnancy beyond 24 weeks.**
- Medical Termination of Pregnancy (MTP) (Amendment) Act, 2021**, allows **rape survivors** to terminate their pregnancies **upto 24 weeks** (refer table).
  - Any abortion which is in contravention to MTP Act is a punishable offense under **Section 312 and 313 of Indian Penal Code (IPC).**
- However, taking note that **such a pregnancy is not voluntary**, SC allowed the survivor to **terminate 27-Week Pregnancy.**
- Key highlights of MTP Act, 2021**

Duration of Pregnancy	Process of termination
Up to 20 weeks	<ul style="list-style-type: none"> <li>Available to <b>all women on the advice of one doctor</b></li> </ul>
20-24 Weeks	<ul style="list-style-type: none"> <li>Available <b>only in two conditions</b> (serious ailment to the child or risk of life or mental health to the women) <b>on the advice of two doctors.</b></li> <li>Available to <b>rape survivors, victims of incest and other vulnerable women</b> like differently abled, minors, among others               <ul style="list-style-type: none"> <li>All women <b>irrespective of marital status</b> are covered.</li> </ul> </li> </ul>
Beyond 24 weeks	<ul style="list-style-type: none"> <li>Available <b>only on the grounds of fetal abnormalities</b> based on the <b>advice of a medical board.</b></li> <li><b>All state/ UTs</b> are mandated to <b>constitute a Medical Board</b> consisting of gynecologists, pediatrician, etc.</li> </ul>

### 6.8.2. STATE OF EDUCATION IN RURAL INDIA REPORT

- Report prepared by Development Intelligence Unit (DIU), under the **initiative of Transforming Rural India Foundation (TRIF)** and Sambodhi Pvt.
- Key Highlights**
  - Higher Education for Girls:** 78% of parents in rural India aspire to educate their girls to graduation and beyond.
  - School dropout:** 35% of female children dropped out of school during primary schooling, as against 25% of their male counterparts.
  - Access to Smart Phones:** Students belonging to Class 8<sup>th</sup> and above had more access to smartphones (58.32%), compared to students of Classes I–III (42.1%).

- Recommendation:** Bringing **community ownership and community/parent** engagement to Schools may bridge the existing trust deficit in school education.
- Government Initiatives for education:** Samagra Shiksha, Mid-Day Meal, RTE Act, Kasturba Gandhi Balika Vidyalaya and PM POSHAN Scheme etc.

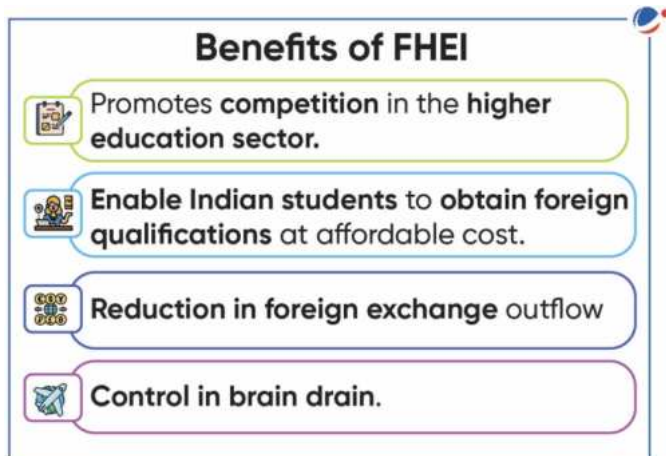


### 6.8.3. RECOGNITION AND GRANT OF EQUIVALENCE TO QUALIFICATIONS FROM FHEI

- UGC Releases Draft Regulations** for recognition and grant of equivalence to Qualifications from Foreign Educational Institutions (FHEIs), 2023
- As per UGC FHEI means a **higher education institution** that is established/incorporated or recognized in a **foreign country** and **offers academic/research** programs at the **undergraduate and/or higher levels.**
- Key provisions of regulation**
  - Recognition:** A degree from a **FHEI** will be **recognized** and granted equivalence **only if a student physically attends** an institute recognized by the home country.
  - Applicability:** For **schools** under a foreign board or any degree from an offshore campus.
    - ✓ The regulation shall not apply to **qualifications obtained through online and distance education modes.**
  - Entry-level requirements** for **admission to the program** must **also be like that** of a corresponding program in India.
  - Equivalence:** UGC will **assume the responsibility of granting equivalence** to foreign degrees.

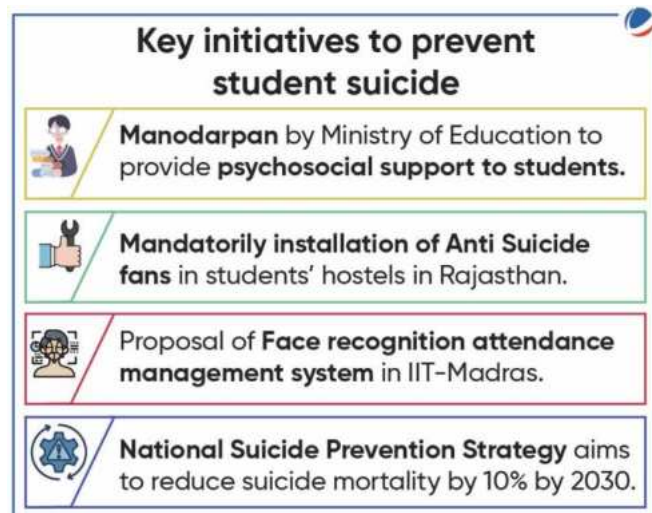
- **Initiative for FHEI in India**

- Announced in **Union Budget 2022-23, World Class Foreign Universities**, free from domestic regulations, **will be allowed in GIFT City** to offer various courses.
- **National Education Policy (NEP), 2020** provides for collaborations and **setting up of foreign universities' campuses in India**.
- UGC in 2023 released **guidelines for setting up foreign universities**.



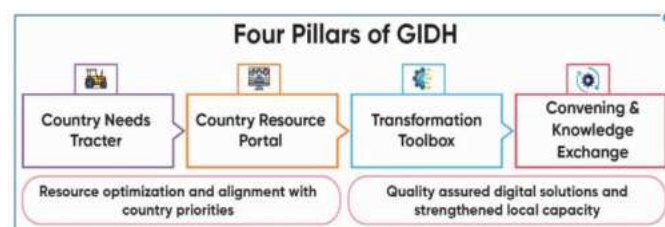
#### 6.8.4. SUICIDE CASES AMONG STUDENTS

- **Rajasthan Government to form a committee** to provide suggestions to prevent suicide cases among students
- The directives came amidst the **rising number of suicides** being committed by students preparing for competitive exams in Kota district.
- Moreover, according to NCRB **number of deaths by suicide by students** have been **steadily rising in the last five years and increased 4.5% (from 2020) to reach over 13,000 in 2021**.
- **Reasons for Students Suicide:**
  - **Academic pressure:** Higher expectations by parents and society may 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.**



#### 6.8.5. GLOBAL INITIATIVE ON DIGITAL HEALTH (GIDH)

- Recently, the World Health Organization (WHO) and the G20 India presidency announced a new **Global Initiative on Digital Health (GIDH)**
- **GIDH aims to**
  - **ALIGN** efforts to support the **Global Strategy on Digital Health 2020–2025**
    - ✓ **Global Strategy on Digital Health 2020–2025** aims to **improve health for everyone, everywhere by accelerating the development and adoption of appropriate digital health solutions** to achieve the health-related SDGs.
  - **SUPPORT quality-assured** technical assistance to develop and strengthen standards-based and interoperable systems aligned to global best practices, norms and standards.
  - **FACILITATE** the deliberate use of quality-assured digital transformation tools that enable governments to manage their digital health transformation journey.
- GIDH will address challenges such as duplication of efforts and “products-focused” digital health transformation through a focus on four foundational pillars





### 6.8.6. DIGITAL IN HEALTH – UNLOCKING VALUE FOR EVERYONE” REPORT

- Recently, the World Bank released the “**Digital in Health – Unlocking Value for Everyone**” report.
- The report presents a new way of thinking about digital health investments **expanding the focus from digitization of health data to integrating digital and health as one: Digital-in-health.**
  - This means, for example, infusing digital technologies in health financing, service delivery, diagnostics, medical education, pandemic preparedness, climate and health efforts, nutrition, and ageing.
- Digital in Health **improve equity, efficiency, and effectiveness** by reaching more people with new and better services with less financial stress.

- A digital-in-health mindset needs to be a routine aspect of annual health system planning, budgeting, and implementation.
- **Recommendations**
  - **Prioritize** digital health interventions to **solve health challenges and reach the underserved.**
  - **Connect** global and regional collaboration; digital infrastructure and health information gaps; leadership and partnership within and across sectors, etc. **to deliver better and seamless health services.**
  - **Scale** digital skills and literacy, public-private partnerships for funding, wider digital transformation, financing **to ensure equitable access to health care for everyone.**



**SMART QUIZ**

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**VISIONIAS**  
**DAKSHA MAINS**  
**MENTORING PROGRAM 2024**

## DAKSHA MAINS MENTORING PROGRAM 2024

(A Strategic Revision, Practice, and Enrichment Mentoring Program for Mains Examination 2024)



**DATE**  
**31<sup>st</sup> August**  
**14<sup>th</sup> September**

**DURATION**  
**5 Months**

### HIGHLIGHTS OF THE PROGRAMME



Highly experienced and qualified team of mentors



Emphasis on score maximization and performance improvement



Scheduled group sessions for strategy discussions, live practice, and peer interaction



Personalized one-to-one sessions with mentors



Well-structured revision and practice plan for GS Mains, Essay & Ethics



Subject-wise strategy documents based on thorough research



Access to Daksha Mains Practice Tests



Continuous performance assessment, monitoring and smart interventions



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# 7. SCIENCE AND TECHNOLOGY

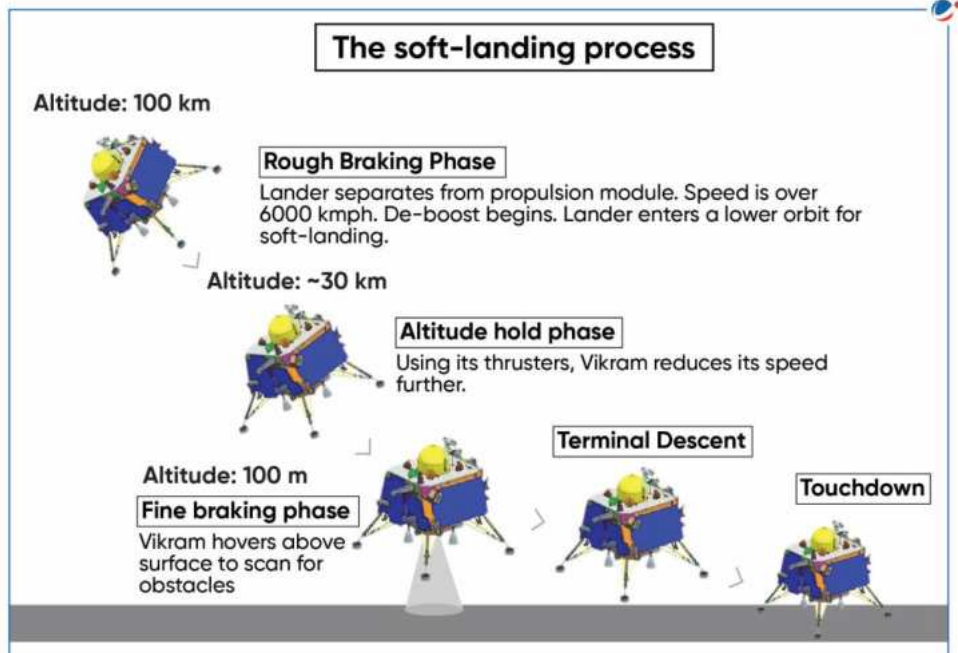
## 7.1. CHANDRAYAAN-3 SOFT LANDING

### Why in the news?

Chandrayaan-3 lander accomplished a 'soft landing' on the Moon's south pole.

### More on news

- The spot where the Chandrayaan-3 Vikram lander made a soft landing would be named **Shiv Shakti Point**.
- The site where the Chandrayaan-2 lander crash-landed on the Moon's surface in 2019 would be known as **Tiranga Point**.
- **August 23**, the day the Chandrayaan-3 lander touched down on the lunar surface, would be celebrated as '**National Space Day**'.
- Chandrayaan-3 had 3 objectives:
  - **Accomplished:**
    - ✓ **Demonstration of a 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.
  - The success of this 'kick-start' experiment raises hopes for future missions such as sample return missions or human missions.



### Key findings made by Chandrayaan-3

- **Temperature:** Chandra's Surface Thermophysical Experiment (ChaSTE) payload onboard Vikram Lander 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:** Laser-induced breakdown Spectroscopy instrument onboard 'Pragyan' rover 'unambiguously confirmed' the **presence of sulphur** on the lunar surface near the south pole.
  - **Other elements** like Aluminum (Al), Calcium (Ca), Iron (Fe), Chromium (Cr), Titanium (Ti), Manganese (Mn), Silicon (Si), and Oxygen (O) **were also detected**.

### Know the term

- **Plasma:** The **fourth state of matter**. It is a gas that is so hot that some or all its constituent atoms are split up into **electrons and ions**.
  - It can be roughly viewed as a soup of **positively charged particles** (ions) and **negatively charged particles** (electrons).

- **Thin plasma:** The 'Langmuir probe' (an instrument that measures the properties of plasmas) finds that there is thin plasma on the surface of the moon.
  - The discovery signifies that **radio waves can easily pass through space**, an important feature for **communication between lunar missions**.
- **Natural seismic activity:** Recording from the Instrument for Lunar Seismic Activity (ILSA) payload indicates a possibility of a quake on the moon, but its exact nature is currently under investigation.
- **Crater:** Chandrayaan-3 Rover identified a 4-meter diameter crater on the moon's surface.

## Conclusion

Chandrayaan-3 represents not just a mission to the Moon but a giant leap for India's space program and its contributions to our understanding of the cosmos.

**To know more about Chandrayaan-3, kindly refer to Article 7.1. Chandrayaan-3 of July 2023 edition of Monthly Current Affairs Magazine.**

## 7.1.1 INDIA'S RACE TO SPACE









### Why in the news?

With the successful launch of Mars, Moon and solar missions, the Indian Space Research Organisation (ISRO) is reinforcing India's status as a rising power in space exploration.

### Background of Space Race

- **Space race:** An outgrowth of the mid-20th-century Cold War, was a **period of competition between the Soviet Union and the United States** over who could conquer space exploration first.
- **Space research in India:** Activities were initiated in India during the **early 1960's**. Subsequently, **ISRO was established in 1969**.
  - A major landmark was the **development of the first launch vehicle SLV-3** which had its first **successful flight in 1980**.
  - During the **1990s**, the development and operationalisation of the **Polar Satellite Launch Vehicle (PSLV)** and the development of the **Geo-synchronous Satellite Launch Vehicle (GSLV)** were significant achievements.

### Timeline of Space Race between the US and USSR

-  **1957:** USSR launched **Sputnik 1**, the **first Earth-orbiting satellite** and **Sputnik 2**, carrying a dog named **Laika** into space
-  **January 1958:** **Explorer 1**, the **first US satellite** to reach orbit
-  **1958:** **NASA is created** and later **US launched SCORE**, the **world's first communications satellite**.
-  **August 1960:** Aboard USSR's **Sputnik 5**, the **first animals** (two dogs, **Belka** and **Strelka**) and a range of plants **returned alive from space**
-  **1961:** **Yuri Gagarin** (USSR) became the **first man into space**. He was followed by **Alan Shepard** (US).
-  **1968:** US spacecraft **Apollo 8** becomes the **first human-crewed spacecraft to reach the Moon**, orbit it, and successfully return to Earth
-  **July 1969:** **Apollo 11** launched and **Neil Armstrong** became the **first man to walk on the moon**
-  **In 1975:** A **joint mission between U.S. and USSR** was launched

### Recent successes

- **Mars Orbiter Mission or the Mangalyaan 2013:** India became the 1st nation to reach Martian orbit in its first attempt.
- **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.
- **Chandrayaan-3:** With the **successful landing of Chandrayaan-3**, India became the first country to land near Moon's south pole.



## Emerging trends of the Indian space sector

- **Growing commercialization:** ISRO has been actively promoting Non-Governmental Entities (NGE) to carry out independent space activities.
  - For instance, IN-SPACe has been the single window agency for promoting the NGEs and receiving proposals.
- **Increasing international collaborations:** ISRO has signed several agreements, including the Artemis Accords, a joint lunar mission with Japan's space agency, launched the SAARC satellite and collaborated on an advanced radar satellite NISAR with NASA.
- **Focus on challenging exploration missions:** India was the first Asian country to reach the Martian orbit with the Mangalyaan Mission (Mars Orbiter Mission) and now became the first country to soft land on the lunar's south pole.
- **Development of new technologies:** ISRO has been working on developing new technologies such as reusable launch vehicles and Inflatable Aerodynamic Decelerator (IAD).
- **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.

### Implication of India's enhanced role in space exploration

- **Geopolitical significance:** With Russia fading away as a space superpower, India's rising capabilities to engage, innovate, and support a commercial space will allow it to become one of the world's leading producers of space technology.
- **India as a space start-up hub:** India has become home to almost 150 registered space-tech start-ups that will enable the Indian space program to remain cost-competitive within the global space market.
- **Leading nation for satellite launches:** With a success rate of almost 95%, India has the required provisions, evolving infrastructure, and young talented minds to master this cusp of space technology and evolve into a global leader in the sector.
  - ISRO's Small Satellite Launch Vehicle (SSLV) will further aid in this.
- **Outer Space use for national security:** China's Anti-Satellite (ASAT) capability has provided the impetus for India to develop and test its own ASAT capability.

### Conclusion

Overall, the Indian space sector is poised for growth in the coming years, with a focus on cost-effectiveness, self-reliance, and international collaborations.



## Data Bank



- **381** Foreign satellites have been launched in 34 countries by India between 1999–2022.
- **\$279** Mn Revenue earned by India from the launch of foreign satellites by ISRO.
- **10%** share in the global space economy could be controlled by India in 2030 from the present 2–3%.
- **US\$13bn** will be the size of the Space economy in India by 2025.
- **36%** of the total revenue in the space economy (by 2025) is estimated to be from the satellite services and application segment.

### 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.





## 7.2. SUPERCONDUCTIVITY

### Why in the news?

Recently, the claims of material **LK-99 depicting the room temperature superconductivity** proved inconsistent.

### More about the news

- Earlier, a group of **South Korean scientists published two research papers** claiming that they had discovered the room-temperature superconductivity phenomena in a material called LK-99.

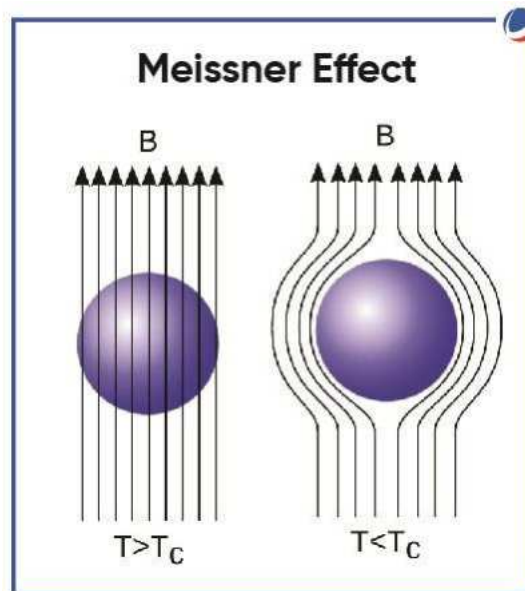
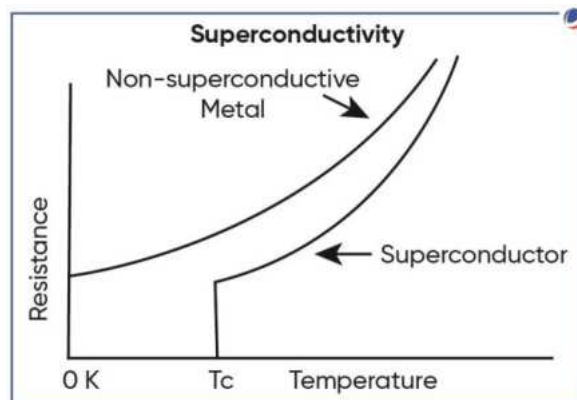
- **LK-99 is a dark grey solid** created due to heating mixtures of powdered **compounds of lead, oxygen, sulphur and phosphorus** at very high temperatures.

### Superconductivity

- Superconductivity is a phenomenon in which **certain materials exhibit zero electrical resistance** and the **expulsion of magnetic fields** when **cooled below a critical temperature ( $T_c$ )**.
  - Critical temperature is the temperature at which **the materials suddenly change from a normal conducting state to a superconducting state**.
  - **Meissner Effect** is the **expulsion of a magnetic field** from a superconductor during its transition to the superconducting state when it is cooled below the  $T_c$ .
- Currently, **superconductivity** can be achieved only at very low temperatures, **more than 250 degrees Celsius below zero**.
  - **Materials like Mercury, Lead, Aluminum, Tin, Niobium, etc.,** become superconducting at critical temperatures ( $T_c$ ).
  - In some cases, **materials can exhibit superconductivity at slightly higher temperatures** as well, but under increased pressure conditions.
  - Scientists are looking for a material that **can display superconductivity at room temperature**.
- **How is the zero resistance achieved?**
  - Under **normal conditions**, **electrons encounter resistance** when moving through a crystalline solid due to interactions with vibrating atoms in the crystal lattice.
  - However, in certain materials, **when the temperature is lowered below a critical level**, **electrons pair up into loosely bound pairs known as Cooper pairs**.
  - The **individual electrons within a Cooper pair cannot be easily scattered** by the lattice vibrations, and hence, **passing electrons start to glide through the material unimpeded**, leading to superconductivity and zero resistance.

### Do you know?

- > The Phenomena of Superconductivity was discovered by **Heike Kamerlingh Onnes** in 1911.
- > He discovered a sudden drop in electrical resistance **while investigating the properties of mercury** cooled to temperatures close to absolute zero ( $-273.15^\circ\text{C}$  or  $0\text{ K}$ ).



### Superconductivity at Room Temperature

- A **room-temperature superconductor** is a material capable of exhibiting superconductivity at operating temperatures, i.e. above  $0^\circ\text{C}$  ( $273\text{ K}$ ;  $32^\circ\text{F}$ ) - temperatures.
- Obtaining room temperature superconductivity is **affected by many aspects, like**
  - **Difficult to achieve conditions like extreme pressure conditions**, and materials may not be able to withstand these extreme conditions.
  - **Non-formation of Cooper Pairs** at higher temperatures.
  - At room temperature, **thermal energy is relatively high**, making it difficult for electrons to form Cooper pairs and overcome this energy barrier.

### Achieving a room-temperature superconductivity will lead to

- **High efficiency and low-cost energy transmission** through grids, thereby bringing down the cost of energy. Ex: Superconducting Generators, Superconducting magnetic energy storage, Transmission lines, Transformers etc
- **Better Magnetic Resonance Imaging (MRI) technology**, with enhanced image resolution and faster scanning, leading to more accurate diagnoses and improved patient outcomes.

- **Reduced cost for Magnetic levitation (Maglev) train technology** as the required conditions are easily achievable.
- **Efficient and less energy-consuming supercomputers** can be manufactured, which perform complex simulations, data analysis, artificial intelligence applications, etc.
- **Enable efficient and rapid energy storage and retrieval**, addressing the intermittency issues of renewable energy sources.
- **Science and research:** Utilised in accelerators and Nuclear Magnetic Resonance (NMR) for various experiments like the Large Hadron Collider.

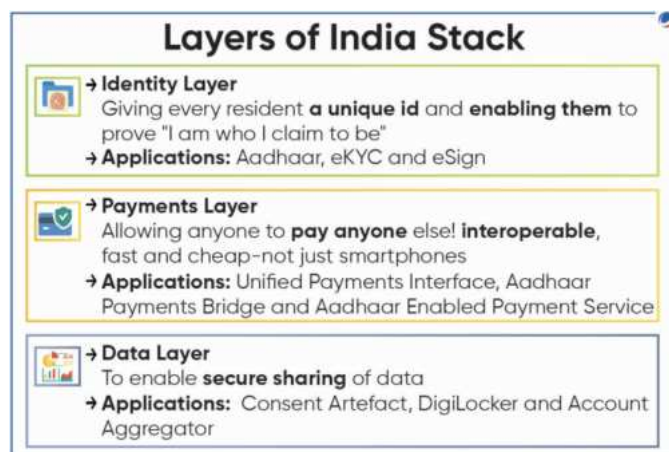
#### Noble Prizes received for research in superconductivity

- **Heike Kamerlingh Onnes (1913):** For his discovery of superconductivity in 1911.
- **John Bardeen, Leon Cooper, and Robert Schrieffer (1972):** For their development of the Braden Cooper and Schrieffer's theory (BCS theory), which explained the mechanism of superconductivity in conventional superconductors.
- **Brian D. Josephson, Leo Esaki and Ivar Giaever (1973):** For their prediction of the Josephson effect, observed in superconducting materials.
- **Pyotr Leonidovich Kapitsa (1978):** For his basic inventions and discoveries in the area of low-temperature physics.
- **K. Alexander Müller and J. Georg Bednorz (1987):** for their discovery of high-temperature superconductivity in copper oxide (cuprate) materials.

## 7.3. NEWS IN SHORTS

### 7.3.1. INDIA STACK

- India signed Memorandum of Understanding (MoU) with **Trinidad and Tobago** on Sharing India Stack.
- MoU aims to **facilitate adoption of customized India Stack solutions**- identity, data, and payment services for mutual digital advancement.
  - India has also signed **MoUs with several other nations** including Papua New Guinea, Armenia, Sierra Leone, Suriname etc. **to share India Stack.**
- India Stack is a **set of open APIs** (Application Program Interface) and **digital public goods** that aim to **unlock economic primitives of identity, data, and payments** at a population scale.
  - **API is a set of defined rules** that **enable different applications to communicate with each other**
- **Components of India Stack** are owned and maintained by different agencies.
  - **For ex:** Aadhaar products are owned by UIDAI; Digilocker by MeitY; UPI by National Payments Corporation of India; Account Aggregator framework by RBI etc.
- **Significance of India Stack**
  - It **allows governments, businesses, startups etc.** to move towards **presence-less, paperless, and cashless service delivery.**
  - Allows significant **synergies across digital economy** and **expands access to digital services** to all citizens.
  - Boost **innovation and entrepreneurship**, particularly in emerging techs like AI and Machine Learning by providing **equitable access to data.**



### 7.3.2. RELEASE OF RADIOACTIVE WATER

- The **1.34 million tonnes of treated radioactive water** from 2011 **earthquake and tsunami-hit Fukushima nuclear plant** is to be **released into the Pacific Ocean** after 12 years.
  - As per International Atomic Energy Agency (IAEA), discharges of the treated water would have a negligible radiological impact to people and the environment.
  - **Tokyo Electric Power Company (TEPCO)**, nuclear plant's operator, has been **designated to execute the plan.**
  - Fukushima plant is **located on the country's east coast**, about 220 kilometres north-east of capital Tokyo.
- Japan claims to have used **"Advanced Liquid Processing System"** to treat the water stored.
  - ALPS is a **pumping and filtration system** removes **most of the radioactive materials** from water

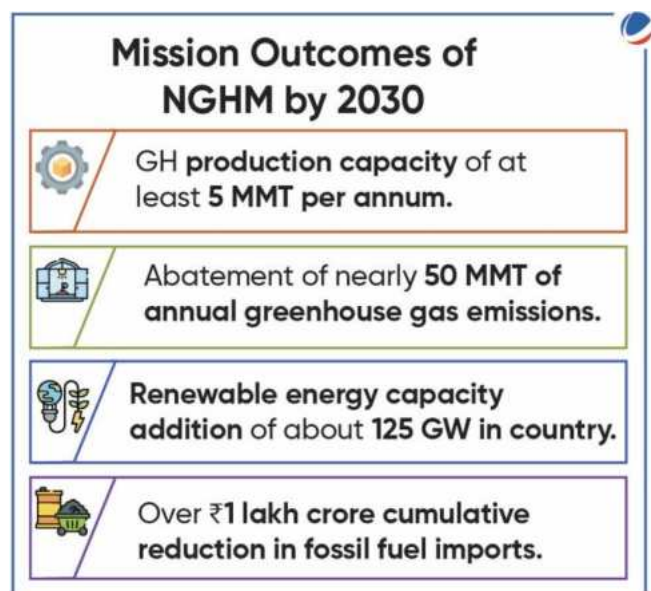


except tritium - radioactive isotope of hydrogen - which is **difficult to separate from water**.

- **Concerns associated with release of water**
  - Tritiated water can **damage DNA if ingested**.
  - Exposure to radioactive materials can health problems like **leukemia, anemia, hemorrhage 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.

### 7.3.3. GREEN HYDROGEN STANDARD

- **Ministry of New and Renewable Energy** notifies Indian Green Hydrogen Standard under National Green Hydrogen Mission (NGHM).
- Notification outlines **emission thresholds that must be met** in order to classify produced hydrogen as **'Green'**.
  - **Hydrogen** can be produced by **splitting water into hydrogen and oxygen** using fossil fuels or renewable energy.
- **Key highlights**
  - **Definition:** Green Hydrogen (GH) is **produced using renewable energy** including, production through **electrolysis or biomass conversion**.
  - **Emission thresholds:** **Well-to-gate emission** (i.e., water treatment, electrolysis, gas purification, etc.) **of not more than 2 kg CO<sub>2</sub> equivalent/kg H<sub>2</sub>**.
  - **Nodal Authority:** **Bureau of Energy Efficiency** shall accredit agencies for the monitoring, verification, and certification of GH production projects.
- **About NGHM**
  - **Aim:** To make India a **Global Hub for producing, utilizing, and exporting GH**.
  - **Programs**
    - ✓ **Strategic Interventions for Green Hydrogen Transition Programme (SIGHT)** for financial incentive.
    - ✓ **Strategic Hydrogen Innovation Partnership (SHIP)** PPP framework for R&D.



### 7.3.4. GRAPHENE-AURORA PROGRAM

- **The Ministry of Electronics & Information Technology (MeitY)** launched the 'Graphene-Aurora program'.
- **Implementation:** Digital University Kerala with joint funding from MeitY and Kerala government and industry partner.
- **Aim:** To bridge the gap between graphene research and commercialization
- **About Graphene**
  - 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:** can be used in touch screens, light panels, solar cells, faster DNA sequencing, drug delivery, etc.

### 7.3.5. DIGITAL INDIA RISC-V MICROPROCESSOR (DIR-V) PROGRAM

- Union government launched the **DIR-V program** with the **objective to enable** the creation of **next-generation microprocessors** in India.
- It will help ensure **partnership between startups, academia, and multinationals** 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.
  - **Applications:** wearable appliances, smartphones, the Internet of Things (IoT), High-performance computing, data centers, etc.



### 7.3.6. FINGER MINUTIAE RECORD – FINGER IMAGE RECORD (FMR-FIR) MODALITY

- FMR-FIR is an **Artificial Intelligence/Machine Learning based tool** that uses a **combination of both finger minutiae and finger image** to check liveness of a fingerprint and to **detect use of a cloned fingerprint**.
- **UIDAI has rolled out FMR-FIR to prevent Aadhaar-enabled Payment System (AePS) frauds.**
  - **AePS frauds** have been undertaken **using spoofed fingerprints** during Aadhaar authentication.

### 7.3.7. LOW-PUNGENT MUSTARD

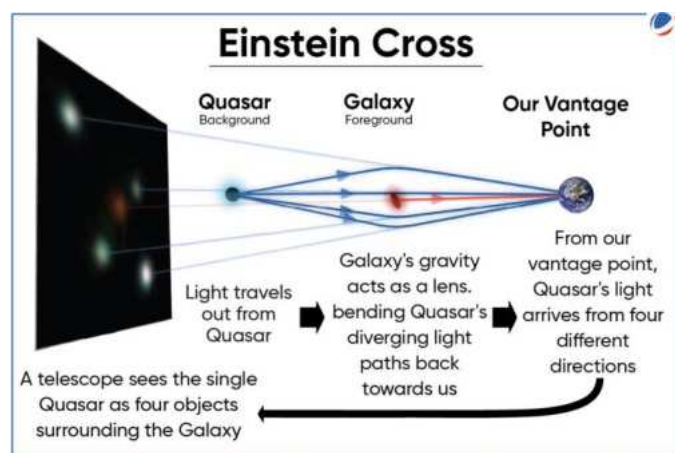
- **Indian researchers developed** the first ever low-pungent mustard using Genome Editing (GE)
- New mustard variety is less pungent as it has **lesser quantity of glucosinolate** at par with the Canola quality limit (30 parts per million or PPM dry weight).
  - **Glucosinolates** is a group of **sulphur and nitrogen-containing** compounds contributing giving characteristic **pungency to mustard products**.
  - It **protects plants** from invading pathogens, animals, etc.
  - However, **high glucosinolates** make it unpalatable, and **causes goiter** and **internal organ abnormalities** in livestock.
  - **Indian mustard (*Brassica juncea*)** contains **120-130 ppm of glucosinolates**.
- It is produced through **gene editing of 'Varuna'**, a high-yielding Indian mustard variety, **using CRISPR/Cas9 gene editing technology**.
- Unlike GMOs, **Gene Editing** incorporates modification of **existing genetic material** to improve the quality.
  - ✓ **Genetically modified organisms (GMO)** have **transgene** (foreign genes) for improvement in quality.
  - ✓ **Dhara Mustard Hybrid-11 (DMH-11)**, is a GM variant of mustard developed in India.
- GE crops **require** clearance only from the **Institutional Bio-Safety Committee (IBSC)** of concerned institution.
  - IBSC has a **nominee from Department of Biotechnology**.
  - GM crops require clearance from the **Genetic Engineering Appraisal Committee of the Ministry of Environment, Forest, and Climate Change**.

### 7.3.8. EINSTEIN CROSS

- **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 or a quasar), acting as cosmic telescopes and **making distant galaxies appear brighter**.

- In case of **Einstein cross**, curvature of **space-time around a foreground object splits light behind it into four**, 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** describes how **massive objects warp the fabric of 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 warps 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**.



### 7.3.9. SPACE DEBRIS

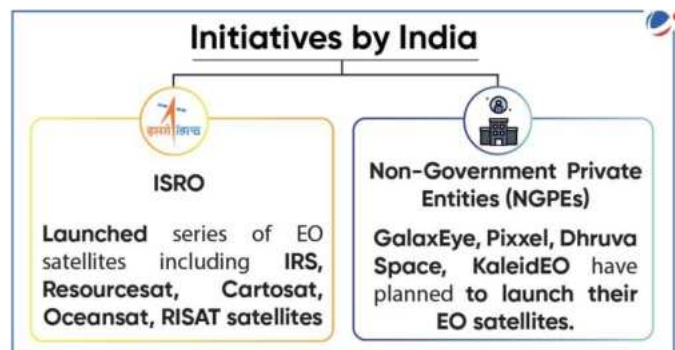
- Indian Space Research Organisation (ISRO) rocket debris found on **Australian shore**.
- Space debris encompasses both **natural (meteoroid) and artificial (man-made) particles**. Meteoroids are in orbit about the sun, while **most artificial debris is in orbit about the Earth**.
  - **Russia, followed by USA, China and France** are top contributor to space debris.
  - In 2021, a large chunk of a 25-tonne Chinese rocket fell into Indian Ocean.
- **Impact of Space debris**
  - **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**
  - **Convention on International Liability for Damage Caused by Space Objects 1972** (Liability Convention) deals with **damage caused by space objects to other space assets, and by falling objects on 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.



### 7.3.10. EARTH OBSERVATION (EO)

- **IN-SPACe** released **Consultation Paper** on Earth Observation (EO) Data from Indian Satellites Missions
- EO refers to **use of remote sensing technologies** (including satellites, aircraft, drones, and ground-based sensors) **to monitor land, marine and atmosphere.**
- **Application of EO Data:**
  - Provides **comprehensive understanding of Earth's climate**, ocean circulation, carbon, energy and water cycle, albedo, cryosphere etc.
  - **National security** as EO satellites are crucial for **Imagery Intelligence, photo reconnaissance, Synthetic Aperture Radar (SAR)**, and electro optical functions.
  - Provide **valuable insight and inform policy decisions** spanning many government departments such as: **agriculture, water resources, urban planning, rural development, mineral prospecting, forestry, disaster management** etc.
- **IN-SPACe** (Indian national Space Promotion and Authorisation Centre) is an **independent nodal agency under Department of Space to stimulate private investment and innovation** in space industry.



### 7.3.11. AGNIBAAN SUBORBITAL TECHNOLOGICAL DEMONSTRATOR (SORTED)

- **Agnikul Cosmos**, an Indian space-tech startup, to **carry out a sub-orbital test flight** of its launch vehicle called **Agnibaan SOrTeD.**
- **About Agnibaan SOrTeD**
  - It is a **single-stage launch vehicle powered by Agnilet engine**, which is an entirely 3D-printed, single-piece, semi-cryogenic engine.
  - Agnibaan **can carry payloads of up to 100 kg to a low Earth orbit (LEO)** of up to 700 km.
  - **Unlike traditional sounding rockets** that launch from guide rails, **Agnibaan SOrTeD will lift off vertically** and follow a **predetermined trajectory.**

### 7.3.12. DEMONSTRATION ROCKET FOR AGILE CISLUNAR OPERATIONS (DRACO) PROGRAM

- **NASA and Defense Advanced Research Projects Agency (DARPA)** are working on DRACO program.
- DRACO program aims to **create a Nuclear Powered Space propulsion system** that could **cut down the travel time to Mars by half.**
  - DRACO will **use a less-enriched form of uranium** for its propulsion systems.
  - The launch of the test flight is currently scheduled for 2027.

### 7.3.13. SOLAR TERRESTRIAL RELATIONS OBSERVATORY (STEREO-A) SPACECRAFT

- **NASA's STEREO-A spacecraft passes between Sun and Earth**, marking the **first Earth flyby of nearly 17-year-old mission.**
  - STEREO-A's flyby will **allow scientists to understand how coronal mass ejection's (CME) magnetic field evolves** on its way to Earth.
- Launched in 2006, STEREO **traces the flow of energy and matter from Sun to Earth.**

- It provides **unique and revolutionary views of the sun-Earth system**. Mission **observed the sun in 3-D** for the first time in 2007.
- Composed of two nearly identical observatories i.e. **one ahead (STEREO-A)** of Earth in its orbit, the **other trailing behind (STEREO-B)**.

#### 7.3.14. GALAXY ESO 300-16

- **Hubble Space Telescope (HST)** captured an image of the **irregular galaxy ESO 300-16**.
  - An irregular galaxy **lacks the distinct spiral arms or elliptical shape of some galaxies**. It lies 28.7 million light-years from Earth in **constellation Eridanus**.
  - It resembles the **shape of a cloud**, comprised of many tiny stars all clumped together.
- HST, launched in 1990, is collaboration between **NASA and European Space Agency**.
  - 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.

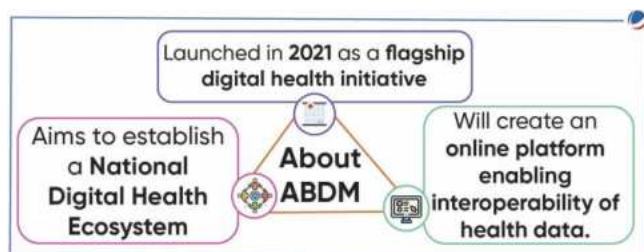
#### 7.3.15. NEERAKSHI

- **India launched its first of its kind Autonomous Underwater Vehicle (AUV) named 'Neerakshi'**.
  - It can be used for **mine detection, mine disposal, underwater surveys** etc.
  - It has an **endurance of four 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 Private Ltd (AEPL)**.

#### 7.3.16. AYUSHMAN BHARAT MICROSITE PROJECT

- **Mizoram became the first state to operationalize Ayushman Bharat's Microsite project**
- **Microsite is a cluster of all small and medium-scale clinics, nursing homes, hospitals (preferably <10 beds), labs, pharmacies, and other healthcare facilities** that are ABDM-enabled and offer digital health services to patients.
  - **National Health Authority (NHA)** in 2023 launched **100 Microsites Project** under the **Ayushman Bharat Digital Mission (ABDM)**.
- **Types of facilities under a Microsite:**
  - **Private facilities** such as standalone clinics, polyclinics, etc.
  - 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:**
  - Digitisation is **seen as an additional cost**,
  - Fear of **increased regulatory scrutiny**,
  - issue with data security,



#### 7.3.17. PROMOTION OF RESEARCH AND INNOVATION IN PHARMA MEDTECH SECTOR (PRIP)

- **Ministry of Chemicals and Fertilizers** notifies Scheme for Promotion of Research and Innovation in Pharma MedTech Sector (PRIP)
- **Key highlights**
  - **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)
  - **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 highend research in pharmaceuticals.
    - ✓ **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.
  - **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.



- **Implementation:** Through a Project Management Agency,



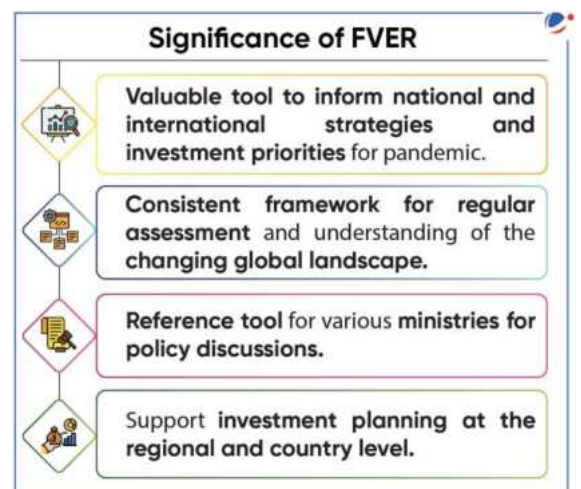
### 7.3.18. GOOD MANUFACTURING PRACTICES (GMP)

- Ministry Of Health And Family Welfare has set deadline for mandatory implementation of GMP.
  - GMP ensures that **products are consistently produced and controlled** according to **set quality standards**.
  - World Health Organization (WHO) has established **detailed guidelines for GMP**.
- **Now**, drugmakers with an **annual turnover of over Rs 250 crore** will have to mandatorily adopt GMP **within six months** while those with **turnover of less than Rs 250 crore** will be given a **year**.
- **GMP in India**
  - In India, **GMP system was first incorporated in 1988 in Schedule M** of Drugs and Cosmetics Rules, 1945, and GMP were **revised in 2018**, bringing them **on par with WHO standards**.
    - ✓ **Schedule M** prescribes **requirements of facilities and their maintenance, personnel, manufacture, control and safety testing, storage traceability, etc.**
  - Presently, **only 2,000 of 10,500 manufacturing units** in country were found to be compliant with **WHO-GMP standards**.



### 7.3.19. FEVR AND RISKS FROM PANDEMICS

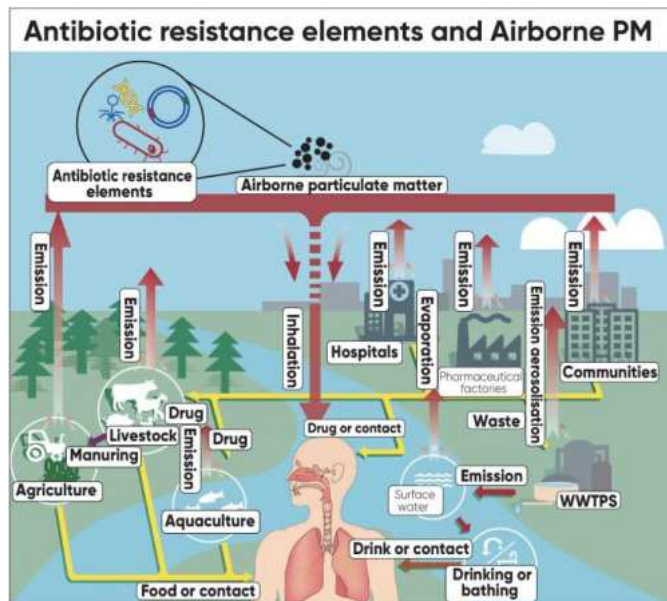
- **On a request by G20 task force**, Framework for Health, Social, and Economic Vulnerabilities (FEVR) has been prepared by WHO, World Bank, IMF, and European Investment Bank.
- It will help better understanding **health and economic vulnerabilities**, and their resulting risks, **caused by pandemics**.
  - COVID-19 pandemic **significantly altered growth trajectories**, and financial and **economic deprivation rates**, on top of the **human toll and social impact** it caused.
- **FEVR comprises 2 components** to help **identify systemic weaknesses and guide policy decisions** and investments:
  - **Key health, social and economic indicators** that are relevant to pandemics and are policy responsive, and therefore should be monitored to mitigate risks and shocks.
  - **Differential impact on health, social, and economic outcomes** of different policy and investment possibilities to inform decision making.





### 7.3.20. AMR AND AIR POLLUTION

- Increase in **Antibiotic Resistance linked to rising air pollution**, says Lancet study.
- This is **first in-depth global analysis** which highlights that humans are exposed to **antibiotic-resistant elements** while inhaling **PM2.5** (refer image).
- Antibiotic resistance, also known as Antimicrobial resistance (AMR) occurs **when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines** making infections harder to treat and increasing risk of disease spread, severe illness and death.
- **Key findings**
  - With **every 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.
  - In 2018, **PM 2.5 caused loss of 18.2 million years of life**, resulting in economic burden.
  - **China and India have greatest impact on premature death toll** due to changes in PM 2.5.
- **Steps taken to curb AMR:** National Action Plan on AMR 2017, Red line campaign on Antibiotics 2016, AMR Surveillance network 2013 etc.



### 7.3.21. G20 WELCOMES GLOBAL INITIATIVES TO CURTAIL AMR

- **Global Antibiotic Research and Development Partnership (GARDP):** It is a non-profit organization created by WHO and others to tackle antibiotic resistance.
  - It **accelerates the development and access of treatments** for drug-resistant infection.
- **SECURE:** the first dedicated mechanism to **expand**

**access** in LMICs to **essential antibiotics** which goes beyond **access** to single products.

- It is being developed by the **WHO and GARDP**.
- **Combating Antibiotic Resistant Bacteria (Carb-X):** A global non-profit **partnership** to **accelerate antibacterial innovation**.

### 7.3.22. G 20 PANDEMIC FUND

- Department of Animal Husbandry & Dairying will receive a **25 million USD grant under Pandemic Fund** for strengthening **Animal Health System of India**.
  - Fund will support '**Animal Health Security Strengthening in India for Pandemic Preparedness and Response**' initiative.
- **G20 Pandemic Fund**
  - **\$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.

### 7.3.23. CHROMODOMAIN HELICASE DNA BINDING PROTEIN 1 LIKE (CHD1L)

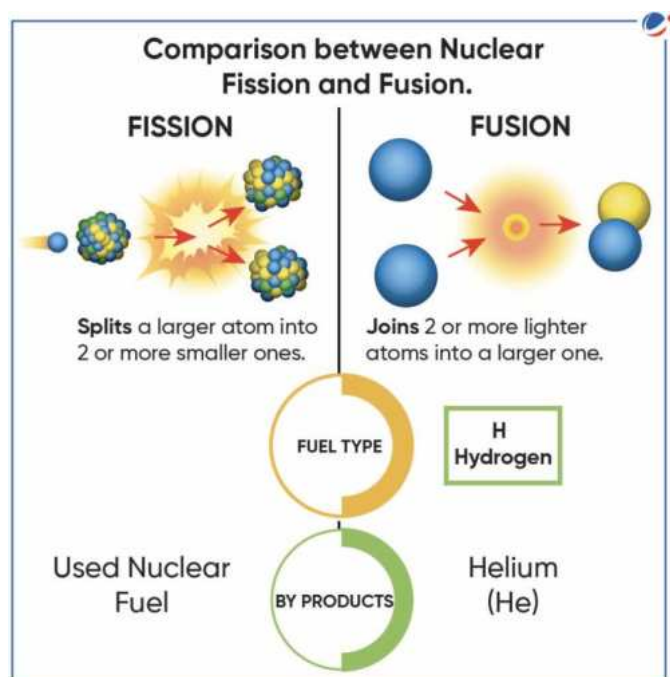
- A study has revealed that **CHD1L gene variant is likely to control Human Immunodeficiency Virus (HIV)**.
- A **variant of CHD1L gene** is specifically present in **African population**.
  - **CHD1L gene variant** has been linked to **reduced viral load (amount of HIV in blood)** of HIV-1 (most common).
  - The gene variant **CHD1L** is found on **chromosome 1**.
  - People carrying this variant in their body **had lower risk of spreading the virus** and also **had slowed progress of their own illness**.

### 7.3.24. RESPIRATORY SYNCYTIAL VIRUS (RSV)

- US Food and Drug Administration approved the **first vaccine "Abrysvo (RSV Vaccine)"** that protects newborns.
  - Vaccine is **given to pregnant mothers during latter stages** of their pregnancies.
- RSV is a **highly contagious virus** that **causes respiratory infections** in individuals of all age groups **especially infants and elderly**.
  - It is the **most frequent cause of Lower Respiratory Tract Diseases** in infants worldwide.
  - RSV vaccine is also available for people at **60 and older**.

### 7.3.25. NET ENERGY GAIN (NEG)

- US scientists achieve **Net Energy Gain (NEG)** for second time in **nuclear fusion reaction**.
- Nuclear fusion is the process by which **two light atomic nuclei combine to form a single heavier one** while **releasing massive amounts 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**, critical for commercial fusion power, implies that researchers could **generate more energy than the nuclear fusion process consumed**.
  - India is part of the International Thermonuclear Experimental Reactor (ITER) project** to demonstrate NEG from fusion reactors.
  - India has also constructed its indigenous **tokamak ADITYA** and semi-indigenous **Steady State Superconducting Tokamak (SST-1)**.
- Significance of Nuclear Fusion:**
  - Clean and safe power** as it releases **no greenhouse gases**
  - 1 kg fusion fuel provides **as much energy as 10 million kilograms of fossil fuel**.
  - Hydrogen, raw material for fusion, is available in abundance** while fission uses uranium, which is not an infinite resource.



### 7.3.26. 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 enough energy is supplied to the system, **electrons can form composite particles known as plasmons**.
  - But 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.

### 7.3.27. SHANTI SWAROOP BHATNAGAR (SSB) AWARDS



- SSB award was not announced for 2021 and nominations for 2023 year were also stopped.
- SSB Awards are **awarded annually for outstanding research**, applied or fundamental, in **seven disciplines** i.e.,
  - Biological Sciences; Chemical Sciences; Earth, Atmosphere, Ocean and Planetary Sciences; Engineering Sciences; Mathematical Sciences; Medical Sciences; and Physical Sciences.
- Eligibility**
  - Any Citizen of India** engaged in research **up to age of 45 years**,
  - Overseas citizen of India (OCI) and Persons of Indian Origin** working in India.
- Dr Shanti Swarup Bhatnagar (**Founder Director of Council of Scientific & Industrial Research**) was awarded **Padma Vibhushan** in 1954.


### 7.3.28. 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** in **157 countries**.
- It is made up of **4 different time capsules to be launched on Moon**.
  - The Orion Collection** (Launched & Returned to Earth in **2022** via NASA Artemis 1, Orion spacecraft)
  - The Nova Collection**
  - The Peregrine Collection**
  - The Polaris Collection**
- Launched via **NASA Artemis / Commercial Lunar Payload Services (CLPS)** program partners to the Moon.

### 7.3.29. BHU-VISION (KRISHI-RASTAA) PLATFORM

- It is an Internet of Things (IoT) based automated soil testing and agronomy advisory platform, which can conduct 12 key soil parameter tests (like pH value, electrical conductivity etc).
- It can immediately send the summary of results in a soil health card to mobile devices and will help to quickly identify the deficiencies.
- **Developed by:** ICAR-IIRR (Indian Council of Agricultural Research - Indian Institute of Rice Research), Hyderabad and KrishiTantra (an Agri-tech start-up).

 <p><b>SMART QUIZ</b></p>	<p>You can scan this QR code to practice the Smart Quiz of Science &amp; Technology at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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# ESSAY

## ENRICHMENT PROGRAMME 2023

**ADMISSION OPEN**

- ▶ Introducing different stages from developing an idea into completing an essay
- ▶ Practical and efficient approach to learn different parts of essay
- ▶ Regular practice and brainstorming sessions
- ▶ Inter disciplinary approaches
- ▶ **LIVE / ONLINE** Classes Available





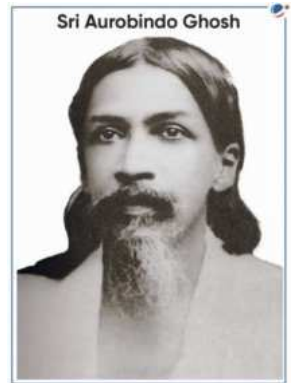
# 8. CULTURE

## 8.2. SRI AUROBINDO GHOSH

### Why in the news?

Recently, the **year-long celebration of the 150th Birth Anniversary** of Sri Aurobindo concluded at **Auroville, Puducherry**.

### About Sri Aurobindo



- **20<sup>th</sup>-century Bengali poet, philosopher, spiritual leader** and revolutionary freedom fighter.
- **Early Life:**
  - Born on **15 August 1872** in **Calcutta district (now Kolkata)**, West Bengal.
  - Education began in **Christian convent school** in Darjeeling.
  - At the **age of 7 years**, he was taken to England along with his brothers.
  - Studied at **St. Paul's School London (1884)** and **King's College in Cambridge in 1890**.
  - In **1893**, Aurobindo returned to India and joined the **Baroda state**, first as a **bureaucrat** and then as a **professor of French** at **Baroda College**.
- **Participation in the National Movement**
  - **Pioneer of the Indian extremist movement** and helped in establishing **Anushilan Samiti in 1902**.
  - Shri Aurobindo left his job and plunged into active politics after **the partition of Bengal in 1905**.
  - During the Surat session of INC in 1907, known for the Surat Split, **he joined the extremist group led by Bal Gangadhar Tilak against the moderates**.
  - Shri Aurobindo advocated **passive resistance and not violence**. He, however, did not opine that to attain freedom, it is wrong to resort to violence.
  - In May 1908, Aurobindo was arrested in connection with **the Alipore Conspiracy Case**.
- **Literary Contribution:**
  - **'New Lamps for Old'**, articles written by him in InduPrakash from 1893-94, criticising moderate politics of Congress.
  - In March 1906, in a Bengali newspaper, Yugantar, he preached **open revolt and complete independence**.
  - Edited **Bande Mataram** newspapers founded by Bipin Chandra Pal.
  - After his release in 1909, Aurobindo started two weeklies, namely **Karmayogin in English and Dharma in Bengali**.
  - In 1914, he started publishing a **philosophical magazine, Arya**.
  - **Other Books include** a compilation of poems, letters and essays such as **Essays on the Gita (1922)**, **Collected Poems and Plays (1942)**, **The Synthesis of Yoga (1948)**, **The Human Cycle (1949)**, **The Ideal of Human Unity (1949)**, **Savitri: A Legend and a Symbol (1950)**, etc.
- **Spiritual Journey:**
  - **Played an active role in the Indian Freedom Movement till 1910**, after which he became a spiritual reformer.
  - His important works like **the Life Divine, Essays on Geeta, The Synthesis of Yoga, and the epic poem 'Savitri'** were written during this period.
  - He developed a kind of **Yoga called Integral Yoga**.
    - ✓ Through **Integral Yoga**, he believed **human beings can achieve true self-realisation**.
    - ✓ **Internal Yoga aims at spiritual realisation** that not only liberates man's consciousness but also transforms his nature.
  - He founded a **community of spiritual seekers**, which took shape as **the Sri Aurobindo Ashram** in 1926 with Mirra Alfassa.
    - ✓ **Mirra Alfassa founded the Auroville**, i.e., the city of dawn, a universal town for a peaceful, progressive, and harmonious existence.
- **Aurobindo's life philosophy**
  - It is a synthesis of **idealism, realism, naturalism, and pragmatism**.
  - According to him, **Jnana (knowledge), Bhakti (devotion), and Karma (work ethics)** can lead man to the divine path.



- ✓ **But the synthesis** of spirituality, creativity, and intellectuality is essential for a sound personality.
- **Sri Aurobindo did not believe in any man-made divisions** and used to consider social inequalities as a major obstacle to raise national consciousness.
- **Influenced by the teaching of Sri Ramanujacharya**, who argued for the inclusion of outcastes into the fold of Hinduism.

#### Principle of Education

Aurobindo was a distinguished philosopher and educationist who formulated rich educational thoughts to enrich our educational system comprehensively. The following thoughts are relevant to today

- **Child–centric education** with full freedom for the child to express her latent potential.
- **Introduction of moral and religious education** as an integral part of general education and by practice of religious life.
- **Training of the senses** as senses are the gateways of knowledge.
- **International education based** on universal love, sympathy, fellow feeling, peace & international understanding
- **Emphasis on Psychological methods** i.e. self – learning, practical experiences, learning by doing, teaching according to age, abilities & aptitude of the child.

#### Concept of Nation and Theory of Spiritual Nationalism

- He believed that the nation is not **just a piece of land or a mass of human beings**.
- The 'nation' is a mighty 'shakti' composed of all the shaktis of all the millions of units that make up the nation. **It is thus a living entity.**
- Nationalism in his opinion is not merely a **political movement**
- In his opinion, nationalism is akin to religion. **It is a faith and a creed that one has to live.**
- **Nationalism is immortal** because it is not a creation of human beings but is created by God.
- If one wants to be a nationalist, **one must work for his nation.**

## 8.3. CHESS WORLD CUP 2023

### Why in the news?

Indian Grandmaster Rameshbabu Praggnanandhaa secured a second-place finish in the final of the International Chess Federation (FIDE) World Cup 2023.

### Personality in Focus



#### Personality's profile



#### R. Praggnanandhaa's Journey

- ↳ Born in Chennai, Tamil Nadu (2005).
- ↳ He won the **World Youth Chess Championship Under-8 title in 2013** and **under-10 title in 2015**.
- ↳ He became **India's youngest and the world's second-youngest GM** at the age of 12 years, 10 months and 13 days.
- ↳ In 2022, at the **age of 16**, he became the **youngest player to defeat then-world champion Magnus Carlsen**.

#### His core values



#### Patience

Praggnanandhaa has displayed infinite capacity to be patient and not be hasty with decisions or moves in any of his games. It is not surprising that **many of his matches have lasted over hours**.



#### Composure

For a boy his age, and with the ups and downs he has seen, his composed demeanour is inspiring. Praggnanandhaa **doesn't celebrate victories, nor mourns defeats**.



#### Humility

Praggnanandhaa has showcased his humble nature numerous times. For instance, **after his historic win against Carlsen, he remained respectful**. Instead of goading the win he chose to celebrate it privately with his family.

## About FIDE World Cup


- **FIDE World Cup 2023:** The World Cup is a major chess event organised by FIDE, the international governing body.
  - Players who finish 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> in the FIDE World Cup qualify to take part in 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 finish 1st, 2nd (Praggnanandhaa) and 3<sup>rd</sup>.
  - 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.

## About Chess Titles

- Based on ratings earned by players, **FIDE awards the most prestigious chess titles**. Once earned, these **titles are held for life**.
  - 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 80 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.



### International Chess Federation (FIDE)

Lausanne, Switzerland

**About:** FIDE is the governing body of the sport of chess, and it regulates all international chess competitions.

**Origin:** Initially founded in 1924 in Paris, it was one of the very first International Sports Federations.

- Constituted as a non-governmental institution, it was recognized by the International Olympic Committee as a Global Sporting Organization in 1999.

**Members:** 199 countries as affiliate members, in the form of National Chess Federations. **All India Chess Federation** is a member.

Different 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

## 8.4. NEWS IN SHORTS

### 8.4.1. GEOGRAPHICAL INDICATION (GI) TAGS

- Recently, various products were given a Geographical Indication (GI) tag by the Geographical Indications Registry in Chennai.

GI Tag Product	Description
<b>Udaipur Koftgari Metal Craft (Rajasthan)</b>	<ul style="list-style-type: none"> <li>The art of <b>decorating arms and weaponry is known as Koftgiri</b>.</li> <li>It is the art of ornamenting surfaces by <b>inlaying light metal on a dark one using gold or silver wires</b>.</li> </ul>
<b>Bikaner Kashidakari Craft (Rajasthan)</b>	<ul style="list-style-type: none"> <li>It involves <b>fine stitching and mirrorwork on cotton, silk, or velvet</b>, primarily for objects related to weddings and gift items. <ul style="list-style-type: none"> <li>The mirrors are believed to ward off the 'evil eye' with their reflective surfaces.</li> </ul> </li> <li>The craft was <b>traditionally done by the Meghwal community</b> in Bikaner and nearby districts.</li> </ul>
<b>Jodhpur Bandhej Craft (Rajasthan)</b>	<ul style="list-style-type: none"> <li>It is the Rajasthani art of tying and dyeing.</li> <li>The fabrics used for Bandhej are <b>muslin, silk and voile. Cotton thread is used for tying the fabric</b>.</li> </ul>
<b>Bikaner Usta Kala Craft (Rajasthan)</b>	<ul style="list-style-type: none"> <li>It is also known as <b>gold nakashi or gold manauti work</b>.</li> <li>It was <b>done on walls, ceilings, glass, wood, marble and artefacts made of camel leather</b>.</li> <li>The most used motifs were foliage, animals and birds.</li> <li>The art form is named after the <b>Ustas, or master craftsmen, who developed it</b>.</li> </ul>
<b>Mankurad Mango (Goa)</b>	<ul style="list-style-type: none"> <li>Named by Portuguese as <b>malcorada</b> (means '<b>poor coloured</b>').</li> <li>Mankurad has a <b>uniform yellow colour, less fibre and balanced sugar</b>.</li> </ul>
<b>Goan Bebinca (Goa)</b>	<ul style="list-style-type: none"> <li>It is a <b>traditional Indo-Portuguese pudding</b>.</li> <li>It is also referred to as the queen of Goan desserts.</li> </ul>
<b>Jalesar Metal Craft (Uttar Pradesh)</b>	<ul style="list-style-type: none"> <li>It is known for <b>decorative metal crafts and brassware</b> (like anklets, bells)</li> <li><b>The Thatheras community</b>, which resides in a mohalla (locality)</li> </ul>

	named Hathuras, makes these products.
<b>Matti Banana (Kanyakumari, Tamil Nadu)</b>	<ul style="list-style-type: none"> <li><b>Matti Banana</b> is commonly known as '<b>Baby Banana</b>' and is known for its <b>distinct fragrance and honey-like taste</b></li> <li>Its <b>low total soluble solids content (TSSC)</b> recommends it as a <b>baby food</b>.</li> <li>Unlike typical banana bunches that grow straight, the <b>Matti's fingers exhibit a distinct wind-blown appearance</b>.</li> </ul>

### 8.4.2. MYLARA CULT

- Recently discovered sculptures in Karnataka has proved the existence of the cult in the state
  - The members of the Cult worship, (MyLara) **Mailara who is a folk deity also identified as a manifestation of Lord Shiva**.
  - The deity is often **depicted seated, standing or on a horse** and he is generally seen holding a sword, trisula (trident), a damaru (hour-glass shaped drum) and a bowl.
  - The cult is prevalent in the states of Karnataka, Maharashtra, Andhra Pradesh and Tamil Nadu.

#### Depiction of Mylara Cult





### 8.4.3. SEETHAKALI FOLK ART

- Seethakali is a **centuries-old folk art form** that is believed to have **originated at Perinad in Kollam district Kerala**.
- It is **performed as part of the harvest festival Onam**.
- It is **based on certain episodes taken from the epic Ramayana** and portrays characters such as Rama, Seetha, Ravana and Hanuman.
  - It's a **blend of songs, storytelling and fast movements**.
  - Props and instruments** used during performances are all **made of natural materials** like bamboo and palm leaves.
  - Vibrant coloured costumes and makeup** is used.

### 8.4.4. NATIONAL FILM AWARDS, 2023

- The winners of the **69th National Film Awards** were announced recently.
- About the Award**
  - It was first awarded in **1954**, initially they were called the **'State Awards'** given for regional languages.
  - It aims at **encouraging the production of films of aesthetic and technical excellence and social relevance**.
  - Presented** by The President of India.
  - Categories:** – Features, Non-Features, and Best Writing on Cinema.



**SMART QUIZ**

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# 9. ETHICS

## 9.1. MEDIA ETHICS AND SELF-REGULATION

### Introduction

Recently, the Supreme Court expressed concerns about the **ineffectiveness of the self-regulatory mechanism** set up by the **News Broadcasting and Digital Standards Authority (NBSA)**. This also highlights the importance of adherence to Media ethics in the modern age, where breaches of media ethics are rising.

### What are Media Ethics?

Media ethics is concerned with the question of what is right or wrong, good or bad, acceptable or unacceptable, about the means and ways that the media collects and presents information and news.

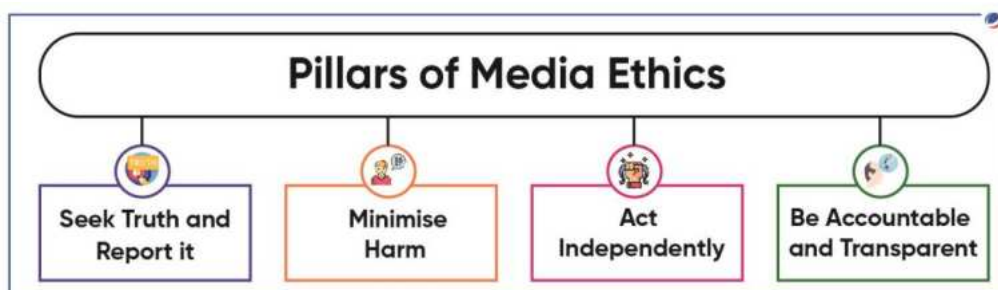
### Principles of media ethics

- **Golden mean theory:**

Aristotle's golden mean focuses on the middle ground between two extremes. In media ethics, this theory could be used for **redacting names from a sensitive article or blurring the faces** of those who are a victim of crime.

- Journalist can use this theory to determine whether or not to publish/telecast something. This theory allows them to strike a balance between too ethical and too neutral.

- **Harm Limitation Principle:** It states that in the process of reporting an issue to the general public, journalists and reporters must do so with **great sensitivity** and in such a way that **it does not harm certain groups of people**.
- **Principle of utilitarianism:** The theory contends that people should prioritise **the greater good**. Utilitarianism can be used to justify sacrificing the privacy of a few individuals if it would facilitate greater access to information for the general public.
- **Deontology:** Focuses on a person's duty as a means to determine appropriate action.
  - This is a very pertinent concept for the media as it is the **media's duty to serve the public** by providing information which is impartial and **which promotes knowledge and reason**.



Key stakeholders in Media Ethics	Their Interests
Media actors	Media ethics must ensure that journalists observe principles of integrity, professionalism, privacy and impartiality.
Government	Media ethics promotes and defends values such as a <b>universal respect for life and the rule of law and legality</b> .
General Public	Serve the public by providing information which <b>is impartial</b> and which promotes <b>knowledge and reason</b> .
Police	Media must facilitate assistance to the police and it must applaud when criminals are brought to justice as a result. <ul style="list-style-type: none"><li>• The press must also hold the police to account, acting as the eyes and ears of the public.</li></ul>

### Instances of Breaches of Media Ethics

- Ineffectiveness of the self-regulatory mechanism has led to a **rise in breaches of media ethics**, some such instances are below:
  - **Media trials:** Undermining the concept of free and fair trial.
  - **Media's love for borewells:** An example of the **media's role in 'making news'** rather than 'reporting news' as was a case of the five-year-old boy who accidentally fell into an open borewell.
  - **The Aarushi–Hemraj murder case:** The manner in which the media covered it sparked a debate on **crime stories being sensationalised** to attract viewers and readers.

- **Kathua Rape Case:** Several media houses revealed the identity and pictures of the victim and did not handle the case with the required sensitivity.
- **Violation of privacy:** From Bollywood stars to cricketers and politicians are victims—Ex. **paparazzi**.

### Rationale behind Self-Regulation of Media

Of the various models of Media regulation like state control, statutory regulation, etc., self-regulation has been given due importance. In India, organisations like **NBSA and Broadcasting Content Complaints Council** have been set up as **internal self-regulatory mechanisms** for television news and entertainment, respectively.

- **Ensures independence of media:** Self-regulation ensures that the **media can operate independently**.
  - This is in the interest of the media as well as its **different stakeholders and the audience**.
- **Bring efficiency:** Media participants are likely to have **superior knowledge** of the subject compared to a government agency.
  - This is important where **technical knowledge** is needed to develop appropriate rules and determine whether they have been violated.
- **Provides greater incentives for compliance:** If rules are developed by the media, industry participants are more likely to perceive them as reasonable.

### Why the need for effective Media Ethics is becoming paramount in India?

- **Conflicts of Interests:** Impartiality is one of the pillars of media ethics. But a dilemma occurs when one is assigned to cover a story about someone s/he has an existing personal relationship with.
- **Confidentiality and Integrity:** Serious ethical concerns have been expressed where reporters covered special stories based on information concerning an **individual's personal conduct in private life**.
- **Bias and subjectivity:** News reports are often reported in a **particular style, and bias in a manner** that has led to the suspicion of the news media's intentions and objects.
- **Emerging dilemmas:** Cross-media ownership by big corporate companies has assumed alarming proportions.
  - **Leaving the regulation to the media** itself generates the likelihood that it may subjugate regulatory aims to its own business goals.
- **Ineffectiveness of the self-regulatory mechanism:** Due to reasons like
  - **Media and market pressure: Business imperatives** of increasing revenue have taken (and continue to take) their toll on **journalistic excellence**.
  - **Inadequate penalty:** Currently, ₹ 1 Lakh fine is ineffective as this fine is not in proportion to profits earned by the offending channel from the corresponding show.
  - **Absence of journalistic ethics:** which is reflected in **inaccurate news** being broadcasted.

### Way ahead

**Self-regulation** in the broadcast media could be the **best way forward** in achieving a balance between the **media's duty to empower the participatory role of the people** in governance and the **reasonable restrictions** that prevent the abuse of its immense strength.

- There should be a **universal code of ethics** which specifies the following guidelines for journalists :
  - **Take responsibility** for the accuracy of their work.
  - **Never deliberately distort facts or context**, including visual information.
  - Recognise a special obligation to serve as **watchdogs over public affairs and government**.
  - **Objectivity** is an essential technique for removing bias in seeking truth.
- There is a **necessity for media training** that can be commenced by media establishments as part of journalism courses. The need of the hour for reporters is to be **aware of the sensitivities of their audiences**.
- **Self-regulation system** of media needs strengthening.
  - **Hutchins Commission report** advocated for **freedom of the press, and self-regulation** was considered as the key feature, and **government intervention as the last resort**.
  - **Penalties should be in proportion** to the profits earned by an errant channel, as recently **advocated by the Supreme Court**.

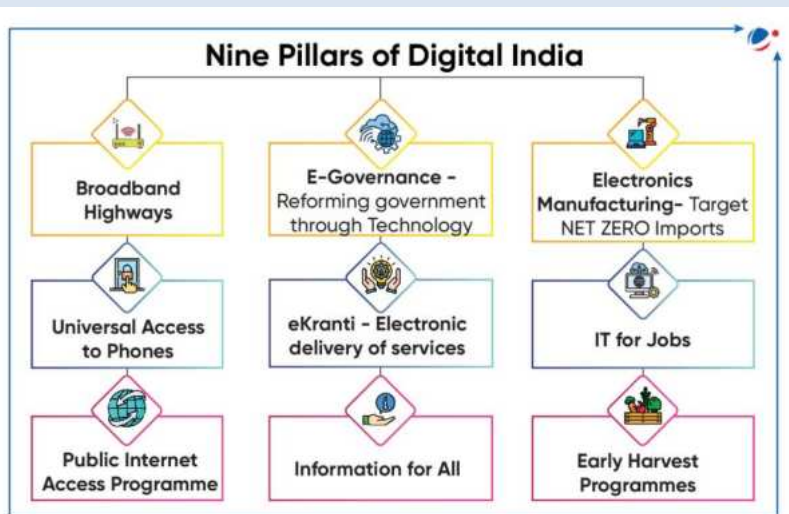
# 10. SCHEMES IN NEWS

## 10.1. DIGITAL INDIA PROGRAMME

### Why in the news?

Recently, The Government approved the expansion of the Digital India programme with a total outlay of ₹14,903 crores for a five-year period between 2021-22 to 2025-26.

Objectives	Salient Features
<ul style="list-style-type: none"> <li>To transform India into a digitally empowered society and knowledge economy.</li> <li>To ensure digital access, digital inclusion, digital empowerment and bridge the digital divide.</li> <li>To ensure that Government services are available to citizens electronically.</li> </ul>	<ul style="list-style-type: none"> <li>It was launched in 2015 to enable digital delivery of services to citizens.</li> <li>The Digital India Programme is a mission to prepare India for a knowledge future by making technology central to enabling change.</li> <li>It is an umbrella programme that covers multiple projects of various Central Ministries/Departments and States and Union Territories (UTs). <ul style="list-style-type: none"> <li>The central ministries/departments and state governments concerned would have the overall responsibility for the implementation of various Mission Mode and other projects under the Digital India Programme.</li> <li>It is implemented under the overall coordination of the Ministry of Electronics and Information Technology.</li> </ul> </li> <li>The programme management structure for Digital India consists of <ul style="list-style-type: none"> <li>a Monitoring Committee on Digital India headed by the Prime Minister,</li> <li>a Digital India Advisory Group chaired by the Minister of Communications &amp; IT and</li> <li>an Apex Committee chaired by the Cabinet Secretary.</li> </ul> </li> <li>The vision is centered on three key areas: <ul style="list-style-type: none"> <li><b>Digital Infrastructure as a Utility to Every Citizen</b> <ul style="list-style-type: none"> <li>✓ High-speed internet as a core utility</li> <li>✓ Cradle to grave digital identity -unique, lifelong, online, authenticable</li> <li>✓ Mobile phone &amp; Bank account enabling participation in digital &amp; financial space</li> <li>✓ Easy access to a Common Service Centre</li> <li>✓ Shareable private space on a public cloud</li> <li>✓ Safe and secure Cyber-space</li> </ul> </li> <li><b>Governance &amp; Services on Demand</b> <ul style="list-style-type: none"> <li>✓ Seamlessly integrated across departments or jurisdictions</li> <li>✓ Services available in real-time from online &amp; mobile platform</li> <li>✓ All citizen entitlements to be available on the cloud</li> <li>✓ Services digitally transformed to improve Ease of Doing Business</li> <li>✓ Making financial transactions electronic &amp; cashless</li> <li>✓ Leveraging GIS for decision support systems &amp; development</li> </ul> </li> <li><b>Digital Empowerment of Citizens</b> <ul style="list-style-type: none"> <li>✓ Universal Digital Literacy</li> <li>✓ Universally accessible digital resources</li> </ul> </li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>✓ All documents/ certificates are to be available on the cloud</li> <li>✓ <b>Availability of digital resources/services in Indian languages</b></li> <li>✓ <b>Collaborative digital platforms</b> for participative governance</li> <li>✓ <b>Portability of all entitlements</b> through the cloud</li> </ul> <ul style="list-style-type: none"> <li>• <b>Some of the key initiatives:</b> Aadhar, Common Service Centres (CSCs), Digi Locker, Digi Sevak, Bharat Broadband Network Limited, CERT-In, Centre of Excellence for IoT, Cyber Swachhta Kendra etc.</li> <li>• <b>Some New Initiatives to be taken up:</b> <ul style="list-style-type: none"> <li>○ 6.25 lakh IT professionals will be re-skilled and up-skilled under the <b>Future Skills Prime Programme</b>.</li> <li>○ 9 more supercomputers will be added under <b>National Super Computer Mission</b>.</li> <li>○ <b>Bhashini, the AI-enabled multi-language translation tool</b> (currently available in 10 languages) will be rolled out in all 22 Schedule's 8 languages.</li> <li>○ <b>Modernisation of the National Knowledge Network (NKN)</b> which connects 1,787 educational institutions.</li> <li>○ <b>3 Centres of Excellence in Artificial Intelligence on health, agriculture and sustainable cities</b> will be set up.</li> </ul> </li> </ul>
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## 10.2. SVAMITVA SCHEME

### Why in the news?

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

Objectives	Salient Features
<ul style="list-style-type: none"> <li>• <b>Creation of accurate land records</b> for rural planning and <b>reduce property-related disputes</b>.</li> <li>• To <b>bring financial stability to the citizens</b> in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.</li> <li>• <b>Determination of property tax</b>, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.</li> <li>• <b>Creation of survey infrastructure</b> and GIS maps that can be leveraged by any department for their use.</li> <li>• To <b>support the preparation of a better-quality Gram Panchayat Development Plan (GPDP)</b> by making use of GIS maps</li> </ul>	<ul style="list-style-type: none"> <li>• It is a <b>Central Sector Scheme of the Ministry of Panchayati Raj</b> formally launched in <b>2021</b>.</li> <li>• It was launched to <b>provide rural India with an integrated inhabited (Abadi) property ownership solution</b>. <ul style="list-style-type: none"> <li>○ This will provide the '<b>record of rights</b>' to village household owners in the form of Property Cards/Title Deeds.</li> </ul> </li> <li>• The scheme aims to cover <b>6.62 lakh villages from the Financial Year 2020-21 to the Financial Year 2024-25</b>.</li> <li>• <b>Financial outlay:</b> Rs. 566 crore for 5 years, 2020-25.</li> <li>• <b>The main activities under the Scheme are</b> <ul style="list-style-type: none"> <li>○ <b>Large Scale mapping using Drones:</b> Rural inhabited (Abadi) areas would be mapped by Survey of India using drone Survey. <ul style="list-style-type: none"> <li>✓ Maps generated are <b>geo-referenced maps capturing digital images</b> of properties in rural abadi areas.</li> <li>✓ The preparation and distribution of Property Cards based on maps generated is the <b>responsibility of the respective State Government</b>.</li> </ul> </li> <li>○ <b>Establishment of Continuous Operating Reference Station (CORS):</b> The CORS network supports accurate Geo-referencing, ground truthing and demarcation of lands.</li> <li>○ <b>SVAMITVA Dashboard:</b> A centralised online monitoring and reporting dashboard for real-time progress monitoring of SVAMITVA implementation.</li> <li>○ <b>DigiLocker App:</b> Beneficiaries can view and download the property card through the DigiLocker App.</li> <li>○ <b>Gram Manchitra:</b> Funds released to the National Informatics Centre (NIC) for the <b>Enhancement of the Spatial Planning Application 'Gram Manchitra' and Central Infrastructure</b>.</li> <li>○ <b>Information, Education, and Communication (IEC) activities</b> to spread awareness of the scheme.</li> <li>○ Setting of Programme management unit at National and State levels.</li> </ul> </li> </ul>



# APPENDIX 1: BHARATNET

## BharatNet

➤ **Ministry:** Ministry of Communications

➤ **Objective:** To provide **100 Mbps bandwidth broadband connectivity to all Gram Panchayats** (approx. 2.6 lakh) in the country to realise the vision of **Digital India**.



### Background

#### BharatNet-Phase - 1

➤ In 2011, Created **National Optical Fibre Network (NOFN, now BharatNet)** and focuses on connecting block headquarters (BHQs) to GPs.

#### BharatNet-Phase - 2

➤ Started in **2017**, Provides an **optimal mix of media** (OFC, Radio and **satellite**) to connect GPs.  
➤ Multiple implementing models like **State-led Model, Private Sector Model** and **CPSU Model**.



### 3 Phases

➤ It is being implemented in **three phases** (to be implemented till 2025).  
➤ **Phase 1:** out of 1.23 lakh GPs approximately **1.22 lakhs** of GPs were made **Service Ready**  
➤ **Phase 2:** out of 1.44 lakh allotted GPs more than **71,000 GPs** have been made Service Ready.  
➤ **Phase 3:** State-of-the-art, **Future proofing of the Network**



### Implementing Agency

➤ Bharat Broadband Network(Merged into BSNL in 2022)



### Benefits

➤ Facilitate delivery of **e-governance, e-health, e-education, e-banking, public internet access**, G2C, B2B, P2P, B2C, etc., weather, agricultural and other services to rural India.



### Satellite connectivity

➤ **GSAT-11 and GSAT-19** under BharatNet project to provide **connectivity to about 6700 GPs/areas** which were not accessible through other mediums.



### Other

➤ **Project of national importance:** Network would remain a **National Asset**. Operation and Maintenance could be taken up by the States.  
➤ **Leveraging private sector:** PPP Model for **operation, maintenance, utilization and revenue generation**.



### Achievement













➤ Around **1.94 lakh** villages have been connected under the project.  
➤ Now the emphasis is to utilize the created infrastructure for **broadband/internet services through Wi-Fi Hotspots, Fibre to the Home (FTTH) connections**, etc.

# APPENDIX 2: AYUSHMAN BHARAT - PRADHAN MANTRI JAN AROGYA YOJANA (AB-PMJAY)

## Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)

- **Ministry:** Ministry of Health and Family Welfare
- **Objective:** To reduce the financial burden on poor and vulnerable groups arising out of catastrophic hospital episodes and ensure their access to quality health services.

### Salient features

Specifications	Details		
 <p><b>A component of Ayushman Bharat Scheme</b></p>	<ul style="list-style-type: none"> <li>➤ Ayushman Bharat is a <b>health scheme</b> of the Centre to <b>holistically address the healthcare system</b> at the primary, secondary and tertiary level. <b>PM JAY and Creation of Health and Wellness Centres (HWCs)</b> are two inter-related components of Ayushman Bharat. <ul style="list-style-type: none"> <li>➤ Under HWCs component, HWCs are being created by <b>transforming Primary Health Centres (PHCs)/Sub-Centres (SCs)</b> to provide Comprehensive Primary Health Care (CPHC).</li> <li>➤ It is funded under <b>National Health Mission (NHM)</b>.</li> </ul> </li> </ul>		
 <p><b>Beneficiaries</b></p>	<ul style="list-style-type: none"> <li>➤ Households identified through <b>deprivation and occupational</b> criteria of the <b>Socio-Economic Caste Census 2011 (SECC-2011)</b> for rural and urban areas, <b>respectively</b>.</li> <li>➤ Also, <b>families</b> that were covered in the <b>Rashtriya Swasthya Bima Yojana (RSBY)</b> but did not form part of the SECC-2011 database.</li> </ul>		
 <p><b>Benefits</b></p>	 <p>Rs 5 lakhs per family per year for secondary and tertiary care hospitalization</p>	 <p>Service available across public and private EHCP.</p>	 <p>All pre-existing conditions are powered from day one.</p>
	 <p>Benefits will be portable across the country</p>	 <p>No cap on family size or age</p>	 <p>Technologically driven, enables cashless and paperless transaction</p>
 <p><b>Other benefits</b></p>	<ul style="list-style-type: none"> <li>➤ Coverage of <b>three days of pre-hospitalization</b> and <b>15 days of post-hospitalization</b> expenses including medicines, follow-up consultation and diagnostic.</li> <li>➤ Treatment of <b>COVID-2019 patients</b> had also been covered from April 2020</li> </ul>		
 <p><b>Three Mode of implementation</b></p>	<ul style="list-style-type: none"> <li>➤ <b>Insurance:</b> SHA pays <b>premium to the insurance company</b> per eligible family for the policy period</li> <li>➤ <b>Assurance/ Trust:</b> SHA directly reimburses the healthcare providers.</li> <li>➤ <b>Mixed:</b> Mix of above two.</li> </ul>		
 <p><b>Implementing agencies</b></p>	<ul style="list-style-type: none"> <li>➤ <b>Centre:</b> <b>National Health Authority (NHA)</b> an autonomous <b>body</b> chaired by the Union Minister of Health and Family Welfare (MoHFW).</li> <li>➤ <b>State:</b> <b>SHA</b> headed by a <b>CEO appointed by the State Government</b>.</li> <li>➤ <b>District:</b> <b>District Implementation Unit (DIU)</b> chaired by DC/DM/Collector of the District</li> </ul>		





## Transparency and accountability

- **4 modes of verification of beneficiaries:** Aadhar based e-KYC, finger-print, iris scan and face-authentication.
- **Whistle-blower policy** issued by the NHA.
- **Anti-Fraud Cells** in the states for carrying out surprise inspections, imposing penalty, de-empanelment, etc.



## Funding pattern (Centre: State)

- **90:10** - For North-Eastern States, two Himalayan States (Himachal Pradesh and Uttarakhand) and Jammu and Kashmir
- **60:40** - For all other states

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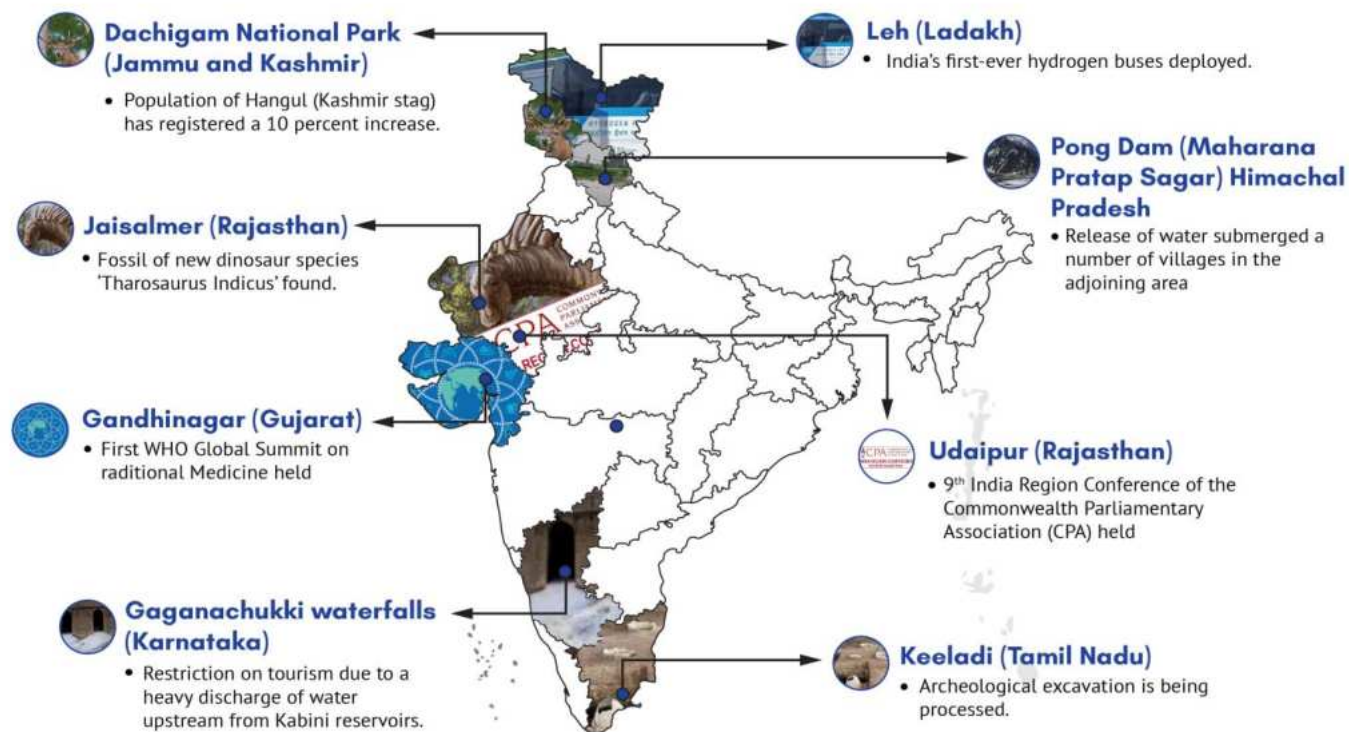
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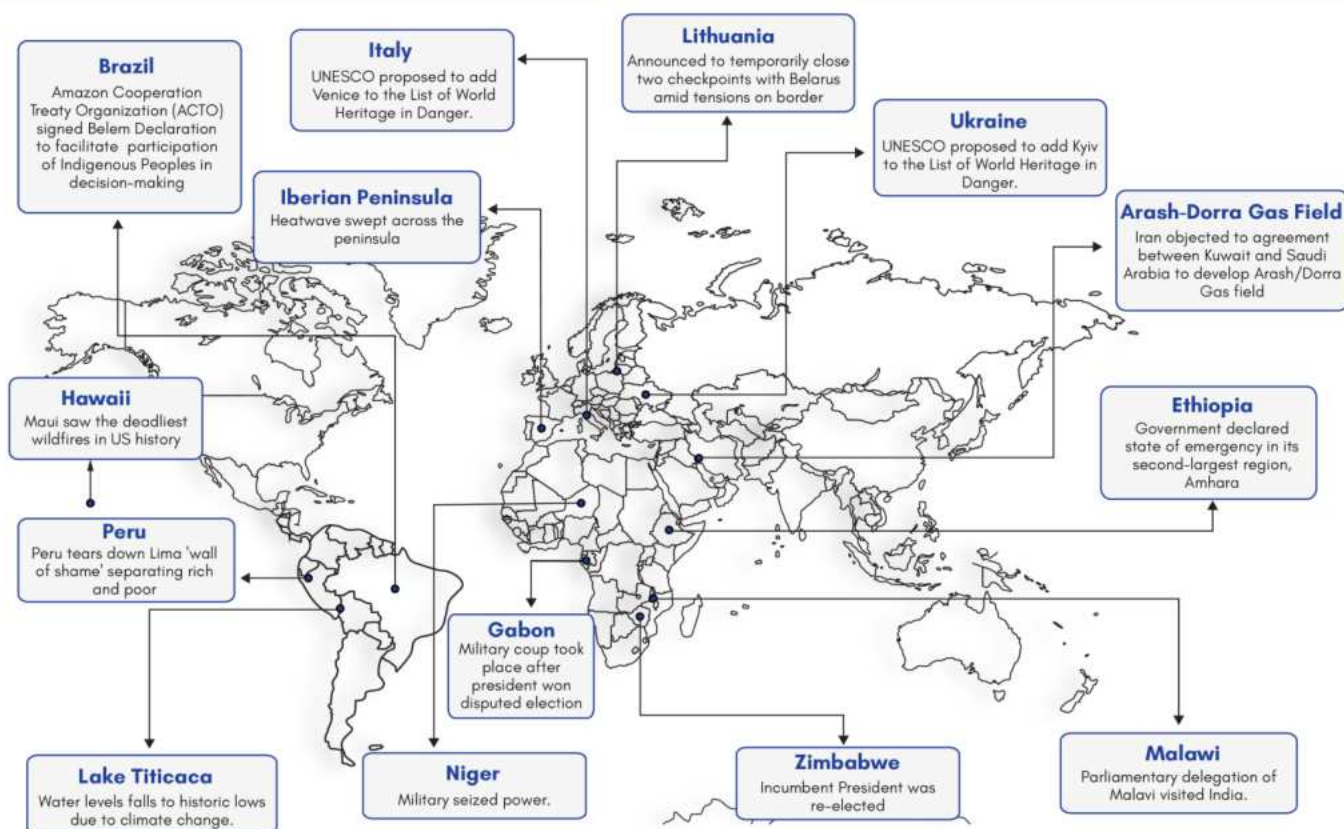


\*: Pre-foundation classes are designed to provide a strong foundation in core UPSC CSE subjects, utilizing NCERTs and basic textbooks. They serve as the initial step in the comprehensive preparation journey for the UPSC Civil Services Examination by providing conceptual clarity in core GS subjects such as History, Polity, Geography, Economy, and Environment. Further, Pre-Foundation Classes act as a transition platform toward the VisionIAS Regular Foundation Course Program, 2025.

## Places in News: India







## Places in News: World





# Personalities In News

Personality	About	Ethical Values Exhibited by the Personality
 <p><b>Sant Ravidas</b></p>	<ul style="list-style-type: none"> <li>He was a poet, philosopher, and social reformer during 15th century.</li> <li><b>Contributions:</b> <ul style="list-style-type: none"> <li><b>Prominent saint</b> of the North Indian <b>Bhakti movement</b>;</li> <li><b>Begumpura City</b> was envisioned by him as a <b>city without any sorrow</b> and full of peace and humanity.</li> <li>He <b>worked against the system of untouchability</b> and also put forth his <b>views about Hindu-Muslim unity</b>.</li> <li>His padas, devotional songs, and other <b>writings are mentioned in the Guru Granth Sahib</b>.</li> <li>Considered <b>spiritual Guru of Meera Bai</b>.</li> </ul> </li> </ul>	<p><b>Social Justice</b></p> <ul style="list-style-type: none"> <li>Moved by the dire conditions of people living in lower end of social ladder, he decided to devote his life for eradicating caste barriers by its spiritual and social critique.</li> </ul>
 <p><b>Prafulla Chandra Roy</b></p>	<ul style="list-style-type: none"> <li>162nd Birth anniversary of PC Roy was celebrated on August 2, 2023</li> <li><b>Contributions</b> <ul style="list-style-type: none"> <li>He is known as <b>"Father of Indian Chemistry"</b> honoured with imperial title of Companion of the Indian Empire, and then Knighthood in 1919.</li> <li>He was the <b>first president of Indian Science Congress Association (ISCA)</b> in 1920.</li> <li><b>Stable compound Yellow crystalline mercurous nitrite</b> was discovered by P C Roy in 1896</li> <li>In 1901, he founded <b>Bengal Chemicals and Pharmaceuticals</b>, the first pharmaceutical company in India.</li> </ul> </li> </ul>	<p><b>Scientific Temper</b></p> <ul style="list-style-type: none"> <li>P.C. Roy exhibited objective inquiry through his rigorous research in chemistry and his continuous quest for knowledge.</li> </ul>
 <p><b>Abanindranath Tagore</b></p>	<ul style="list-style-type: none"> <li>The nation celebrated <b>152nd birth anniversary</b> of Abanindranath tagore.</li> <li><b>Contributions:</b> <ul style="list-style-type: none"> <li>Tagore is known for infusing the <b>spirit of swadeshi</b> in the art of paintings.</li> <li>He Established <b>'Indian Society of Oriental Art' and 'Bengal school of art'</b>.</li> <li>He <b>modernized the Mughal and Rajput styles</b>.</li> <li>His paintings reflected a medley of the influences of the <b>Japanese 'wash' style and Chinese ink painting, English pre-Raphaelite and Art-Nouveau trends</b>.</li> </ul> </li> <li><b>Famous painting:</b> 'Arabian Nights' Ganesh Janani, Bharat Mata , The Victory of Buddha</li> <li><b>Books:</b> 'BudoAngla', 'KhinerPutul' and 'Rajkahini'</li> </ul>	<p><b>Pioneering and creative spirit</b></p> <ul style="list-style-type: none"> <li>He emerged as the first Indian artist to gain international recognition for his paintings.</li> <li>He modernized the traditional Indian art and developed new Indian style of painting.</li> </ul>
 <p><b>Subhadra Kumari Chauhan</b></p>	<ul style="list-style-type: none"> <li>She is a well-known <b>poet and freedom fighter</b>.</li> <li><b>Contributions:</b> <ul style="list-style-type: none"> <li>In 1921, she joined Mahatma Gandhi's <b>Non-Cooperation Movement</b>.</li> <li>She was the <b>first woman satyagrahi to court arrest in Nagpur</b> and was jailed twice for her involvement in protests against British rule in 1923 and 1942.</li> </ul> </li> <li><b>Famous Work:</b> Jhansi Ki Rani, Veeron Ka Kaisa Ho Basant, Rakhi Ki Chunauti, and Vida etc.</li> <li>She wrote in <b>Khariboli dialect of Hindi</b>.</li> <li>Her writing focused on <b>hardships faced by Indian women</b> during freedom movement of India.</li> </ul>	<p><b>Patriotism and Zeal</b></p> <ul style="list-style-type: none"> <li>Through her prolific writing, her poems are considered to have played significant role in creating awareness about freedom struggles.</li> <li>She demonstrated utmost dedication by participating in various freedom struggle movements.</li> </ul>

 <p><b>Major Dhyan Chand</b></p>	<ul style="list-style-type: none"> <li>• The <b>National Sports Day</b> was recently celebrated in India on 29 August to commemorate the birth anniversary of hockey legend <b>Major Dhyan Chand</b>.</li> <li>• <b>Contributions:</b> <ul style="list-style-type: none"> <li>▶ <b>Indian field hockey player.</b></li> <li>▶ Contributed majorly in the <b>victory of the Indian team in 1928 Olympics</b> when India won its first gold medal in hockey.</li> <li>▶ In <b>1934</b>, he was made the <b>captain of the Indian team</b>.</li> <li>▶ Conferred the <b>Padma Bhushan</b> in <b>1956</b>.</li> </ul> </li> </ul>	<p><b>Perfection and Mastery</b></p> <ul style="list-style-type: none"> <li>• His control over ball and goal scoring during the game was considered as magical and unbelievable.</li> <li>• He dominated the sports for almost two decades as no other player emerged anywhere who can match the talent of Dhyan Chand.</li> </ul>
 <p><b>Calyampudi Radhakrishnan (C.R) Rao</b></p>	<ul style="list-style-type: none"> <li>• <b>C.R. Rao</b> a pioneering statistician passed away.</li> <li>• <b>Contributions:</b> <ul style="list-style-type: none"> <li>▶ He <b>founded fundamental statistical concepts</b> such as – Cramer-Rao inequality and Rao-Blackwellization theorem, information geometry, and Fisher-Rao metric.</li> <li>▶ Served as <b>chairman of the Committee on Statistics</b> and Demographic and Communication for Population Control.</li> </ul> </li> <li>• <b>Book:</b> Statistics and Truth: Putting Chance to Work</li> <li>• He was awarded <b>Padma Bhushan (1969)</b> and <b>Padma Vibhushan (2001)</b>.</li> </ul>	<p><b>Professionalism and Dedication to Duty:</b></p> <ul style="list-style-type: none"> <li>• His groundbreaking contributions to statistical concepts and his recognition with esteemed awards which epitomize his professional excellence in the field of statistics.</li> <li>• His service as the chairman of key committees underscore his unwavering commitment and dedication to the advancement of the discipline.</li> </ul>
 <p><b>Bindeshwar Pathak</b></p>	<ul style="list-style-type: none"> <li>• Recently, campaigner and social reformer <b>Bindeshwar Pathak (1943-2023)</b> passed away at the age of 80.</li> <li>• <b>Contribution</b> <ul style="list-style-type: none"> <li>▶ He <b>founded the Sulabh International Social Services Organisation in 1970</b> to introduce a public toilet system in India.</li> <li>▶ In 2012, he undertook a philanthropic mission at the behest of the Supreme Court to <b>work towards the welfare of the widows of Vrindavan</b>.</li> <li>▶ He was the <b>brand Ambassador for the Swachh Rail Mission</b> of Indian Railways.</li> </ul> </li> <li>• <b>Awards:</b> <b>Padma Bhushan (1991)</b>, <b>The International Saint Francis Prize for the Environment (1992)</b>, <b>Stockholm Water Prize (2009)</b>, <b>Lal Bahadur Shastri National Award for Excellence in Public Administration, Academics and Management (2017)</b></li> </ul>	<p><b>Social Responsibility and Compassion:</b></p> <ul style="list-style-type: none"> <li>• His foundation of Sulabh International to address public sanitation signifies his commitment to addressing crucial societal challenges and improving public health.</li> </ul>



# WEEKLY FOCUS

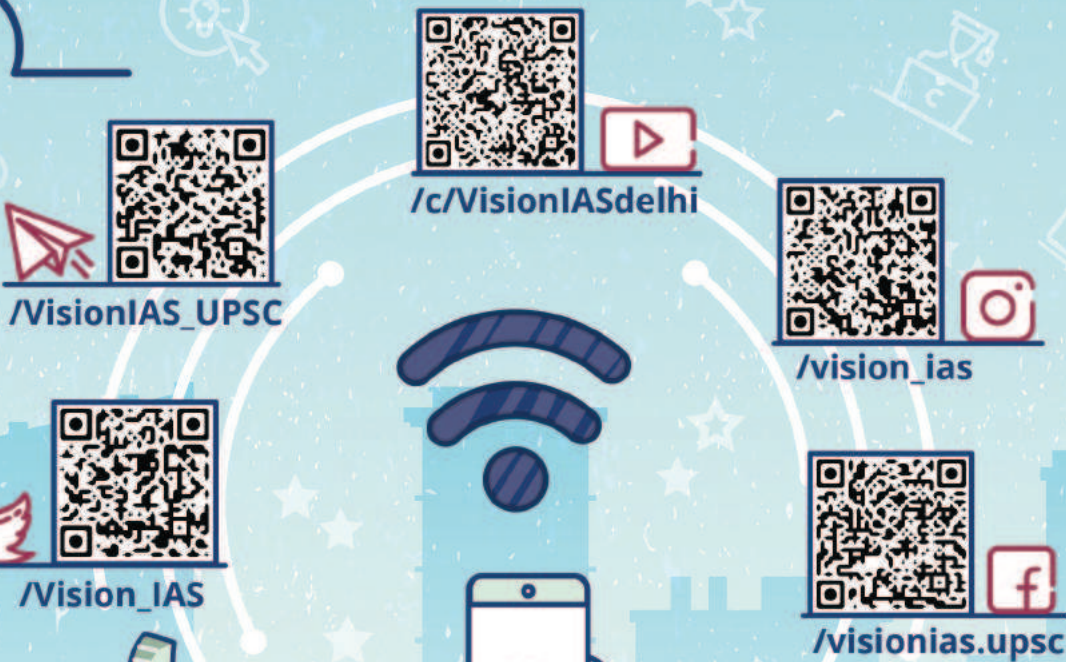
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Selections  
in CSE 2021**



**ANKITA AGARWAL**



**GAMINI  
SINGLA**



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VERMA**



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DWIVEDI**



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