VAJIRAM & RAVI
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the recitals

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14 States and Union Territories are yet to sign a crucial MoU with the Union Education Ministry.

- The MoU mandates the implementation of the National Education Policy in order to avail funds worth almost ₹13,000 crore for the next three years.

- These funds will be disbursed under the Centre's flagship scheme for State-run higher education - **Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA).**

Concerns Raised By States

- The MoU is being signed to show the willingness of States and UTs to participate in the PM-USHA scheme. States have expressed worries about the MoU because it requires them to **cover 40% of the budget** for the PM-USHA initiative.
  - o PM-USHA aims to improve the quality of higher education in State Universities while ensuring equity, access, and inclusion.
    - It will do so through curricular and programme changes, teacher training, physical and digital infrastructure, accreditation, and enhancing employability.
  - o It provides an outlay of ₹12,926.10 crore between 2023-24 and 2025-26.

- Additionally, there are no additional funds set aside specifically for carrying out reforms outlined in the National Education Policy (NEP).
  - o The MoU makes it mandatory for States to undertake the administrative, academic, accreditation, and governance reforms detailed in the NEP.
  - o This also includes an academic credit bank, entry and exit flexibility, and the Samarth e-governance platform.
  - o This has irked some State governments as States will need more funds and aid from the Centre to implement the NEP.

Higher Education Institutions (HEIs)

- **Statistics**
  - o As per the AISHE report 2020-21, there are 1,113 Universities, 43,796 Colleges, and 11,296 Stand Alone Institutions.
    - There are 422 State Public Universities that have 41,836 affiliated colleges.
    - 446 Universities are privately managed and 475 Universities are located in rural areas, 17 are women-centric universities.
  - o Total enrolment in higher education has been estimated to be 4.13 crores with 2.12 crores boys and 2.01 crores females.(48.7% of the total enrolment)
  - o There are 2,255 students enrolled in Integrated Ph.D. in addition to 2.11 lakh students enrolled in Ph.D. Level.

- **Major problems currently faced by the higher education system in India – As identified by National Education Policy 2020**:
  - o A severely fragmented higher educational ecosystem; less emphasis on the development of cognitive skills and learning outcomes;
  - o A rigid separation of disciplines, early specialization, and streaming of students into narrow areas of study;

- o Limited access particularly in socio-economically disadvantaged areas, with few HEIs that teach in local languages;
- o Limited teacher and institutional autonomy;
- o Inadequate mechanisms for merit-based career management and progression of faculty and institutional leaders;
- o Lesser emphasis on research at most universities and colleges, and lack of competitive peer-reviewed research funding across disciplines;
- o Suboptimal governance and leadership of HEIs;
- o An ineffective regulatory system; and large affiliating universities result in low standards of undergraduate education.
- PM-USHA aims to address the key gaps and issues identified by NEP 2020.

Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA)

- **Background**
  - o **Rashtriya Uchchatar Shiksha Abhiyan (RUSA)** was a Centrally Sponsored Scheme to fund States/UTs institutions.
  - o The first phase of the scheme was launched in 2013 and the second phase was launched in 2018.
  - o Now, in the light of the National Education Policy, RUSA scheme has been launched as Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA).

- **About**
  - o It is a centrally sponsored scheme of the Government of India executed through the Ministry of Education.
  - o The scheme aims to work with over 300 HEIs including the state universities, its affiliated colleges to raise the quality of education.

- **Key Objectives**
  - o The key objectives of PM-USHA are to improve access, equity and quality in higher education through planned development of higher education at the state level.
  - o The objectives also include:
    - ▪ creating new academic institutions,
    - ▪ expanding and upgrading the existing ones,
    - ▪ developing institutions that are self-reliant in terms of quality education, professionally managed, and characterized by greater inclination towards research.

- **Funding**
  - o PM-USHA aims at providing strategic funding to eligible state higher educational institutions.
  - o The central funding is based on norms and is outcome dependent.
  - o Funds flow from the central ministry through the state governments/union territories before reaching the identified institutions.
  - o Funding to states is made on the basis of the critical appraisal of State Higher Education Plans, which enlist each state's strategy to address issues of equity, access and excellence in higher education.

- CAG has highlighted irregularities in registration and validation of beneficiaries under the Ayushman Bharat- Pradhan Mantri Jan Aarogya Yojana (PMJAY).

- In its audit report on Performance Audit of AB-PMJAY, tabled in Lok Sabha, the CAG said that overall, 7,49,820 beneficiaries were linked with a single mobile number in the Beneficiary Identification System (BIS) of the scheme.

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

- Launched in September 2018, the scheme aimed to offer secondary and tertiary care services to the vulnerable population in the society.
  - It was launched as a second component of the 'Ayushman Bharat' scheme.

- This scheme aimed to offer medical coverage of Rs. 5 lakh per family per year for secondary and tertiary care hospitalisation to poor and vulnerable families.

Eligibility

- The scheme is targeted to cover 10.74 crore families (deprived rural families and identified occupational category of urban worker's families)

- The beneficiaries are identified by latest Socio-Economic Caste Census (SECC) data.

Benefits

- It provides **cashless access** to health care services for the beneficiary at the point of service, i.e., the hospital.

- Rs 5 lakh Insurance coverage benefit per year offers Health Benefit Packages which covers surgery, medical and day care treatments, cost of medicines and diagnostics.

Role of National Health Authority (NHA)

- NHA is the apex body responsible for implementing AB-PMJAY.

- It has been entrusted with the role of:
  - designing strategy, building technological infrastructure and
  - implementation of National Digital Health Mission to create a National Digital Health Eco-system.

- To implement the scheme at the State level, State Health Agencies (SHAs) in the form of a society/trust have been set up by respective States.

Achievements

HOSPITAL ADMISSIONS		AYUSHMAN CARDS ISSUED*	
5,47,23,291	27,364	24,41,29,944	1,21,548
Progress since launch	Progress in last 24 hours	Progress since launch	Progress in last 24 hours
*As of 9th Aug 2023	*As of 8th Aug 2023 at 11.59 P.M.	*As of 9th Aug 2023	*As of 8th Aug 2023 at 11.59 P.M.

PMJAY Registration- CAG Reports 7.5 Lakh Recipients Linked To Single Number

- In its audit report on Performance Audit of AB-PMJAY, the CAG has revealed that nearly 7.5 lakh beneficiaries were linked with a single cell phone number — 9999999999.

- The report stated that 7.87 crore beneficiary households were registered, constituting 73% of the targeted households of 10.74 crore (November 2022).
  - Later, the government increased the target to 12 crore.

Key Highlights Of The Report

- **Significance of mobile number**

  o Mobile numbers are significant for searching records related to any beneficiary in the database, who may approach the registration desk without the ID.

  o In case of loss of e-card, identification of the beneficiary may also become difficult.

  o This may result in denial of scheme benefits to eligible beneficiaries as well as denial of pre- and post-admission communication causing inconvenience to them.

REGISTRATION OF BENEFICIARIES AGAINST SAME OR INVALID MOBILE NUMBERS

Number of mobile numbers in system	Mobile number	Number of people registered against them
3		9,85,166
	9999999999	7,49,820
	8888888888	1,39,300
	9000000000	96,046
20		10001 to 50,000
1435		1001 to 10,000
185397		11 to 1,000

Source: CAG report

- **Pointed out unrealistic household size for registered beneficiaries under PMJAY**

  o Data analysis revealed that in 43,197 households, the size of the family was unrealistic, ranging from 11 to 201 members.

  o Presence of such unrealistic members in a household in the BIS database indicates:

    ▪ **lack of essential validation controls** in the beneficiary registration process,

    ▪ possibility that beneficiaries are taking advantage of the **lack of a clear definition of family in the guidelines**.

  o The National Anti-Fraud Unit has sent periodic reminders to the States/UTs highlighting discrepancies in verified data.

  o However, 'Public Health' being a State subject, the final decision in this regard vests with the State Governments

- **Many pensioners found possessing PMJAY cards**

  o Many pensioners in Chandigarh, Haryana, Himachal Pradesh, Karnataka, Maharashtra and Tamil Nadu were found possessing PMJAY cards and availing treatment under the scheme.

- **Delayed action in weeding out the ineligible beneficiaries**

  o Audit observed that delayed action in weeding out the ineligible beneficiaries resulted in ineligible persons availing benefits of the Scheme and excess payment of premium to the insurance companies.

Adopt WHO Standard GMP - Govt Sets Deadline for Pharmas

- The government has set a deadline for mandatory implementation of the Good Manufacturing Practices (GMP) in India pharmaceutical industries.

  o GMP are a set of **quality management and regulatory guidelines**.

  o These are designed to ensure the consistent production of safe, high-quality products, especially in industries such as pharmaceuticals, food and beverages, cosmetics etc., where product quality and safety are critical.

  o The primary goal of GMP is to minimize risks that can arise from errors, contamination, or deviations during the manufacturing process.

  o In India, GMP were revised in 2018, bringing them on par with WHO standards.

- This was after the incidents of several countries reporting deaths allegedly linked to contaminated India-manufactured drugs.

Pharmaceutical Industry In India: Notable Achievements

- <u>India ranks 3rd worldwide for production by volume and 14th by value</u>.
- India is the <u>largest provider of generic medicines</u> globally, occupying a 20% share in global supply by volume.
  - Pharmaceutical industry in India offers 60,000 generic brands across 60 therapeutic categories.
- It is the leading vaccine manufacturer globally. 60% of the world's vaccines comes from India.

Industry Scenario

- **Foreign Direct Investment (FDI)**
  - 100% FDI in the Pharmaceutical sector is allowed under the automatic route for **greenfield pharmaceuticals**.
  - 100% FDI in the pharmaceutical sector is allowed in **brownfield pharmaceuticals**; wherein <u>74% is allowed under the automatic route</u> and thereafter through the government approval route.
- **Market Size**
  - The pharmaceutical industry in India is currently valued at $50 bn. It is expected to reach $65 bn by 2024 and to $120 bn by 2030.
- **Export**
  - India is a major exporter of Pharmaceuticals, with over 200+ countries served.
  - India supplies over 50% of Africa's requirement for generics, ~40% of generic demand in the US and ~25% of all medicine in the UK.
  - For the period 2021-22, export of drugs and pharma products stood at $24.6 bn.
  - The Indian pharma industry witnessed exponential growth of 103% during 2014-22 from $11.6 bn to $24.6 bn.
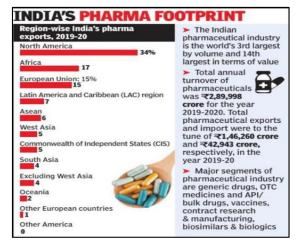
INDIA'S PHARMA FOOTPRINT

Region-wise India's pharma exports, 2019-20

Region	%
North America	34%
Africa	17
European Union: 15%	15
Latin America and Caribbean (LAC) region	7
Asean	6
West Asia	5
Commonwealth of Independent States (CIS)	5
South Asia	4
Excluding West Asia	4
Oceania	2
Other European countries	1
Other America	0

> The Indian pharmaceutical industry is the world's 3rd largest by volume and 14th largest in terms of value

> Total annual turnover of pharmaceuticals was ₹2,89,998 crore for the year 2019-2020. Total pharmaceutical exports and import were to the tune of ₹1,46,260 crore and ₹42,943 crore, respectively, in the year 2019-20

> Major segments of pharmaceutical industry are generic drugs, OTC medicines and API/bulk drugs, vaccines, contract research & manufacturing, biosimilars & biologics

- **Support by the govt.**
  - The Indian pharmaceuticals market is supported by the following Production Linked Incentive (PLI) Schemes.
  - PLIs are aimed to boost domestic manufacturing capacity, including high-value products across the global supply chain.

Recent Instructions Given By The Government

- **Deadlines set**
  - Companies with a turnover of over Rs 250 crore will have to implement the revised GMP within six months.
  - However, medium and small-scale enterprises with turnover of less than Rs 250 crore will have to implement it within a year.
  - Those who do not comply with the direction will face suspension of licence and/ or penalty.
- **Introduction of a GMP-related computerised system**
  - The companies will also have to introduce a GMP-related computerised system.

- o These computer programmes will be designed to automatically record all the steps followed and checks done, which will ensure that all the processes are followed.
- **Carry out stability studies as per the climate conditions**
  - o At present, most companies store their samples under recommended conditions and test for various parameters from time to time.
  - o Now, they will have to keep the drugs in a stability chamber, set the proper temperature and humidity, and carry out an accelerated stability test as well.
- **Requirement for companies involved in supplying medicines to domestic/foreign markets**
  - o Currently, companies exporting medicines to other countries already have to be WHO-GMP certified.
  - o However, those manufacturing medicines for the domestic market can be granted permission if they meet the requirements listed in Schedule M of rules under the Drugs & Cosmetics Act.
    - ▪ Among other things, this lists the specifications of the manufacturing units, processes that need to be followed, and equipment needed.

Significance Of This Step

- **For better quality control**
  - o Currently, 2,000 of the 10,500 manufacturing units in the country have been found to be compliant with the global WHO-GMP standards.
  - o Now, all will have to implement the revised GMP, ensuring quality medicines for the domestic market and abroad.
- **Risk-based inspection had pointed out several deficiencies**
  - o Recently, a risk-based inspection of 162 manufacturing units and 14 testing labs found several deficiencies.
  - o This included *absence of testing of raw materials before use, absence of quality failure investigation of its products, faulty design of manufacturing and testing areas*.
  - o The recent instructions by the government would lead to at least 11 specific changes in the manufacturing process on the ground.
    - ▪ This includes introduction of a pharmaceutical quality system, quality risk management, product quality review, and validation of equipment.
- **India's image as the pharmacy of the world**
  - o Indian pharma industry is facing a credibility crisis.
    - ▪ The WHO, in October 2022, said that the deaths of dozens of children in Gambia and Uzbekistan were due to contaminated cough syrups manufactured by Indian drug makers.
    - ▪ In February 2023, blindness, severe eye infections and a death in the US were linked to India-made eye drops.
  - o In this context, the recent instructions would help restore India's image as the pharmacy of the world.'

Concerns Raised By Smaller Companies

- **It is the smaller companies who have to make drastic changes**, as most bigger companies in India already follow the global GMP.
  - o Therefore, **at least 36 months** would be needed to make the necessary changes.
- To help such companies, the department of pharmaceuticals has a scheme to provide **credit-linked capital and interest subsidy** for upgradation of MSME units.

In a reply to a written question, the Government informed the Rajya Sabha that over 136 people were arrested between 2019 to 2021 under the Official Secrets Act out of which two were convicted.

About the Official Secrets Act (OSA)

Key Provisions	**Spying/Espionage (Section 3 of the Act)** Any person who is in the vicinity of, or enters, any prohibited place or obtains, collects, records or publishes or communicates to any other person any secret information which might be directly or indirectly, useful to an enemy or affects the sovereignty and integrity of India, the security of the State or friendly relations with foreign States *will be charged with spying and will be punishable for fourteen years if the crime has been committed in any office or establishment of the defence forces and for three years in another cases.* ✓ Secret information can include official code or password, or any sketch, plan, model, article or note or other document or information.
	Disclosure Of Secret Information (Section 5 of the Act) If any person having in his possession or control any secret information- (a) willfully communicates it to any person other than a person to whom he is authorized to communicate it; (b) uses the information in his possession for the benefit of any foreign power or in any other manner prejudicial to the safety of the State; (c) fails to take reasonable care of secret information shall be punishable with imprisonment for a term which may extend to three years, or with fine, or with both.
	Unauthorized use of uniforms; falsification of reports, forgery, personation, and false documents (Section 6 of the Act) A person will be held guilty if he, for the purpose of gaining admission or of assisting any other person to gain admission to a prohibited place- (a) uses or wears any naval, military, air force, police or other official uniform (b) makes any false statement in oral or writing (c) forges, alters, or tampers with any official document (d) personates, or falsely represents a person to whom an official document or secret information has been duly issued or communicated
	Interfering With Officers of the Police or Armed Forces If any person in the vicinity of any prohibited place obstructs, knowingly misleads or interferes with or impede, any police officer, or any member of armed forces engaged in duty at a prohibited place will be punishable with imprisonment or fine or both.
	Duty of Giving Information Regarding Offences If any person fails to give any information regarding offences, he shall be punishable with imprisonment which may extend to three years, or with fine, or with both.
	Harbouring Spies If any person knowingly harbours any person who is about to commit or has committed an offence, they shall be guilty of an offence under this section.

Historical Evolution	• In practice since the British era, OSA was first enacted as The Indian Official Secrets Act (Act XIV), **1889** to muzzle the voice of nationalist publications for opposing the British Raj's policies, building political consciousness and facing police crackdowns and prison terms to uphold their mission and convictions. • It was amended and a more stringent version of the act came into being in 1904 when Lord Curzon's was the Viceroy of India. • A newer version was notified in 1923 as The Indian Official Secrets Act (Act No XIX of 1923) which extended to all the matters of secrecy and confidentiality in governance in the country.
Major Instances when it was invoked	1. *Coomar Narain Spy Case, 1985-* one of the longest running espionage case, it involved twelve staff members in the Prime Minister's Office and Rashtrapati Bhavan Secretariat who entered into a criminal conspiracy through Coomar Narain (an employee of a Mumbai-based engineering and trading company) with officials of the French, Polish and German embassies, communicating secret official codes, classified documents and information pertaining to defence, shipping, transport, finance, planning, and R&AW and Intelligent Bureau reports. These former staff members were sentenced to 10 years of imprisonment in 2002. 2. *S Nambi Narayan Case-* an ISRO scientist accused of passing on rocket and cryogenic technology to Pakistan for illegal gratification. He was acquitted later. 3. *Iftikhar Gilani Case, 2002-* A journalist with the Kashmir Times, he was arrested and charged under the OSA for allegedly possessing secret documents relating to the deployment of troops in the Valley. 4. *Poonam Agarwal Case, 2017-* A journalist charged under OSA for conducting a sting operation on an Army official who criticized the Sahayak system in the Army. 5. *Madhuri Gupta Case, 2018-* former diplomat who had served at the Indian High Commission in Islamabad, was sentenced to three years in jail for passing on sensitive information to the ISI.

Classification of Official Documents	**Declassification Process**
OSA <u>does not mention any criteria</u> for classifying a document as "secret". The Ministry of Home Affairs issues Departmental Security Instructions based on which official documents are classified into five categories depending on the level of sensitivity of the information and the implications of its disclosure for national security. They are- 1. **Top Secret**- Information whose unauthorized disclosure could cause "*exceptionally grave damage*" to national security or national Interest. It is reserved for the <u>nation's closest secrets</u>. 2. **Secret**- Information whose disclosure may cause "*serious damage*" to national security or national interest, or serious embarrassment to the government. It is used for "<u>highly important matters</u>". 3. **Confidential**- Information that might cause "damage" to national security, be prejudicial to national interest and embarrass the government. 4. **Restricted**- Information meant only for official use, which is not to be published or communicated to any person except for official purposes.	• Documents are reviewed <u>every five years</u>. Documents more than 25 years old are transferred to the **National Archives**. • According to the <u>Public Records Act, 1993 and the Public Records Rules, 1997,</u> an officer not below the rank of Under Secretary to the Government of India evaluates and downgrades the classified records being maintained by it. He is given this authority by an office order sent by the records creating agency. • But not all the old files are sent to National Archives. Files related to issues like the Pokhran Nuclear

5. **Unclassified**- Documents that do not require security classification.	Test, 1974 were retained by the Prime Minister's Office.

Right to Information Act (RTI) Vs Official Secrets Act (OSA)

1. **Overriding Effect of RTI**: Section 22 of the RTI Act, 2005 states that it will have an overriding effect over other laws including the OSA. Therefore, in case of an inconsistency about furnishing of information under OSA, it will be superseded by the RTI Act. However, under Sections 8 and 9 of the RTI Act, the government can refuse information. Effectively, if the government classifies a document as **"secret"** under **OSA Clause 6**, that document can be kept outside the ambit of the RTI Act, and the government can invoke Sections 8 or 9.

2. **Importance to Public Interest**: Section 8(2) of the RTI Act states that access to information labelled as secret under the OSA can be provided, if public interest in disclosure outweighs the harm to the protected interests.

Recommendations To Amend OSA

• The 1971 Law Commission (first official body to make an observation regarding OSA) in its report on 'Offences Against National Security' observed that merely because a circular is marked secret or confidential, it should not attract the provisions of OSA if the publication is in public interest and no question of national emergency and interest of the State as such arises. But the Law Commission did not recommend any changes to the Act.

• The Second Administrative Reforms Commission (ARC) in 2006 recommended repealing or replacing OSA with a chapter in the National Security Act containing provisions relating to official secrets as OSA was "incongruous with the regime of transparency in a democratic society". It referred to the 1971 Law Commission report that called for passing an "umbrella Act" to bring together all the laws related to national security.

• The government had set up a committee in 2015 to look into provisions of the OSA considering the RTI Act. It recommended making OSA more transparent and in line with the RTI Act.

Critical Analysis

• The act doesn't properly define a 'secret document' and leaves it to the government's discretion to decide what can come under the category. This loophole is used by the government to prevent the disclosure of any information which can go against its political interests and takes away a citizen's right to information.

• As per **section 3(2)** of this act, an accused can be convicted without even proving him guilty of any act which can impact the safety or interests of the State. It places the burden of proof on the accused, making it difficult for him to prove his case.

• Although RTI has been given overriding powers over OSA, there are still cases where some information requested under RTI can be termed as secret under 'OSA' and excluded from the ambit of RTI.

• But repealing this act can also have a negative impact as sensitive information can be revealed bringing the country at risk. Thus, what is required is that the act should be reviewed properly, and necessary amendments should be made like proper definition for classifying a document as a secret document and the government should not enjoy unlimited powers when it comes to classify an information as secret and public interest should be kept in mind before taking any decision.

Way Forward and Suggestions

The Supreme Court has affirmed that the primacy of the right to freedom of speech, expression, and information should take precedence over the outdated Official Secrets Act. The court has also issued rulings to safeguard whistleblowers, ensuring that individuals who expose bribery should not experience feelings of insecurity.

Jan Vishwas (Amendment of Provisions) Bill, 2023

The Jan Vishwas (Amendment of Provisions) Bill, 2023 which seeks to redefine the regulatory landscape of the country by decriminalizing and rationalizing offences under some enactments was recently passed by both the houses of Parliament. It aims to enhance trust-based governance and promote ease of living and doing business.

About Jan Vishwas (Amendment of Provisions) Bill, 2023

Background	• The bill was first introduced in the Lok Sabha in the year 2022 and was subsequently referred to the Joint Parliamentary Committee (JPC). • The JPC submitted its report in March 2023 which contained a few amendments to the Bill and seven general recommendations providing advice and guidance for future decriminalization efforts. • Most of these recommendations were accepted by the union cabinet and presented in Parliament this Monsoon session where it was well received by everyone and passed by both the houses.
Objective	• To **decriminalize** and rationalize offences in 183 provisions of 42 laws administered by 19 ministries/departments governing environment, agriculture, media, industry and trade, publication, and other domains that create hurdles in ease of doing business in the country. • It seeks to completely **remove or replace imprisonment clauses with monetary fines**, to provide a boost to the business ecosystem and improve the well-being of the public. • The Bill also proposes compounding of offences in some provisions.
Features	The bill proposes to amend various enactments by- • Decriminalizing and removing certain offences. Like all the offences have been removed under the Indian Post Office Act,1898. • Appointing one or more **adjudicating officers** under some acts for determining penalties. These officers are authorized to summon individuals for evidence and conduct inquiries into violations of respective Acts. • Periodically revising fines and penalties for various offences in the specified Acts and increase the minimum amount by 10% every three years.
Need	• **To Eliminate Red Tapism**- There are 1,536 laws in the country resulting in around 70,000 compliances that govern doing business in India. Dealing with these excessive compliances is onerous for business enterprises, especially MSMEs. This leads to red tapism affecting the effectiveness and efficiency of the business. • **For Discontinuing Archaic and Obsolete Laws**- This bill envisages decluttering outdated rules and regulations for vibrant democratic governance which lies in the government trusting its own people and institutions. • **For Decriminalizing Minor Offences**- People convicted for minor offences are required to reach courts, which wastes the time and resources of courts as well as people charged with these minor offences. Thus, decriminalizing minor offences and imposing fines can make things easier. • **To remove Discrepancies in Existing Laws**- unnecessary and contradictory compliance requirements further increases the time for processing applications and granting approvals. This results in escalated costs and dampens the entrepreneurial spirit. Thus, proposed

amendments will help in smoothening the process and attracting more investment.

- **To Reduce Judicial Burden**- According to the National Judicial Data Grid, there were about 4.4 crore of pending cases in Indian Courts till July 2023. The proposed amendment will help in lowering the burden of the judiciary and fast redressal of complaints.

Some Key Laws Covered In The Bill:

- **The Indian Forest Act, 1927**
- **The Air (Prevention and Control of Pollution) Act, 1981**
- **The Information Technology Act, 2000**
- **The Environment (Protection) Act, 1986**
- **The Copyright Act, 1957**
- **The Motor Vehicles Act, 1988**
- **The Railways Act, 1989**
- **The Cinematograph Act, 1952**
- **The Agricultural Produce (Grading & Marking) Act, 1937**
- **The Food Safety and Standards Act, 2006**
- **The High Denomination Bank Notes (Demonetisation) Act, 1978, etc.**

Benefits	Concerns Raised

1. **Rationalizes Criminal Provisions**- It will ensure that citizens, businesses and government departments operate **without fear of imprisonment** for minor, technical or procedural defaults.
 	
2. **Strikes Balance b/w Offence and Punishment**- It establishes a balance between the severity of the offence/violation committed and the gravity of the prescribed punishment.
 	
3. **Provides Administrative Adjudication Mechanisms**- Administrative adjudication mechanismsproposed in the Bill will help in reducing undue pressure on the justice system, reduce the pendency of cases and help in a more efficient and effective justice dispensation.
 	
4. **Eliminates Barriers**- Consolidated amendments in various laws with a common objective will save time and cost for both Government and Businesses alike by eliminating barriers and bolstering growth of businesses.
	• The monetary fines or penalties are not a good enough attempt at 'decriminalisation'. Hence, the Bill undertakes 'quasi-decriminalisation.'
	
	• Omitting all offences under the Indian Post Office Act, 1898 raises two questions-
	
	  1. As most of the offences are likely to be committed only by post office officials, it is not clear how deleting those offences will help improve ease of living and doing business.
	
	  2. The omitted offences include unlawful opening of postal articles. This may lead to unjustified invasions of privacy.
	
	• Under the Environment Protection Act, 1986, the adjudicating officers appointed for awarding penalties for environmental offences are senior officials of the Executive branch who may lack required technical and judicial competence to take decisions on such penalties.
	
	• The reasons for creating the Environmental Protection Fund are unclear as its purpose overlaps with that of the existing funds of the Central and State Pollution Control Boards.
	
	• Decriminalization of offences under the High Denomination Bank Notes (Demonetization) Act, 1978 might not be relevant as the act used to remove high-value banknotes as legal tender on January 16, 1978. Instead of amending the act, it should be repealed.

The Justice G. Rohini-headed Commission which was given the task to examine sub-categorization of Other Backward Classes (OBC) caste groups recently submitted its report to the Hon'ble President of India six years after its constitution.

- President will forward to the Ministry of Social Justice and Empowerment

- The details of the recommendations have not been made public yet, and the government is expected to deliberate on the report before any implementation.

The process of OBC reservation started when the **Kalelkar Commission** was set up in 1953, representing the initial recognition of backward classes beyond the national scope of SCs and STs.

Historical Background on OBC Reservations

1979

The Second Backward Classes Commission (Mandal Commission) was set up in 1979 to determine the criteria for defining the socially and educationally backward classes.

In its report, the Mandal Commission identified 52% of the population as "Socially and Economically Backward Classes" (SEBCs) and recommended 27% reservation for SEBCs in addition to the previously existing 22.5% reservation for SC/STs.

1990

In 1990, the then Union Government implemented the recommendations of the Mandal Commission and provided reservations for Other Backward Classes (OBCs) in government jobs.

Accordingly, OBCs got 27% reservation in jobs in central government services and public sector units.

1992

Following severe opposition, the issue of OBC reservation reached the Supreme Court in 1992 and in the Indra Sawhney vs Union of India judgement, the court set two important precedents-

- *Economic backwardness alone could not be a criterion to qualify for reservation.*
- *The total number of reserved seats/places/positions cannot exceed 50% of what is available.*

Other Interventions

- In 2008, the Supreme Court intervened and directed the central government to exclude the "creamy layer" (advanced sections) among the OBCs from benefiting from the reservation policy, ensuring that it reaches the most disadvantaged.

- In 2018, 102nd Constitution Amendment Act granted constitutional status to the National Commission for Backward Classes (NCBC).

About The Rohini Commission

The Government constituted a four-member Commission headed by Justice (Retd.) G. Rohini, Chief Justice, Delhi High Court in 2017 under article 340 of the Constitution, to examine the issues of the **sub-categorization** of Other Backward Classes with the following terms of reference:

i. To examine the extent of <u>inequitable distribution of benefits of reservation</u> among the castes or communities included in the broad category of Other Backward Classes.

ii. To work out the mechanism, criteria, norms and parameters in a scientific approach for sub-categorization within such Other Backward Classes.

iii. To identify respective castes or communities or sub-castes or synonyms in the Central List of Other Backward Classes and classify them into their respective sub-categories.

iv. To study the various entries in the Central List of OBCs and recommend correction of any repetitions, ambiguities, inconsistencies and errors of spelling or transcription.

**Article 340- allows the President to appoint a Commission consisting of such persons as he thinks fit to investigate the conditions of socially and educationally backward classes within the territory of India and the difficulties under which they labour and to make recommendations as to the steps that should be taken by the Union or any State to remove such difficulties and to improve their condition.

Need for Sub-Categorization

- 27% reservation is granted to OBCs in *jobs and education* under the central government. But, only a few wealthy ones from over 2,600 communities included in the Central List of OBCs have benefitted from this reservation.

- Sub-categorization of OBCs i.e., quota within the 27% quota will ensure equitable distribution of the benefits of reservation.

Many states like Andhra Pradesh, Telangana, Puducherry, Karnataka, Haryana, Jharkhand, West Bengal, Bihar, Maharashtra, and Tamil Nadu have already sub-categorized OBCs by conducting exercises to bring <u>OBC reservation in urban local body polls</u> and updating their caste-related population data.

Final Report	Challenges Faced By The Commission
• **Findings**- Analysis of the data consisting of 1.3 lakh OBC quota jobs in central government over the preceding five years, and OBC admissions to central higher education institutions, including universities, IITs, NITs, IIMs and AIIMS, over the preceding three years showed that- 1. 97% of all jobs and education seats are given to 25% of OBC castes out of which 24.95% of these jobs and seats have gone to just 10 OBC communities. 2. As many as 983 OBC communities (37% of the total) have zero representation in jobs and educational institutions and 994 OBC sub-castes have only 2.68% representation in recruitments and admissions. • **Suggestions**- It has suggested dividing the caste groups into broad categories, where dominant castes (with most access to benefits) will get the smallest share of the 27% reservation, and the historically crowded-out caste groups will be given the largest share of the reservation pie.	1. **Absence of Data:** The population data of various communities was absent, making it difficult to compare with their representation in jobs and admissions. 2. **Delayed Census**: The Ministry of Home Affairs (MHA) in 2018 announced that Census 2021 would also collect data for OBCs, but it was delayed due to the Covid-19 pandemic. 3. **Caste Census Demand:** OBC groups and almost all political parties except the central leadership have continued to demand a caste census. The Bihar legislature has twice unanimously passed resolutions calling for a caste census. Recently, the Patna High Court dismissed a challenge to the decision of conducting a caste survey, upholding the state's right to conduct such a survey.

Related Judgements

- In 2020, a Constitution Bench of the Supreme Court of India reopened the legal debate on sub-categorisation of SCs and STs for reservations. Disagreeing with its 2005 Constitution Bench verdict, the SC asserted that there are unequals within the list of SCs, STs and socially and educationally backward classes (SEBCs).

  ➢ *E V Chinnaiah vs State of Andhra Pradesh, 2005*- In this case, *Chinnaiah* had held that no special sub-quota can be introduced within the quota for SCs and STs for the benefit of castes or tribes that were more backward than the others on these lists. The five-judge bench in this case ruled that state governments had no power to create sub-categories of SCs for the purpose of reservation and only the President has the power to notify the inclusion or exclusion of a caste as a Scheduled Caste.

- *State of Punjab vs Davinder Singh, 2020*- In this case, the court examined the constitutional validity of Section 4(5) of the Punjab Scheduled Caste and Backward Classes (Reservation in Services) Act, 2006 that created sub-classification within the SCs, and sought to reserve half the SC quota for Balmiki and Mazhabi Sikhs. The court supported the sub classification and referred the case to a larger bench for decision.

Extra Mile

What is Reservation?

It is a system used to provide preferential treatment to certain groups of society in the fields of education, jobs, and other areas.

Need for Reservation

- **Historical Injustice**: Marginalized communities like Dalits and Adivasis have faced a long history of injustice and discrimination. To address this issue, reservations provide them opportunities in education and jobs.

- **Caste System**: The Caste system has traditionally relegated certain groups to lower social and economic positions. Reservation aims to promote social and economic equality by providing opportunities for the

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underprivileged sections of society.

- **Inadequate Representation**: Reservation ensures adequate representation of depressed communities in education and employment.

Types of Reservations

1. **Vertical Reservation**: Reservation in educational institutions and jobs in government services for Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBCs) based on their proportion of population in the country or a specific state.

  ➢ **Income Based Reservation**: Provides opportunities and access to education and employment to poor sections of society like reservations for economically weaker sections (EWS) of society.

2. **Horizontal reservation**: Reservation for specific categories of people within the reserved categories like reservations for the differently abled people within the SC category reservation. It is a reservation for Children of veterans who are serving in the armed forces, retired or killed in action, disabled persons, widows and unmarried women, people from rural areas etc.

  ➢ **Gender Based Reservation**: It is based on the principle of gender equality. The Constitution has provided one-third reservation to women in local bodies under Articles 243D and 243T.

  ➢ **Reservation for the Differently Abled:** Based on the principle of inclusivity it aims to create an equal and accessible society for people with disabilities. For example, 4% reservation is provided to disabled persons in government jobs.
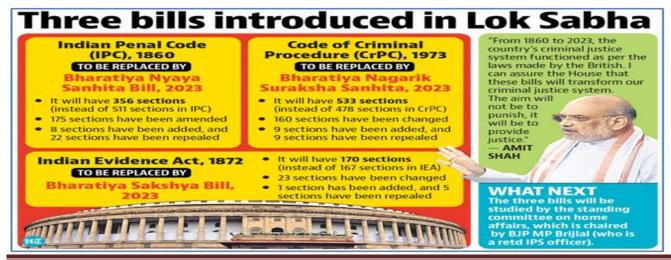
Centre To Overhaul IPC, CrPC, Evidence Act

The Prime Minister, in his address to the public on 15th August 2022, had kept **Panch Pran/** five vows in front of the people of the country, which included-

  1) Goal of Developed India; 2) Remove Colonial Mindset; 3) Take Pride in Our Roots; 4) Unity; 5) Sense of Duty in Our Citizens.

Taking a step in this direction and to completely overhaul the criminal law system introduced by the British, the Union Minister of Home and Cooperation recently introduced three new bills in Lok Sabha which include-

1. Bharatiya Nyaya Sanhita Bill (BNS), 2023, to replace the IPC, 1860;

2. Bharatiya Nagarik Suraksha Sanhita Bill (BNSS), 2023, to replace CrPC, 1973;

3. Bharatiya Sakshya (BS) Bill, 2023, to replace the Indian Evidence Act, 1872

Three bills introduced in Lok Sabha

Indian Penal Code (IPC), 1860
TO BE REPLACED BY
Bharatiya Nyaya Sanhita Bill, 2023
- It will have **356 sections** (instead of 511 sections in IPC)
- 175 sections have been amended
- 8 sections have been added, and 22 sections have been repealed

Code of Criminal Procedure (CrPC), 1973
TO BE REPLACED BY
Bharatiya Nagarik Suraksha Sanhita, 2023
- It will have **533 sections** (instead of 478 sections in CrPC)
- 160 sections have been changed
- 9 sections have been added, and 9 sections have been repealed

Indian Evidence Act, 1872
TO BE REPLACED BY
Bharatiya Sakshya Bill, 2023
- It will have **170 sections** (instead of 167 sections in IEA)
- 23 sections have been changed
- 1 section has been added, and 5 sections have been repealed

"From 1860 to 2023, the country's criminal justice system functioned as per the laws made by the British. I can assure the House that these bills will transform our criminal justice system. The aim will not be to punish, it will be to provide justice."
— AMIT SHAH

WHAT NEXT
The three bills will be studied by the standing committee on home affairs, which is chaired by BJP MP BrijIal (who is a retd IPS officer).

Background

- The Ministry of Home Affairs in 2020 constituted a national level '**Committee for Reforms in Criminal Laws'** headed by (Dr.) Ranbir Singh, former Vice Chancellor of National Law University (NLU), Delhi to undertake a review of criminal laws in India.
- It was tasked to recommend principled, effective, and efficient reforms which-
  - o Ensure the safety and security of the individual, the community and the nation;
  - o Prioritize the constitutional values of justice, dignity and the inherent worth of the individual.
- The committee submitted its report in February 2022.

Objective

- To protect all the rights given by the Constitution to the Indian citizens.
- Not to punish (Penal Provisions) anyone but give justice ('Nyaya') and in this process, punishment will be given where it is required to create a sense of prevention of crime.

Need

- **Colonial legacy-** Since 1860, country's criminal justice system has functioned as per the laws made by the British which were mainly introduced to strengthen and protect colonial rule. It is expedient and necessary to review the existing criminal laws with an aim to strengthen law and order in the country and to make existing laws relevant to the contemporary situation considering the technological advancements with time that have resulted in new dimensions to crime, evidence, and investigation.
- **Simplification and Streamlining-** The laws have become complex over time, leading to confusion among legal practitioners, law enforcement agencies, and the public. To enhance transparency, understanding and better implementation it is important to simplify and streamline the legal procedure so that ease of living is ensured to the common man.
- **Evidence Collection and Presentation-** The Indian Evidence Act was enacted before the advent of modern forensic science and technological tools. To make changes in the laws according to the latest available investigation tools and strategies is the need of the hour.
- **Need for reforms-** The department-related Parliamentary Standing Committee on Home Affairs in its 146th report had recommended a comprehensive review of the criminal justice system of the country. The same was highlighted by the Parliamentary Standing Committee in its 111th and 128th reports through the enactment of comprehensive legislation instead of piecemeal amendments in existing acts.
- **Pending Cases and large number of undertrials**

About The New Bills

> **The Bharatiya Nyaya Sanhita Bill (BNS), 2023**

- This bill repeals the Indian Penal Code (IPC) to streamline provisions relating to offences and penalties by repealing 22 of its provisions, proposing changes to 175 existing provisions and introducing eight new sections. It contains a total of 356 provisions and various offences have also been made gender neutral.
- The Bill retains several parts of the IPC. Changes include introduction of offences of organised crime and terrorism, enhancement in penalties for certain existing offences, and introduction of community service as a punishment for certain petty offences.
- Certain offences under the IPC that have been struck down or read down by courts have been omitted. These include offences of adultery and same-sex intercourse (Section 377).
  - o IPC is a 164-year-old law enacted in 1860 on the recommendation of the first Indian Law Commission 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.

- o It prescribes punishments for crimes like assault and murder, theft and extortion, unlawful assembly and rioting, offences against the state, etc.

Key Highlights of the Bill

- **Sedition**- Section 124A of the IPC act which deals with sedition, instead of being completely repealed has been introduced in a new form under the bill in the form of Section 150 which criminalizes -
  - o exciting or attempting to excite secession, armed rebellion, or subversive activities;
  - o encouraging feelings of separatist activities, or endangering sovereignty or unity and integrity of India.

- These offences may involve exchange of words or signs, electronic communication, or use of financial means. These will be punishable with imprisonment of up to seven years or life imprisonment, and a fine.

  ** Section 150 provides a wider definition for sedition than the one suggested by the 22nd Law Commission which recommended to include the words 'with a tendency to incite violence or cause public disorder' and that the tendency to incite violence should be defined as a 'mere inclination to incite violence or cause public disorder rather than proof of actual violence or imminent threat to violence.' to the definition of sedition under Section 124A.

- **Punishment for Rape**-
  - o All types of gang rape will now include 20 years of imprisonment or life imprisonment.
  - o Rape of a minor (women below 18 years of age) will include the imposition of the death penalty. (IPC allows death penalty for gang rape of women below 12 years of age.)
  - o Under section 69, it criminalizes sexual intercourse (not amounting to rape) under the false pretext of marriage or by deceitful means (includes false promise of employment or promotion, inducement or marrying after suppressing one's identity) and provides for a maximum of 10-year imprisonment for the same and a fine.
    - IPC does not have an explicit clause dealing with such offence and typically covers it under Section 90, where consent obtained through a 'misconception of fact' is deemed invalid. It charges the accused in such cases under Section 375 for the offence of rape.

- **Extending applicability of certain offences to boys:** Under the IPC, importing girls under the age of 21 years for illicit intercourse with another person is an offence. The Bill specifies that importing boys under the age of 18 years for illicit intercourse with another person will also be an offence.

- **Murder**- It specifies a separate penalty for murder committed by five or more people on specified grounds. These include race, caste, sex, place of birth, language, or personal belief. Each offender will be punishable with imprisonment between seven years and life, or death. It will also attract a fine.

- **Mob Lynching**- For the first time, capital punishment has been introduced for the offence of mob lynching under Section 101 apart from the offence being made punishable with 7 years of imprisonment or life imprisonment and a fine.

- **Decriminalizes**-
  - o The offence of adultery in line with the Supreme Court's 2018 ruling in the case of *Joseph Shine v. Union of India*, where Section 497 of the IPC, which criminalized adultery, was held unconstitutional.
  - o Same-sex relationship pursuant to the Supreme Court unanimous reading down of Section 377 of the IPC which criminalized same-sex relations between consenting adults in *Navtej Singh Johar v. Union of India* (2018). This modification reflects a more inclusive and tolerant approach to personal choices and relationships.

- **Retains the Clause on Marital Rape**- Exception 2 to Section 63 (which defines the offence of rape) reads– 'Sexual intercourse or sexual acts by a man with his own wife, the wife not being under eighteen years of age, is not rape.'

- **Speedy Legal Procedure-** A charge-sheet will have to be filed within 90 days, and the court can give permission for another 90 days. Probe will have to be completed within 180 days and sent for trial. After trial, judgment will have to be given in 30 days.

- **Terrorism-**
  o For the first time, the word terrorism has been defined under the BNS Bill which was not there under the IPC.
  o The bill defines a terrorism as an act that threatens the unity, integrity and security of India, to intimidate the general public or a segment thereof, or to disturb public order.
  o 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;
    ▪ 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.
  o Punishment for attempting or committing terrorism includes:
    ▪ Death or life imprisonment, where the offence has resulted in death of any person,
    ▪ Imprisonment term between five years and life in other cases.
    ▪ An offender will also be liable to a fine of at least five lakh rupees.
  o The bill penalizes conspiring, organizing, or assisting in preparation of any terrorist act with an imprisonment term between five years and life imprisonment, and a fine of at least five lakh rupees.

- **Defamation**- For this offence, the bill provides for a simple imprisonment of up to two years, or with fine, or with both or with community service.

- **Criminalizes Torture**- Clause 118 of the bill criminalizes custodial torture that voluntarily causes hurt, for the purpose of extorting from the sufferer any confession or any information which may lead to the detection of an offence or misconduct and provides for a punishment of imprisonment of up to seven years, and a fine.

- **Organized Crime-**
  o The Bill defines organized crime as a continuing unlawful activity such as kidnapping, extortion, contract killing, land grabbing, financial scams, and cybercrime carried out by use of violence, intimidation, or other unlawful means to obtain material or financial benefit, and carried out by individuals acting singly or jointly, as members of or on behalf of a crime syndicate.
  o It provides for the following punishment for the attempting or committing organized crime-
    ▪ Death or life imprisonment, where the offence results in death of any person;
    ▪ Imprisonment term between five years and life, in other cases plus a fine.
  o It makes attempting or committing petty organized crime punishable with imprisonment between one and seven years, and a fine.
    ▪ Petty Organized Crimes- ones which cause general feelings of insecurity among citizens and are committed by organized criminal groups/gangs like pick pocketing, snatching, and theft.

It proposes several important changes to the Criminal Procedure Code (CrPC), 1973 which guides the criminal justice system and contains a total of 533 sections. CrPC is the main legislation on <u>procedure for administration of substantive criminal law in India enacted in 1973</u>. It deals with public nuisance, prevention of offences and maintenance of wife, child and parents and provides -

- The machinery for the investigation of crime,

- Apprehension of suspected criminals,

- Collection of evidence,

- Determination of guilt or innocence of the accused person and

- The determination of punishment of the guilty.

Key Highlights of The Bill

- **Greater Use of Technology-** It allows:

  o Trials, appeal proceedings, recording of depositions (including those of public servants and police officers) in electronic mode.

  o Statement of the accused to be recorded through video-conferencing.

  o Summons, warrants, documents, police reports, statements of evidence in electronic form.

  o Recording through mobile the search and seizure of articles and properties, the visit to a crime scene by a forensic expert, and victim's statement.

  o Digital display of details of an arrested accused and the nature of the offence in every police station and district headquarters.

  o Sharing information with the police electronically.

- **Communication devices-** The Bill adds electronic communication including "communication devices" and states that a person is required to produce any document/ device that is likely to contain digital evidence for the purpose of an inquiry, on the directions of a court or police officer.

- **Use of handcuffs-** It permits a police officer to use handcuffs while arresting a person if he is a habitual, repeat offender who escaped from custody, or has committed an organised crime, terrorist act, drug-related crime, illegal possession of arms, murder, rape, acid attack, counterfeit currency, human trafficking, sexual offence against children or offences against the state.

- **Specific safeguards-**

  o Section 41A of CrPC (deals with prominent safeguard against arrests) will be listed as Section 35 in the new bill with an additional provision stating that _no person can be arrested without prior permission of an officer, not below the rank of a deputy SP, in cases where the offence is punishable with less than three years, or if the person is above 60 years of age._

  o On receiving information in cognizable cases where the offence attracts 3-7 years, the police officer will conduct a preliminary inquiry to ascertain within 14 days whether there exists a prima facie case or not.

- **Mercy petitions-** It provides for a provision on procedures for the timeframe to file mercy petitions in death sentence cases which states that-

  o After being informed by jail authorities about the disposal of the petition of a convict sentenced to death, he, or his legal heir or relative can submit a mercy petition within 30 days to the Governor.

  o If it gets rejected, the person can send a petition to the President within 60 days.

  o No appeal against the order of the President shall lie in any court.

- **Sanction to prosecute-** It states that the government must take a decision within 120 days of receiving a request, to grant or reject sanction to prosecute a public servant. If it fails to do so, the sanction will be deemed to have been accorded. No sanction is required in cases including sexual offences, trafficking, etc.

- **Timelines for procedures:** The Bill prescribes timelines for various procedures. For instance, it requires medical practitioners who examine rape victims to submit their reports to the investigating officer within seven days. Other specified timelines include: (i) giving judgement within 30 days of completion of arguments (extendable up to 60 days), (ii) informing the victim of progress of investigation within 90 days, and (iii) framing of charges by a sessions court within 60 days from the first hearing on such charges.

- **Arms in procession-** There is no mention of the clause 'to prohibit carrying arms in any procession' in the provisions granting powers to the District Magistrate (DM)**.**
  - Section 144Aof the CrPC gives the district magistrate the power to prohibit the carrying of arms in any procession, mass drill or mass training, to preserve public peace.

- **Medical examination of accused:** The Bill provides that any police officer can request for such an examination.
  - The CrPC Code allows conducting a medical examination of the accused in certain cases, including cases of rape. Such examination is carried out by a registered medical practitioner on the request of at least a sub-inspector level police officer.

- **Forensic investigation:** The Bill mandates forensic investigation for offences punishable with at least seven years of imprisonment. In such cases, forensic experts will visit crime scenes to collect forensic evidence and record the process on mobile phone or any other electronic device. If a state does not have forensics facility, it shall utilise such facility in another state.

- **Signatures and finger impressions:** The CrPC Code empowers a Metropolitan/Judicial Magistrate to order any person to provide specimen signatures or handwriting. Such an order can be given for any investigation or proceeding under the Code.
  - However, such specimen cannot be collected from a person who has not been arrested under the investigation. The Bill expands this to include finger impressions and voice samples. These samples may also be taken from a person who has not been arrested.

- **Samples without arrest-** It contains provisions allowing the magistrate to order any person to give samples of his signature, handwriting, voice or finger impressions for the purpose of investigation without being arrested.

- **Detention by police-** It allows the police to detain or remove any person resisting, refusing or ignoring, or disregarding directions given as part of preventive action.

- **Detention of undertrials:** Under the CrPC Code, if an accused has spent under detention half of the maximum period of imprisonment for an offence, during investigation or trial, he must be released on his personal bond. This does not apply to offences which are punishable by death.
  - The Bill adds that this provision will also not apply to: (i) offences punishable by life imprisonment, and (ii) persons against whom proceedings are pending in more than one offence.

- **Trial in absentia:** It provides for conduct of trial and pronouncement of judgement in the absence of a proclaimed offender. Reversing the burden of proof- with the onus on the accused to prove himself not guilty rather than the state carrying the duty to prove guilt against the accused.
  - Proclaimed offender is the one 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.

- **Copy of FIR-** Section 230 of the new bill ensures that a copy of the FIR is made available to the accused and the victim free of cost and within fourteen days of the date of production or appearance of the accused.

o Every district and police station will designate a police officer who will officially inform the family of the arrested person about his arrest online and in person.

- **Zero FIR**- The Bill permits the filing of a zero FIR from any part of the country.

  o When a police station receives a complaint regarding an alleged offence committed in the jurisdiction of another police station, it registers an FIR and then transfers it to the relevant police station for further investigation; this is called a zero FIR.

The Bharatiya Sakshya (BS) Bill, 2023

It repeals the Indian Evidence Act, 1872 enacted with a view to consolidate the law relating to evidence on which the court could conclude about the fact of the case and then pronounce judgment thereupon.

Key Highlights of the Bill

- **Admissibility of Electronic Evidence-** The Act provides for two kinds of evidence – documentary and oral evidence.

  o Documentary evidence includes information in electronic records that have been **printed or stored** in **optical or magnetic media** produced by a computer. Such information may have been stored or processed by a combination of computers or different computers. The Bill 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 voice mails. It permits the admissibility of an electronic or digital record as evidence and provides it legal validity as documentary evidence.

  o **Oral evidence:** The Bill adds any _information given electronically_ to be considered as oral evidence. Under the Indian Evidence Act, oral evidence includes statements made before Courts by witnesses in relation to a fact under inquiry.

- **Expands the Scope of Secondary Evidence-**

  The Bill expands secondary evidence to include: (i) oral and written admissions, and (ii) the testimony of a person who has examined the document and is skilled in the examination of documents. Under the Act, secondary evidence may be required under various conditions, such as when the original: (i) is in the possession of the person against whom the document is sought to be proved, or (ii) has been destroyed. The Bill adds that secondary evidence may be required if the genuineness of the document itself is in question.

  The Indian Evidence Act, 1872 provides for primary and secondary evidence.

  ✓ Primary evidence includes the original document and its parts, such as electronic records and video recordings.

  ✓ Secondary evidence includes documents that can prove the contents of the original like certain copies of the original documents and oral accounts of the document's content.

  The Indian Evidence Act permits the following to be admissible as proof of evidence in the form of secondary evidence:

  (i) Copies made from original by mechanical processes;

  (ii) Copies made from or compared with the original;

  (iii) Counterparts of documents as against the parties who did not execute them;

  (iv) Oral accounts of the contents of a document given by some person who has himself seen it and giving matching hash # value of original record.

- **Production of Documents:** It states that no Court will require any privileged communication between the Ministers and the President to be produced before it.

- **Joint Trial**: A joint trial refers to the trial of more than one person for the same offence. The Act states that 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. The Bill adds an explanation to this provision. It states that a trial of multiple persons, where an accused has absconded or has not responded to an arrest warrant, will be treated as a joint trial.

Significance v/s Concerns Raised Regarding New Legislations

Significance	Concerns Raised
1. **Introduction of New Offences**- Including several new offences absent in the IPC like acts endangering sovereignty, organized crime, terrorism offences, mob lynching, etc. And prescribing community service as punishment is a welcome step.	1. **Borrowed Provisions-** Some of the offences are borrowed heavily from existing legislation on organized crime and the UAPA without clarifying the reasons for, or consequences of such borrowing.
2. **Fair Investigations**- Mandatory video recording of search and seizure during police investigations is a major reform ensuring fairness in the investigation process.	2. **Arbitrary Arrests**- The way the offences have been drafted proposes no solution to the problem of vague criminal law provisions which exacerbate the risk of arbitrary arrests. Like, there is no provision on Sedition but the introduction of "acts endangering sovereignty" imposes the same danger.
3. **Expanding Usage of Electronic Evidence**- Accepting electronic evidence is a major step in the era of technology.	3. **Concerns Regarding Forensic Evidence**- The collection and analysis of forensic evidence along with the way they are used in courts remain unaddressed in the proposed procedural or evidence law.
4. **Speedy Delivery of Justice**- Specific timelines for time-bound investigations, trials and judgements will ensure speedy delivery of justice and help save time and resources.	4. **Bail Adjudication-** Overcrowded prisons and the large proportion of undertrials is a burgeoning crisis demanding reforms in bail adjudication. But the new Bills forget to realize that bail should be the default option, and incarceration the exception.
5. **Citizen Centric Approach-** has been adopted for supply of a FIR and informing victims about the progress of the case, including by digital means.	5. **Institutional Reforms**- The Bills misses out on bringing reforms in the police force, the prison administration, or even courts.
6. **Zero FIR-** allowing registration of FIR in any police station irrespective of where the offence was committed will empower the victims and allow quick and better investigations.	6. **Marital Rape-** has not been criminalized despite India having tough laws to deter sexual violence against women.

Way Forward

- Problems like low pay, harsh service rules, poor working conditions, constant pressure, and an uncared-for system need to be addressed.

- More people from diversified communities should be involved while working on reforms on criminal laws to make them more effective.

- *Introducing community service* is a welcome step for offences like misbehaving in public post drinking. Similar steps should be taken to deal with social problems like defamation, drinking etc. instead of criminalizing them.

- As the Bills are placed before the parliamentary standing committee for its consideration, there should be efforts to improve the drafts in terms of both language and substance, *provisions concerning victims' rights and participation, hate crime, bail, sentencing framework and legal aid should be accommodated.*

- Efforts should be made to make the envisioned criminal law reforms foster the rule of law and fortify the pursuit of justice for ages to come.

PM Modi's Visit to Greece

Following his visit to South Africa to attend 15th BRICS summit, PM Modi paid an official visit to Greece. This was the first visit by an Indian Prime Minister to Greece in 40 years.

Key Highlights Of The Visit

- **PM Modi conferred with the Grand Cross of the Order of Honour**
  - PM Modi was conferred with the Grand Cross of the Order of Honour by Katerina N. Sakellaropoulou, President of Greece.
  - He became the **first foreign Head of Government to receive this honour**.

- **Decision to upgrade Greek-Indian bilateral ties**
  - The leaders of both the countries decided to upgrade Greek-Indian bilateral ties to the level of a "**Strategic Partnership**".
  - They agreed to work to further expand bilateral cooperation in political, security and economic spheres.

- **Decision to double bilateral trade by 2030**
  - Appreciating the increase in bilateral trade and economic engagement in recent years, the leaders also directed that <u>both sides shall work to double bilateral trade by 2030</u>.

- **Institutional dialogue framework at the level of National Security Advisers**
  - The two sides also agreed to have an institutional dialogue framework at the level of National Security Advisers besides vowing to <u>strengthen defence industrial cooperation</u>.

- **MOU on Cooperation in the field of Agriculture**
  - This included the establishment of a <u>Hellenic-Indian Joint Sub-committee on Agriculture</u> for facilitating sectoral cooperation for mutual benefit.

- **Cultural cooperation**
  - Both the leaders also agreed to encourage joint efforts in preserving and protecting ancient sites, and strengthen cooperation within UNESCO.

- **Mobility and Migration Partnership Agreement (MMPA)**
  - Both leaders agreed that an early finalization of a Mobility and Migration Partnership Agreement (MMPA).
  - This agreement would be mutually beneficial, facilitating in particular the free movement of workforce between the two countries.
    - Describing **ties between India and Greece as a "natural reunion",** PM Modi said this agreement would facilitate skilled migration between the two countries.

India-Greece Bilateral Relationship

- India and Greece enjoy civilizational ties, which have strengthened in recent years through cooperation in areas like maritime transport, defence, trade and investments and people-to-people ties.

Historical Linkages

- India's contacts with Greece began over 2500 years ago. Trading between the Mauryan Kings and Greece is evidenced by coinage and writings.

- In 326 BC, **Alexander's expedition** led him to the North-Western part of the Indian subcontinent as far as the Hyphasis (Beas River), where he fought with King Porus (King of Pauravaa - between the Jhelum and Chenab), and Ambhi who ruled at Taxila.

- Chanakya, in Chandragupta's Court records in Arthashastra about Yavan Ambassador in the Kings' court, named Megasthenes.

- **Gandhara art** is believed to be a fusion of Indian and Greek influences.

Political Linkages

- Diplomatic relations were established between the two countries in May 1950. Greece opened its Embassy in Delhi in 1950 and India in Athens in 1978.

- On J&K, Greece's position reflects our concerns. It has not issued any statement on the recent developments in Kashmir.

- Greece supports India's quest for permanent seat in an expanded UNSC.

Trade & Commerce

- Two-way trade has grown from $507 million in 2016-17 to **$1.94 billion in 2022-23**.

- The main Export items from India to Greece are Aluminum, organic chemicals; fish and crustaceans; iron and steel; plastic; textile articles etc.

- The main import items from Greece are Aluminium foil; mineral fuels, mineral oils and products of their distillation; sulphur; lime and cement etc.

Defence Cooperation

- Bilateral defence cooperation received an impetus after the visit of Raksha Mantri (RM) to Greece in 1994.

- Since then, the two countries regularly cooperate with each other on defence related matters.

- INS Chennai naval ship of Indian Navy visited Souda Bay, Crete in July, 2023 and undertook a Passage Exercise with the Hellenic Naval Ship in the Aegian Sea.

Science & Technology

- With the aim of encouraging and supporting cooperation in the field of science and technology on the basis of equality and mutual benefit, the Agreement on Science & Technology was signed in April 2007.

- A team of 7 scientists from ISRO/DoS participated in the 44th Committee on Space Research (COSPAR) assembly at Athens in July, 2022.

- On the sidelines, opportunities for cooperation in Space between India and Greece were explored.

Cultural Cooperation

- Dimitrios Galanos a Greek, became the first European Indologist gaining world reputation.

- His translations of Sanskrit texts into Greek made knowledge of the philosophical and religious ideas of India available to many Europeans.

- A "**Dimitrios Galanos**" Chair for Hellenic Studies has been established at Jawaharlal Nehru University in New Delhi, India in September 2000.

- Prof. **Nicholas Kazanas**, a distinguished Greek Indologist, was declared as one of the awardees of the prestigious **Padma Shri award** on the occasion of the 72nd Republic Day of India 2021.

- According to 2011 Greek census, the number of Indian community is 11,333. Currently, they are estimated to be between 13000-14000.

- They have been living across various parts of Greece for many years and are predominantly from Punjab and largely Sikhs.

EDITOR'S CUT Jeddah Peace Summit on Russia-Ukraine War

- Saudi Arabia hosted Ukraine, the U.S., some European countries and major developing countries **including India and Brazil** for peace talks on the Russia-Ukraine war.

- The aim of this summit was to reach an agreement on key principles for a peaceful end to Russia's war in Ukraine.
  - o This meeting follows an earlier meeting in Copenhagen more than a month ago to discuss the Russia-Ukraine conflict.

- While Russia did not participate, Ukraine was present at the meeting. India was represented by NSA Ajit Doval.

India's Stand At The Meeting

- **Highlighted the challenges presented by Russia-Ukraine war**
  - o The meeting confronts a two-fold challenge — **resolution of the situation** and **softening the consequences of the conflict**.
  - o Efforts must be directed on both fronts simultaneously and much more groundwork is needed to ensure this.

- **Emphasised that a solution acceptable to all relevant stakeholders is needed to end the war**
  - o NSA Doval said that several peace proposals have been put forward, and each has some positive points but none is acceptable to both sides.
    - **Ukrainian President Zelenskyy** had proposed **10-point peace plan** during last year's G-20 summit.
    - China also came up with a **12-point-plan** for the political settlement of the Ukraine crisis.
    - In June 2023, **leaders of 7 African countries**, led by South African President Cyril Ramaphosa, visited Russia and Ukraine.

- They proposed a 10-point proposal which suggested the recognition of Russia and Ukraine's sovereignty, and the release of prisoners.
  - o The key question that needs to be addressed in this meeting is whether a solution acceptable to all relevant stakeholders can be found.

- **India's approach in Russia-Ukraine war**
  - o India's approach has been and always will be to promote dialogue and diplomacy. This is the only way forward for peace.
  - o India has engaged both Russia and Ukraine since the beginning of the conflict at the highest levels.
    - While India has **not explicitly condemned the Russian invasion** of Ukraine, PM Modi had said this is not the era of war.

- India has also condemned the Bucha massacre, expressed concerns at the nuclear rhetoric by the Russian leadership.
- In recent days, India condemned the collapse of the Black Sea Grain Initiative, where Russia walked out of the deal.
  - New Delhi is providing both humanitarian assistance to Ukraine and economic assistance to its neighbours in the Global South.

India's participation: What does it signify?

- NSA Ajit Doval's participation in the peace conference on Ukraine shows India's willingness to step up efforts to end the war.

- The fact it has raised its level of representation — up from the Secretary-rank official in June — reflects the sense of purpose on India's side.
  - In Copenhagen meet, where Ukraine was on the agenda, India was represented by MEA' Secretary (West).

- As chair of G20, New Delhi is keen to have a consensus document at the leaders' summit in New Delhi next month.

WHO Report on Tobacco Control

- WHO has released a report on tobacco control measures recently.

- This was the ninth WHO report on the global tobacco epidemic. It tracks the progress made by countries in tobacco control since 2008.

- In 2008, WHO had developed the **MPOWER measures** to help countries implement the _demand-reduction measures_ of the WHO Framework Convention on Tobacco Control.

MPOWER measures include:

- **M** monitor tobacco use and prevention policies;
- **P** protect people from tobacco smoke;
- **O** offer help to quit tobacco
- **W** warn about dangers of tobacco;
- **E** enforce bans on tobacco advertising; and
- **R** raise taxes on tobacco products.

Key Highlights Of The Report

- **Population coverage**
  - In the 15 years since the MPOWER measures were first introduced, 5.6 billion people in the world – or 71% of the entire population – remain protected by at least one of the measures.
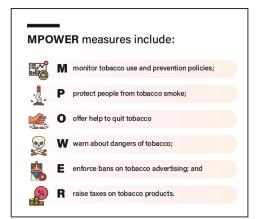
- **Number of countries implementing MPOWER measure**
  - The number of countries implementing at least one MPOWER measure has increased from 44 countries in 2008 to 151 in 2022.
  - At least four countries – Brazil, Turkiye, Netherlands, and Mauritius – have implemented all the measures.
  - There are at least 44 countries in the world that still do not implement any MPOWER measure.

- **Flagged the dangers of e-cigarettes**
  - E-cigarettes are harmful to both the people using them and those around them, especially when used indoors.
  - The tobacco industry is aggressively promoting E-cigarettes as a safer alternative to cigarettes. This is undermining the progress made on tobacco control.

- **On controlling second-hand smoking**

  o The report focuses on controlling second-hand smoking (being in the presence of someone who is smoking).

  o It talks of creating smoke-free public areas and also de-normalising the act of smoking in the society.

  o Of the estimated 8.7 million tobacco-related deaths each year, 1.3 million are of non-smokers exposed to second-hand smoke.

India Specific Observations

- India has the **highest level of achievement** when it comes to putting health warning labels on tobacco products and providing tobacco dependence treatment.

- With 85% of cigarette packs carrying health warnings both on the front and back, India figures among the top 10 countries in terms of the size of health warnings.

- The cigarette packets in the country also carry a toll-free number for a quit-line.

Steps Taken By India

- **Warnings on OTT platform**

  o One of the biggest steps in the works is **implementing warnings on OTT platform** content when actors are seen using tobacco products.

  o This would make India the first country in the world to do so.

- **Cigarette and Other Tobacco Products Act (COTPA) 2003**

  o It regulates the advertisement, promotion, and sponsorship of tobacco products, prohibits smoking in public places, mandates pictorial health warnings on tobacco product packaging, and sets rules for the sale of tobacco products to minors.

- **Pictorial Health Warnings**

  o India has implemented prominent and graphic pictorial health warnings on tobacco product packaging.

- **Ban on Smoking in Public Places**

  o COTPA prohibits smoking in public places, including indoor areas, workplaces, and public transportation.

- **Tobacco Advertising and Promotion**

  o India has restrictions on tobacco advertising, promotion, and sponsorship.

  o Direct and indirect advertising of tobacco products, as well as tobacco sponsorship of events, are regulated to discourage tobacco consumption.

- **Tobacco Taxation**:

  o The Indian government has periodically increased taxes on tobacco products to make them less affordable and discourage consumption.

- **National Tobacco Control Program (NTCP)**

  o India established the NTCP to implement tobacco control strategies at the national, state, and district levels.

- o The program focuses on awareness generation, capacity-building, and strengthening enforcement mechanisms.

G20 Health Ministers' Meeting

- The health ministers' meeting under G20 ended in Gandhinagar with the adoption of the Indian Health Ministry spear-headed outcome document.
- The outcome document was agreed upon by all G20 delegations, except for a contentious paragraph on the ongoing war in Ukraine in the 25-point document.

Outcome of the G20 Health Ministers' Meeting

- **Consensus around many areas**
  - o India's G20 presidency has managed to build consensus on:
    - setting up an R&D and manufacturing network for vaccines, therapeutics, and diagnostics, and
    - setting up a platform for making open-source, inter-operable digital solutions readily available.
- **Global Initiative Digital Health (GIDH) launched**
  - o Global Initiative Digital Health — a platform for sharing digital goods and knowledge — was also launched at the meeting.
  - o It will have **four pillars**
    - investment tracker,
    - ask tracker to track technologies the countries need,
    - a library of available digital tools, and
    - a platform for knowledge-sharing to implement these technologies at scale.
- **On health emergency prevention preparedness and response**
  - o The priority on health emergency prevention preparedness and response ended with a commitment to negotiate a legally binding WHO convention, agreement, or other international instrument by May 2024.
- **Proposals of the Pandemic Fund**
  - o G20 countries noted that they continued to be committed to strengthening dialogue through the G20 Joint Finance-Health Task Force.
  - o They welcomed the conclusion of the **First Call for Proposals of the Pandemic Fund**.
    - The proposals focus on the **three priorities of the first Call**, namely, strengthening disease surveillance, lab capacity, and the public health work force.
    - The Pandemic Fund will provide a dedicated stream of additional, long-term financing to strengthen critical HEPR capabilities in low-income and middle-income countries.

      (HEPR - health emergency preparedness, response and resilience)
    - The pandemic fund established during the previous G20 presidency has **$2 billion** now and proposals for funding have already been initiated.

What Is Digital Health?

- Digital health refers to the use of technology, such as mobile devices, software applications, and other

digital tools, to improve health and healthcare delivery.

- Basically, it is a multidisciplinary concept that includes <u>concepts from an intersection between technology and healthcare</u>.

- It encompasses a wide range of technologies and services, including telemedicine, electronic health records, wearable devices, health information exchange, and more.

- **India's CoWIN, UNICEF's RapidPro and FamilyConnect** etc. are few notable examples of digital health initiatives.

o The real-time information platform, RapidPro, is a core solution in UNICEF's digital health portfolio.

o UNICeF's FamilyConnect sends targeted life cycle-based messages via SMS to pregnant women, new mothers, heads of households etc.

Global Initiative on Digital Health (GIDH) Launched under G20 India Presidency

What Is GIDH?

- **GIDH is one of the key deliverables of India's G-20 Presidency.**

- It will <u>consolidate the evidence</u> and <u>amplify recent and past gains in global digital health</u> while strengthening mutual accountability to enhance the impact of future investments.

- GIDH will be a WHO Managed Network ("Network of Networks") that will promote equitable access to digital health.

  o It will do so by sharing digital goods and knowledge.

- The GIDH will ensure inclusivity, integration, and alignment of healthcare goals by not leaving anyone behind.

Aims of GIDH

- **ALIGN** efforts to support the Global Strategy on Digital Health 2020–2025;

- **SUPPORT** *quality assured technical assistance* to develop and strengthen *standards-based and interoperable systems* aligned to global best practices, norms and standards;

- **FACILITATE** the deliberate use of quality assured digital transformation tools that enable governments to manage their digital health transformation journey.

Pillars of GIDH

It will have **four pillars (**given above)

Strategies to be employed by GIDH

- The GIDH will bring countries and partners together to achieve measurable outcomes by:

  o developing clear **priority-driven investment plans** for digital health transformation;

  o improving **reporting and transparency** of digital health resources;

  o facilitating **knowledge exchange and collaboration** across regions and countries to accelerate progress;

  o increasing **technical and financial support** to the implementation of the Global Strategy on Digital Health 2020–2025 and its next phase.

- The 15th BRICS summit was held at the Sandton Convention Centre in Johannesburg, South Africa.
- A major outcome of the BRICS Summit was the decision of the BRICS leaders to expand its membership to include six new members.
  - BRICS decisions are unanimous, that is, all members have to agree for any move to go ahead.

About 15th BRICS Summit

- **Host:** This year's summit was hosted by South Africa.
  - South Africa became Chair of BRICS on 1 January 2023.
- **Theme**
  - BRICS and Africa: Partnership for Mutually Accelerated Growth, Sustainable Development and Inclusive Multilateralism
- **Five priorities for 2023**
  - Developing a partnership towards an equitable Just Transition
  - Transforming education and skills development for the future
  - Unlocking opportunities through the African Continental Free Trade Area
  - Strengthening post-pandemic socio-economic recovery and the attainment of the 2030 Agenda on Sustainable Development
  - Strengthening multilateralism, including working towards real reform of global governance institutions and strengthening the meaningful participation of women in peace processes

Key Highlights of 15th BRICS Summit

- **Outcome Document:** At the end of summit, member countries adopted **Johannesburg II Declaration**.
  - The outcome document called upon member countries to work on following themes:
    - Partnership for Inclusive Multilateralism
    - Fostering an Environment of Peace and Development
    - Partnership for Mutually Accelerated Growth
    - Partnership for Sustainable Development
    - Deepening People-to-People Exchanges
    - Institutional Development
  - Afghanistan is missing from the BRICS declaration, but the document mentioned the **legitimate aspirations** of India, Brazil and South Africa to be part of the UNSC.
  - It acknowledged G20 as a premier multilateral forum and **called the Russia-Ukraine war a "conflict" this time instead of "situation"**.
  - India's proposal of disaster-resilient infrastructure was in the declaration as well.
    - It reiterated the importance of BRICS cooperation in the field of disaster management.
- **Expansion of BRICS Without Tinker With The Name**
  - The 15th BRICS Summit invited **six countries to join the alliance**. These countries are - Iran, the United Arab Emirates, Saudi Arabia, Argentina, Egypt, and Ethiopia.
  - Their membership will begin in January 2024.

- o This is significant as this move can strengthen BRICS' claim of being a 'voice of the Global South'.
- **BRICS Expansion: Significance**
  - o **Spokesperson of the developing world**
    - Adding new members strengthens the group's heft as a spokesperson of the developing world.
  - o **Increased weight of the organisation**
    - BRICS currently represents around 40% of the world's population and around a quarter of the world's GDP.
    - With the additions, it will represent **almost half the world's population, and will include three of the world's biggest oil producers**, Saudi Arabia, the UAE and Iran.
  - o **China's increasing dominance**
    - This move also raises concerns about China's increasing dominance as China is driving the expansion of the group.
    - The fact that regional rivals Saudi Arabia and Iran are now part of BRICS is in itself remarkable.
    - China happens to be the biggest buyer of Saudi Arabia's oil, and had recently brokered a peace deal between Tehran and Riyadh.

BRICS

- BRICS brings together 5 major emerging economies - Brazil, Russia, India, China and South Africa.
- Before expansion, BRICS as a platform represented **42% of the world population, 30% of the world's territory, 23% of global GDP, and around 18% of world trade**.

Timeline of BRICS

- **2001 -** British economist Jim O'Neill of Goldman Sachs coined the term 'BRIC'.
  - o He coined the term to highlight the potential of these four economies from an investors' interest perspective.
- **2006** - An informal meeting of the grouping was held in 2006 among Russia, India, and China on the sidelines of the G8 Outreach Summit in Russia.
- **2009 –** First BRIC's summit was held in Russia.
- **2010 –** South Africa became the member and BRIC became BRICS.
- **2015 –** New Development Bank, also known as BRICS Bank, was launched.

Rationale behind the creation of BRICS

- **Lack of representation from voices of the 'Global South'**
  - o In the past, India and other Asian and African countries have criticised the dominance of European and Western countries at international forums and institutions, such as the United Nations.
- **Countering the influence of USA**
  - o It also came amid a solidification of the United States' status as the sole superpower after the USSR's collapse in 1991, and a realisation of countering its influence.
- **To enhance cooperation**
  - o BRICS came about to enhance cooperation between these five countries.
  - o This includes aspects of:
    - political cooperation through meetings, and
    - economic cooperation such as through the New Development Bank, which is meant to provide financial support to developing markets for infrastructure and other projects.
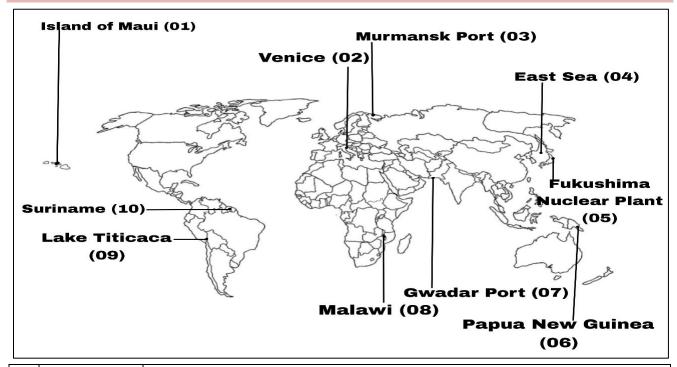
Challenges Faced by BRICS

- Lack of a binding ideology
  - Both China and Russia are now viewing the West with a lot more suspicion than before.
  - This is due to Russia - Ukraine War and frequent roadblocks in US-China ties.
  - India, meanwhile, has been deepening its relations in spheres of economy and technology with the US, of late.
  - This makes having a common policy and cooperation within the grouping difficult.
- Bilateral differences between member countries, especially India and China
- Diversity in terms of socio-cultural and political systems
- Economic slowdown faced by member countries
- China's overwhelming presence which reduces the space for other countries.

International Places In News

Island of Maui (01)

Murmansk Port (03)

Venice (02)

East Sea (04)

Fukushima
Nuclear Plant
(05)

Suriname (10)

Lake Titicaca
(09)

Gwadar Port (07)

Malawi (08)

Papua New Guinea
(06)
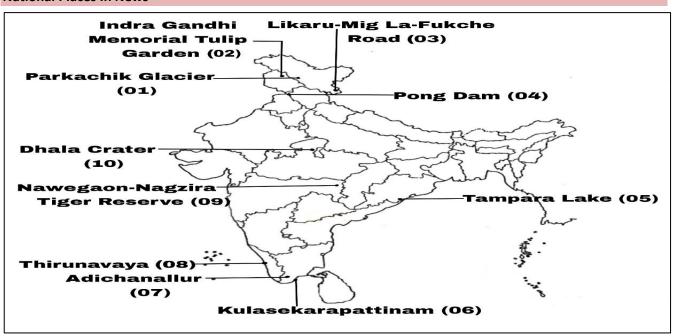
01	Island of Maui	Multiple wildfires are raging through Hawaii, especially the island of Maui. It is the second largest Hawaiian island. It is also known as "The Valley Isle". The island is adored for its world-famous beaches, the sacred Lao Valley, and views of migrating humpback whales.
02	Venice	UNESCO proposed to add Venice to the list of World Heritage Sites in Danger list. It is located in northern Italy. It is a collection of over 118 small islands. The islands are located in the shallow Venetian Lagoon, an enclosed bay that lies between the mouths of the Po and the Piave rivers.
03	Murmansk Port	India's engagement with Russia's Arctic region has been strengthening with India-bound goods constituting the maximum share of cargo handled this year by Murmansk Port. It is one of the largest ice-free ports in Russia. It is located on the Kola Peninsula at the coast of Barents Sea.
04	East Sea	China and Russia hold a joint air and sea drill in Sea of Japan. It is a marginal sea of the western Pacific Ocean. It is located in Eastern Asia that is bounded by Japan and Sakhalin Island to the east and by Russia and Korea on the Asian mainland to the west. The Japanese archipelago separates the sea from the Pacific Ocean.
05	Fukushima nuclear plant	The 1.34 million tonnes of treated radioactive water from Fukushima nuclear plant is to be released into the Pacific Ocean. It is a disabled nuclear power plant located in Fukushima Prefecture, Japan. The 9.0 magnitude earthquake and tsunami in March 2011 caused major damage to the plant. The chain of events caused permanently damaged, making them impossible to restart.
06	Papua New Guinea	US Secretary of Defence said the US was not seeking a permanent base in Papua New Guinea. It is an island country that lies in the south-western Pacific.It includes the eastern half of New Guinea (the world's second-largest island) and many small offshore islands.

07	Gwadar Port	A convoy of Chinese engineers working on the Gwadar Port was attacked by the militants of the Balochistan Liberation Army (BLA). It is a deep seaport located on the Arabian Sea in Pakistan's Balochistan Province. It is deemed as a link between China's One Belt One Road project. The port is managed by a Chinese government company.
08	Malawi	Parliamentary delegation from Malawi is visiting India. It is a landlocked country in South-eastern Africa. It is bordered by Zambia, Tanzania and Mozambique. It's capital and largest city is Lilongwe. Lake Nyasa, known in Malawi as Lake Malawi, accounts for more than one-fifth of the country's total area.
09	Lake Titicaca	Water levels in Lake Titicaca falls to historic lows due to climate change. It is the largest freshwater lake in South America. It is situated between Peru and Bolivia. It is located in Andes Mountains of South America. At 3,800 meters above sea level, it is the world's highest navigable body of water. It has been on UNESCO's World Heritage tentative list since 2005.
10	Suriname	A MoU has been signed between the Indian Pharmacopoeia Commission (IPC) and the Ministry of Health of Suriname. It is a small country on the northeastern coast of South America. It is bordered by the Atlantic Ocean, French Guiana, Guyana and Brazil.
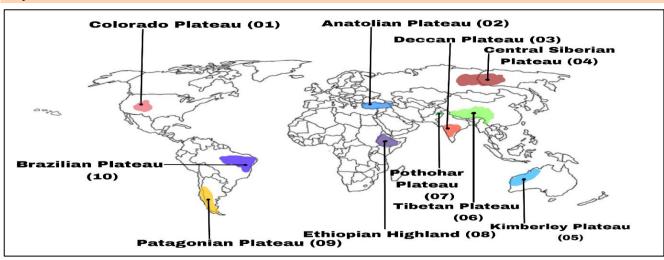
National Places In News

01	Parkachik Glacier	A study has shed light on the formation of glacial lakes around Parkachik Glacier. It is a mountain glacier in Kargil, Ladakh. This ice mass falls into the Suru River. It is one of the largest glaciers in the Suru River valley. The Suru River valley is a part of the southern Zanskar Ranges in the western Himalayas.
02	Indira Gandhi Memorial Tulip Garden	It entered the World Book of Records (London) as Asia's largest such park. It is located Srinagar, Jammu and Kashmir. It is spread over an area of about 30 hectares. It is situated on the foothills of the Zabarwan Range with an overview of Dal Lake. The garden houses about 48 varieties of tulip flowers.
03	Likaru-Mig La-Fukche road	Border Roads Organisation (BRO) started the construction of the Likaru-Mig La-Fukche road close to Hanle in Eastern Ladakh's Demchok sector. The road will

		reach an altitude of about 19,400 feet, surpassing the existing highest motorable road at Umling La in Ladakh. Fukche is situated three kilometers away from the contested Line of Actual Control (LAC).
04	**Pong dam**	Punjab put on high alert as inflow of water into Bhakra and Pong dam's increases. It is a manmade reservoir. It was constructed in 1975 on river Beas in wetland zone of Shivalik hills of Kangra, Himachal Pradesh. In 1983, entire reservoir was declared as Wildlife Sanctuary. It is the highest earth fill dam in India. Pong Dam Lake has been declared as Ramsar Site in 2002.
05	**Tampara Lake**	The National Green Tribunal, Eastern Zone, has directed the Odisha government not to go ahead with 'illegal' construction in and around Tampara Lake. It is a fresh water lake situated on the right bank of the Rushikulya River. It has been designated as a protected Ramsar site since 2021.
06	**Kulasekarapattinam**	The Centre has approved the establishment of a new spaceport in Kulasekarapattinam. It is a town in the Thoothukudi (formerly Tuticorin district) of Tamil Nadu. Its name is derived from pandyan ruler Maravarman Kulasekara Pandyan I.
07	**Adichanallur**	The Union Finance Minister visited Adichanallur and laid the foundation stone for the 'Iconic Site Museum' at the Adichanallur site. Adichanalluris an ancient and historical Iron-age burial site located in Thoothukudi, Tamil Nadu. It is set along the banks of the Tamirabarani (Porunai) river.
08	**Thirunavaya**	A large number of megalithic hat stones were found at Nagaparamba, near Thirunavaya in Malappuram, Kerala. It is situated on the northern bank of Bharathapuzha river and is considered the land of ancient Mamankam. It is one of major Hindu pilgrimage centres in Kerala.
09	**Nawegaon-Nagzira Tiger Reserve**	A young male tiger died in a road hit near Murdoli village in the buffer zone of the Nawegaon-Nagzira Tiger Reserve. It is located in the Gondia, Maharashtra. Navegaon is also a home to almost 60% of the bird species found in entire Maharashtra. It was notified as the 46th Tiger Reserve of India in December 2013.
10	**Dhala crater**	Study suggests that Ureilite meteorite has formed Dhala crater. It is located in Madhya Pradesh, and has recently gained attention as Asia's largest and the world's seventh-largest impact crater. About 2500-1700 million years ago, it was formed by the collision of a meteorite called Urelite.

Major Plateau of Worlds

01	**Colorado Plateau**	It includes Utah, Arizona, and New Mexico. It is divided by the Colorado River and the Grand Canyon. It is the largest plateau in America, and it covers an area of 337,000km2and its highest elevation is about 2,450m above sea level.
02	**Anatolian Plateau**	It is also known as Asia Minor, most of Turkey lies on this plateau. It is an inter montane plateau lying between Pontiac and Taurus Mountain ranges. Tigris – Euphrates Rivers flow through this plateau. Precious wool producing Angora goats are found here.
03	**Deccan Plateau**	It cuts across eight states of India. It is bordered by two mountain ranges, the Western Ghats and the Eastern. The plateau includes the Deccan Traps which is the largest volcanic feature on Earth.
04	**Central Siberian Plateau**	It occupies a great part of central Siberia between the Yenisei and Lena rivers. To the south it is bounded by the Altai Mountains, Salair Ridge, Kuznetsk Alatau, the Eastern and Western Sayan Mountains. The plateau is underlain by crystalline rocks of the stable Siberian Platform.
05	**Kimberley Plateau**	It lies in the northern part of Australia. This plateau is made of volcanic eruption. Many minerals like iron, gold, lead, zinc, silver and diamond are found here. Diamond is also found here.
06	**Tibetan plateau**	It is the highest, largest and most famous plateau in the world. It is located in South-Central Asia and Stretches through the countries of Tibet, China, and India. It is sometimes termed as the Third Pole because its ice fields contain the largest reserve of fresh water outside the polar regions.
07	**Pothohar Plateau**	It is located in the northeastern part of Pakistan. The plateau is bordered by the Jhelum River to the east, by the Indus River to the west, by the Margalla Hills and the Kala Chitta Range to the north, and by the Salt Range to the south. The plateau encompasses four districts which include Jhelum, Chakwal, Rawalpindi and Attock.
08	**Ethiopian Highland**	It is the highest plateau in Africa and forms the largest continuous area of its altitude in the continent. It is sometimes called the Roof of Africa due to its height and large area. Most of the Ethiopian Highlands are part of central and northern Ethiopia, and its northernmost portion reaches into Eritrea.
09	**Patagonian Plateau**	It is a Piedmont plateau lying in southern part of Argentina. It is a rain shadow desert plateau. It is bounded, by the Patagonian Andes to the west, the Colorado River, the Atlantic Ocean, and the Strait of Magellan to the south.It is an important region for sheep rearing.
10	**Brazilian Plateau**	It is a large plateau that covers almost half of Brazil. The Brazilian Highland is divided into three plateaus mainly Atlantic, Central, and the Southern plateau. The Atlantic Plateau is located at the eastern coast of Brazil.

National Medical Commission's Guidelines and Its Criticism

The National Medical Commission (NMC) has put on hold the regulations that make it mandatory for doctors to prescribe generic drugs.

- In light of the criticism received by the Indian Medical Association (IMA) as well as the as the Indian Pharmaceutical Alliance (IPA), the NMC put on hold the Medical Practitioner (Professional Conduct) Regulations, 2023.

- Even the country's apex drug regulator, the Central Drugs Standard Drug Control Organisation (CDSCO), questioned the language in the notification.

- The participating bodies suggested that the guidelines be kept in abeyance until the WHO's good manufacturing practices (GMPs) are implemented.

- The participants said that prescribing only generic drugs will prompt pharmacies to sell generic drugs at high-profit margins, disincentivising firms that manufacture quality branded generics.

Medical Practitioner (Professional Conduct) Regulations, 2023

- On August 2nd, the National Medical Commission had published the **Medical Practitioner (Professional Conduct) Regulations, 2023** aimed at **reshaping prescription practices**.

- It mandated that registered medical practitioners prescribe medications using "generic", "non-proprietary", or "pharmacological" names.

- The guidelines define a generic drug as a "drug product that is comparable to brand/reference listed product in dosage form, strength, route of administration, quality and performance characteristics, and intended use."

- It says branded generic drug is one which has come off patent and is manufactured by drug companies and sold under different companies' brand names.

- The guidelines say, "*Every RMP (Registered Medical Practitioner) should prescribe drugs using generic names written legibly and prescribe drugs rationally, avoiding unnecessary medications and irrational fixed-dose combination tablets*."
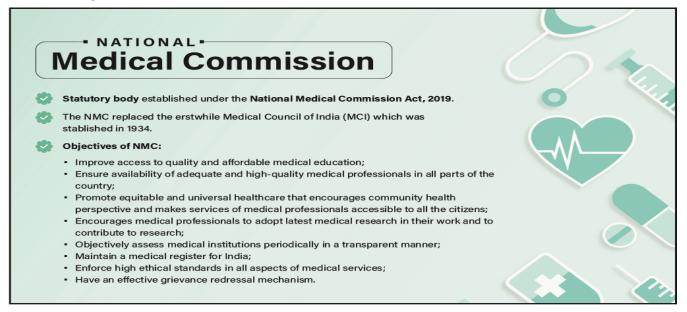
NMC WILL HAVE FEWER MEMBERS, MOST OF THEM NOMINATED

	Medical Council of India	National Medical Commission
Members	100+	25
Tenure	5 yrs	4 yrs (part-time members 2 yrs)
Appointment	70% Elected	Majority nominated
Extension	Could be renominated/reelected	Those nominated by Centre cannot be renominated
Quorum	15 of 100+ members	13 of 25 members
Meeting mandate	At least once a year	Every quarter

- The **guidelines have also talked about punitive measures against those violating**.

- Besides the instructions on generic drugs, the NMC guidelines included directives on *issues ranging from continued medical education, usage of social media platforms and maintaining a dynamic register of doctors.*

- It also **barred doctors from attending events sponsored by pharmaceutical companies**.

- However, the NMC guidelines have not gone down well with the Indian Medical Association (IMA).

Issued Raised By Indian Medical Association (IMA)

- The IMA issued a statement in response to the regulations introduced by the NMC.

- The IMA says the **biggest impediment to generic drugs is the uncertainty about its quality**.

  o The statement added that less than 0.1% of the drugs manufactured in India are tested for quality & patient care and safety are not negotiable.

- The IMA said that **step should be deferred till the Government can assure the quality of all the drugs released into the market**.

- The IMA says **it has been demanding for long that only good quality drugs should be made available in the country and prices should be uniform and affordable**.

- It urges the Government to have '**one drug, one quality, one price**' system whereby all brands should either be sold at the same price or banned and only generics allowed while ensuring highest quality of these drugs.

- **National Medical Commission**
  - Statutory body established under the **National Medical Commission Act, 2019**.
  - The NMC replaced the erstwhile Medical Council of India (MCI) which was stablished in 1934.
  - Objectives of NMC:
    - Improve access to quality and affordable medical education;
    - Ensure availability of adequate and high-quality medical professionals in all parts of the country;
    - Promote equitable and universal healthcare that encourages community health perspective and makes services of medical professionals accessible to all the citizens;
    - Encourages medical professionals to adopt latest medical research in their work and to contribute to research;
    - Objectively assess medical institutions periodically in a transparent manner;
    - Maintain a medical register for India;
    - Enforce high ethical standards in all aspects of medical services;
    - Have an effective grievance redressal mechanism.

National Curriculum Framework (NCF)

- The National Curriculum Framework (NCF) was released by the Union Minister of Education recently.
  - The draft proposals were released for public feedback in April 2023.

- The final/revised version of the NCF mandates **teaching of 3 languages** (including 2 Indian languages) in classes 9-10, and 2 languages (including 1 Indian language) in class 11-12.
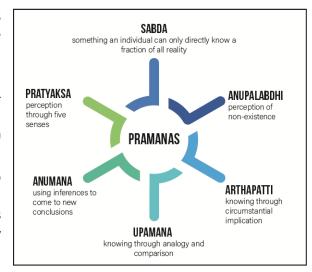
What are the National Curriculum Frameworks (NCFs)?

- **The National Education Policy 2020 (NEP 2020)** aims to devise 4 NCFs, for which a comprehensive strategy has been worked out jointly by Ministry of Education (MoE) & NCERT.

- **The National Steering Committee** under the chairmanship of (former ISRO chief) K. Kasturirangan was set up by the MoE to undertake and develop NCFs.

- 4 NCFs are shown in figure beside -

- **NCFs aims to bring about a paradigm shift in education** with focus on holistic development of children, emphasis on skilling, vital role of teachers, learning in mother tongue, cultural rootedness.

4 NCFs

- National Curriculum Framework for Early Childhood Care and Education (NCFECCE)
- National Curriculum Framework for School Education (NCFSE)
- National Curriculum Framework for Teacher Education (NCFTE)
- National Curriculum Framework for Adult Education (NCFAE)

- The NCF has been revised four times in the past (in 1975, 1988, 2000, and 2005). If implemented, the suggested modification would be the **5th one**.

- It's important to note that the NEP 2020 and the NCFs, based on the education policy, **are not binding on the states**.

Pre-draft of the National Curriculum Framework for School Education (NCFSE)

● It covers the framework of curriculum for age groups **3 to 18 years**.

● A key part of the document is **inclusion of values and its "rootedness" in India** in:

  ○ **content and learning of languages**,

  ○ pedagogical approaches including tools, resources and philosophical basis.

● It advocated the teaching of three languages (referred to as R1, R2 and R3) in classes 6, 7 and 8, and two languages in classes 9 and 10 (R1 and R2).

  ○ **No guidelines were provided for language learning in classes 11 and 12.**

  ○ R1 denoted the mother tongue or home language, R2 could be any other language (including English), and R3 was any language that wasn't R1 or R2.

● The document leans towards making students **acquainted with true sources of knowledge**, which have been a philosophical preoccupation of ancient Indians. **These sources focus on 6 pramanas (in fig. beside).**

● **Moral development:** Through **panchakosha** vikas or 5-fold development. This concept is an ancient explanation of the importance of the **body-mind link** in human experience and understanding.

● **For Grade 10 certification:** Students will have to take two essential courses from humanities, maths and computing, vocational education, physical education, arts education, social science, science and interdisciplinary areas.

● **Grade 11 and 12:**

  ○ Students will be offered choice-based courses in the same disciplines for more rigorous engagement.

  ○ **Modular Board Exams** will be offered as opposed to a single exam at the end of the year and final result will be based on cumulative result of each exam.

  ○ **Immediate transition from annual to semester system in Class 12.**

The Final Version of the NCFSE

● **Holding the Class 12 board exam twice a year:** To ensure students have enough time and opportunity to perform well.

  ○ Students can appear for a board exam in subjects they have completed and feel ready for.

  ○ They will also be allowed to retain the best score.

● **Mandatory and optional subjects:**

  ○ So far, the students from Classes 9 to 12 studied five mandatory subjects, with an option of adding one more subject.

  ○ **Now, the number of mandatory subjects for Classes 9 and 10 is seven, and it's six for Classes 11 and 12.**

  ○ **Optional subjects have been grouped in 3 parts in the NCF.**

    ■ **1st optional group** includes art education (both visual and performing arts), physical education and vocational education.

    ■ **2nd group** includes Social Science, Humanities, and interdisciplinary areas.

    ■ **3rd group** includes Science, Mathematics, and computational thinking.

- **Emphasis on Indian languages:** It mandates the compulsory instruction of 3 languages (referred to as R1, R2 and R3) up to Class 10. At least 2 of these 3 languages must be native to India.
  - In classes 11 and 12, students will have to study two languages and one of them has to be an Indian language.
  - **The final NCF makes the study of Indian languages imperative** across schools and boards, contrary to the optional nature of these subjects at present.
- **Offers flexibility:**
  - It offers students the freedom to pursue a mix of science and humanities to reduce the rigid boundaries separating arts, commerce and science in Classes 11 and 12 across school boards.
  - It also offers freedom to all boards to change to **semester or term-based systems** in Class 12 in the long term.
- **For Classes 6 to 8**: The NCF states that:
  - 20% content would be from the local level for the Social Science curriculum,
  - 30% content would be from the regional level,
  - 30% would be from the national level, and
  - 20% content would be global.

Care Protocol for Babies In India

- Former British nurse **Lucy Letby** was sentenced to life in prison earlier this week after being found guilty in the worst child serial killer case in the history of the U.K.
- Letby killed infants by injecting them with air, others were force-fed milk and two were poisoned with insulin.

How Is Neonatal Safety Maintained in India?

- A new-born infant, or neonate, is a **child under 28 days of age**. During these first 28 days of life, the child is at highest risk of dying.

- There are no exclusive rules for neonatal care and safety, or protection against external harm in Indian hospitals.

- However, there are provisions and checks against issues like inadvertent mix-up of babies at birth and abduction.

Patient Safety Provisions in India

- Patient safety is a fundamental element of public healthcare.
- As per the Union Health Ministry document titled, *'National Patient Safety Implementation Framework (2018-2025)',* patient safety is defined as the freedom for a patient from unnecessary harm or potential harm associated with provision of healthcare.
- Patients in India are protected under multiple layers of law that are largely fragmented.
- The first idea of patient safety is enshrined in the *Hippocratic Oath* itself.
- Additionally, the *Consumer Protection Act, 2019* deals with medical negligence and deficiency of services.
- Legal rights of the patients are set out in the *Clinical Establishment Act, 2010.*
- The *National Pharmaceutical Pricing Authority (NPPA) and Drugs Controller General of India* have mechanisms to see that patients' rights in terms of medication and devices are protected and that they are not overcharged, among other things.

Issues Neonates Face

- **Infant Mortality Rate –**
  - WHO data shows that in 2019, **47% of all under-five deaths occurred in the new-born period with about one third dying on the day of birth** and close to three quarter dying within the first week of life.
  - The current **infant mortality rate for India in 2023 is 26.6 deaths per 1,000 live births**, a 3.89% decline from 2022.
  - ✓ Infant mortality rate for India in 2022 was 27.6 deaths per 1,000 live births.

- o Children who die within the first 28 days of birth <u>suffer from conditions and diseases associated with lack of quality care at birth or skilled care and treatment immediately after birth</u> and in the first days of life.

- **Pre-term Birth –**
  - o Pre-term birth, intrapartum-related complications (birth asphyxia or lack of breathing at birth), infections and birth defects cause most neonatal deaths.
  - o Women who receive midwife-led continuity of care (MLCC) provided by professional midwives, educated, and regulated to internationals standards, are 16% less likely to lose their baby and 24% less likely to experience pre-term birth.

Conclusion

- The WHO has advised families that **prompt medical care should be sought in case of danger signs, including feeding problems**, or if the new-born has reduced activity, difficult breathing, a fever, fits or convulsions, jaundice in the first 24 hours after birth, yellow palms and soles at any age, or if the baby feels cold.

- **Families are also required to register the birth and bring the baby for timely vaccination**, according to national schedules. Some new-borns require additional attention and care during hospitalisation and at home to minimise their health risks.

Smart Cities Mission & Rankings

The Union Housing and Urban Affairs Ministry named **Indore** the best city and **Madhya Pradesh** the best state in its India Smart Cities Awards 2022.

- **Surat** and **Agra** were named second and third best among cities and Tamil Nadu second in states, with the third prize being shared by Rajasthan and Uttar Pradesh.

- The cities were selected based on their ranking in terms of progress of projects, project outcomes and presentations submitted for the awards.

About Smart Cities Mission

- Smart Cities Mission was launched by the Union government in **June, 2015**.

- The main objective of the Mission is to **promote cities that provide core infrastructure, clean and sustainable environment and give a decent quality of life to their citizens through the application of 'smart solutions'**.

Need for Such Mission

- Cities accommodate ~31% of India's current population and contribute 63% to the GDP (Census 2011).
  - ✓ By 2030, urban areas are expected to accommodate 40% of India's population and contribute 75% to the GDP.

Core Infrastructure Elements *of* Smart Cities Mission

- Adequate water supply
- Assured electricity supply
- Sanitation including solid waste management
- Efficient urban mobility and public transport
- Affordable housing, especially for the poor
- Robust IT connectivity and digitalization
- Good governance, especially e-governance and citizen participation
- Sustainable environment
- Safety and security of citizens, particularly women, children and the elderly
- Health and education

- Population growth in cities leads to infrastructure management and service delivery challenges.

- The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model to serve as a beacon to other aspiring cities.

Coverage of Smart Cities Mission

- The mission will cover **100 cities** that have been distributed among the States / UT on the basis of an equitable criteria.

- The formula gives equal weightage (50:50) to **urban population** of the State/UT and the **number of statutory towns** (a town with a municipality, corporation, cantonment board or notified town area committee) in the State/UT.

- Based on this formula, each State/UT will, therefore, have a certain number of potential Smart Cities, with each State/UT having at least one.

Strategy of Smart Cities Mission

- Components of **area-based development** in the 100 Smart Cities Mission in India comprise **city improvement** (retrofitting), **city renewal** (redevelopment) and **city extension** (greenfield development), along with a **pan-city initiative.**

  - ✓ Area-based development that will transform existing areas, including slums, into better planned residential areas by retrofitting and redevelopment, thereby improving habitability of the whole city.

  - ✓ Greenfield projects that will develop new areas in the city to accommodate the expanding population in urban areas.

- **Pan-city development** envisaging the application of select smart solutions to the existing city-wide infrastructure.

Administrative Structure of Smart Cities Mission

- Guidelines on Smart City provide monitoring at three levels – national, state and city.

- **National**: An Apex Committee, headed by the *Secretary of the Ministry of Urban Development* and comprising representatives from related ministries and organisations, has the mandate to approve proposals, monitor progress and release funds.

- **State**: A High Powered Steering Committee (HPSC) to be headed by the *Chief Secretary of the State*, which would steer the Smart City Mission as a whole.

- **City**: A Smart City Advisory Forum in all Smart Cities, comprising the District Collector, Chief Executive Officer of Special Purpose Vehicle (an SPV is created for implementation at the city level.

  - o Its role is to release funds, and implement, monitor and evaluate the Smart City development projects. Member of Parliament, member of Legislative Assembly, Mayor, local youth, technical experts and representatives of the area Resident Welfare Association to advise and enable collaboration.

Financing of Smart Cities Mission

- The Smart Cities Mission in India is a **Centrally Sponsored Scheme**.

- It requires state governments and urban local bodies (ULBs) to contribute an equal amount for implementing projects under the *Smart City Proposal (SCP).*

Progress Made by Smart Cities Mission

- As per data submitted by the Ministry of Urban Affairs & Housing in February 2023, **more than two-thirds of the total 7,804 projects under the Smart Cities Mission (SCM) have been completed**.

- o According to SCM guidelines, the Union government is expected to provide financial support to the tune of Rs 48,000 crore to the 100 smart cities over a period of five years (2017-22) — almost Rs 100 crore per city per year on average.
- o Compared to Rs 14,100 crore in FY 2022-23, the budgetary allocation for the Smart Cities Mission was **hiked in the Union Budget for FY 2023-24 to Rs 16,000 crore**.
- Of the total proposed projects under SCM, 6,041(76 per cent) projects worth **Rs 1,10,635 crore** have been completed and the remaining 1,894 projects worth Rs 60,095 crore will be finished by June 30, 2024.
- With about 768 projects, **Karnataka** topped the list of states with the most completed projects, followed by **Madhya Pradesh** (577), **Uttar Pradesh** (553), and **Tamil Nadu** (531).
- **Raipur** (235) in Chhattisgarh, **Indore** (220) in Madhya Pradesh, **Tumakuru** (199) in Karnataka, and **Varanasi** (104) in Uttar Pradesh were identified as the cities with the highest number of completed projects in their states.

Committee on Stalled Real Estate Projects

A 14-member committee, constituted to examine stalled real estate projects and recommend ways to complete them, submitted its report.

Major Finding of the Committee

- **Stalled Projects –**
  - o The first question before the committee was how many and where are the legacy stalled projects located.
  - o The committee's report cited the Indian Banks' Association (IBA) as estimating that **4.12 lakh dwelling units of Rs.4.08 lakh crore were "stressed"** and about 2.40 lakh (44%) of these were in the National Capital Region.

Background

✓ Union Ministry of Housing and Urban Affairs had set up a committee in March, 2023.

✓ The committee was chaired by former NITI Aayog CEO and India's G20 Sherpa **Amitabh Kant**.

✓ It included officials of the Union Finance Ministry, Uttar Pradesh and Haryana state governments, the Insolvency and Bankruptcy Board of India, the National Housing Bank and the Real Estate Regulatory Authority (RERA) of Haryana and UP.

✓ The committee has submitted its report to the Housing and Urban Affairs Minister.

- o Another 21% of the units were in the Mumbai Metropolitan Region.
- o The committee concluded that the main reason for the stress in these projects was the "**lack of financial viability**", which had led to cost overruns and time delays.
- o The committee said the **way to solve the problem would be to improve the Internal Rate of Return of the projects in order to attract funding**.
- o In order to make the projects viable, all stakeholders — that is the developers, financiers, land authorities etc. — would have to take a "haircut" or accept less than what is due to them.

Major Recommendations of the Committee

- **Mandatory RERA Registration –**
  - o The committee began its list of recommendations by reiterating provisions of the **Real Estate (Regulation and Development) Act, 2016**.
  - o RERA Act mandates that all projects where the land is over 500 square metres or the number of apartments to be constructed are more than eight are registered with the respective state RERA. **Registration of the projects would lead to greater transparency**.
- **Rehabilitation Package for Stalled Projects –**
  - o One of the main recommendations of the committee was for **state governments to set up a rehabilitation package to get the stalled projects running again**.

- o Those developers who sign up for the package would have to commit to completing the projects in three years.
- o The committee gave the example of a model package for Noida and Greater Noida.
- o This includes a "Zero Period" for two years starting with the onset of the COVID-19 pandemic in 2020 where interest and penalties on developers by the authorities would be waived.
- o **Developers would be allowed to get a "co-developer" on board to complete the work**.
- o The committee proposed a "partial surrender policy", in which developers can give back some of the unused lands to the authority in exchange for a waiver on the dues for that land.

- **Special Window for Affordable and Mid-Income Housing (SWAMIH) Fund –**
  - o The report said the MoHUA should prepare a detailed scheme for using the SWAMIH Fund to proactively finance the stalled projects and sent it to the Finance Ministry.
  - o It said the requirement of minimum Internal Rate of Return and first charge in the SWAMIH fund should be reworked.

Who Will Implement This Recommendations?

- '**Land**' is a state subject and most of the recommendations of the committee fall within the purview of the respective state governments.
- According to Housing and Urban Affairs Ministry officials, the report has been sent to all states
  - ✓ In the case of UP, the NOIDA and Greater Noida authorities have already moved towards implementing the rehabilitation package envisaged in the report.
- It remains to be seen if other states will accept the committee's findings and implement the measures recommended by it.

Special Window for Affordable & Mid-Income Housing (SWAMIH) Scheme

- In November 2019, the Central Government launched the SWAMIH Scheme.
- **Objectives**:
  - o To provide priority debt financing for the competition of stalled housing projects falling under the <u>affordable and middle-income housing categories.</u>
  - o To provide relief to real estate developers that require funding to complete their unfinished projects and consequently ensure the timely delivery of homes to the buyers.
- About 1,509 housing projects comprising approximately 4.58 lakh housing units fulfil the eligibility criteria to benefit from the scheme.

Eligibility: Funding shall be provided to the projects that meet the following criteria:
- o Stalled for lack of adequate funds
- o Affordable and Middle-Income Category
- o Net worth positive projects
- o RERA (Real Estate Regulatory Authority) registered
- o Priority for projects very close to completion

About SWAMIH Fund

- SWAHIM Fund is a government-backed fund, set up as a **Category-II AIF** (Alternate Investment Fund) debt fund registered with SEBI.
  - o Alternative Investment Fund means any fund which is a *privately pooled investment vehicle* which collects funds from sophisticated investors, whether Indian or foreign, for investing it in accordance with a defined investment policy for the benefit of its investors.

- The **Investment Manager** of the Fund is **SBICAP Ventures**, a wholly-owned subsidiary of SBI Capital Markets, which in turn is a wholly-owned subsidiary of the SBI
- The total commitment of funds to be infused by the Government in the affordable and middle-income group housing sector through the Special Window would be **up to Rs. 10,000 crore**.
- The **maximum finance for any single project is Rs. 400 crore**.

Anti-Ragging Laws or Policies in India

Supreme Court of India on Ragging

- **Meaning:** The Court in a 2001 (Vishwa Jagriti Mission) case, defined ragging as:
  - Any disorderly conduct (by words spoken or written or by an act), which has the effect of causing annoyance, hardship or psychological harm/ shame or embarrassment in a fresher or a junior student, adversely affecting their physique or psyche.
- **The cause of indulging in ragging:** To derive sadistic pleasure (by inflicting pain) or showing off power, authority or superiority by the seniors over their juniors or freshers.
- **Key guidelines on anti-ragging:**
  - Setting up **proctorial committees** to prevent ragging and internally address complaints against ragging.
  - If the ragging becomes unmanageable or amounts to a cognisable offence **the same may be reported to the police.**

UGC Guidelines to Prevent Ragging

- In 2009, the SC in another case dealt with the ragging issue appointed a committee headed by former CBI Director **RK Raghavan**.
- The recommendations of the committee were subsequently formalised by the University Grants Commission (**UGC**) in the form of **detailed guidelines for universities on anti-ragging**.
- The guidelines [**The Regulations on Curbing the Menace of Ragging in Higher Educational Institutions**] include 9 explanations of what could constitute ragging:
  - Teasing, treating or handling a fellow student with rudeness;
  - Causing physical or psychological harm;
  - Causing or generating a sense of shame;
  - Academic activity of any other student or a fresher;
  - Exploiting a fresher or any other student for completing academic tasks assigned to an Individual or a group of students;
  - Financial extortion or forceful expenditure;
  - Homosexual assaults, stripping, forcing obscene and
  - Lewd acts, gestures, causing bodily harm.
- At an institutional level, the UGC requires universities **to declare its intent publicly to prevent ragging** and **requires students to sign an undertaking** that they will not engage in ragging activities.
- **The institution shall set up appropriate committees**, including the course-incharge, student advisor, Wardens and some senior students as its members, to actively monitor, promote and regulate healthy interaction between the freshers and seniors.
- **If found guilty by the anti-ragging committee**, the UGC guidelines require any member of the committee to "proceed to file a FIR, within 24 hours of receipt of such information.

Laws to Prevent Ragging in India

- **While ragging is not a specific offence**, it could be penalised under several other provisions of the Indian Penal Code (**IPC**).
- **For example,** the offence of **wrongful restraint** is criminalised under Section 339 of the IPC which is punished with simple imprisonment up to 1 month, or with fine up to Rs 500, or with both.
  - **Wrongful restraint** is an offence when a person is prevented from proceeding in any direction in which that person has a right to proceed.
- **Section 340 criminalises** wrongful confinement which is defined as wrongfully restraining any person in such a manner as to prevent that person from proceedings beyond certain circumscribing limits.
- **Several states have special laws for anti-ragging**. For example,
  - **The Kerala Prohibition of Ragging Act 1998** provides for suspension or dismissal of the student accused of ragging and mandatorily requires the college administration to inform the nearest police station.
  - If an educational institution fails to do so, it would be "deemed abetment" to commit the offence.

Way Ahead

- Fixing the accountability of authorities.
- Add more teeth to anti-ragging laws at the central and state levels.
- Conducting regular campus checks and awareness building exercises (among freshers regarding safeguards available) at the campuses especially during the first few months of the beginning of a new session.

First WHO Traditional Medicine Global Summit

- A year after the WHO Global Centre for Traditional Medicine was set up in India, the country is hosting the **first global summit** with an aim to help identify areas of collaboration in traditional medicine.
- This summit was hosted alongside the ongoing G20 ministerial meeting of the health track in Gandhinagar, Gujarat. The Global Summit was co-hosted by **WHO and Government of India**.
- The main outcome of this global summit came in the form of **Gandhinagar Declaration.**

Key Highlights Of The Summit

- **Dedicated platform for traditional medicine**
  - The summit decided to create a **dedicated platform for *traditional medicine* under the G20 framework**.
  - This platform will aim to foster international collaboration, share best practices, and seamlessly integrate traditional medicine into the heart of mainstream healthcare system.
- **Increased role of WHO centre:** The WHO centre will study not only traditional medicine from India but also collaborate with research institutes abroad to study and generate evidence about their traditional medical practices.

Key Highlights Of The Speech Delivered by WHO Director General Dr Tedros Adhanom Ghebreyesus

- **Highlighted importance of traditional medicines**
  - Traditional, complementary and integrative medicine is especially important for preventing and treating non-communicable diseases, for mental health, and for healthy aging.
- **Role of traditional medicine in finding modern drugs**
  - E.g., aspirin from bark of willow tree, childhood cancer drugs from Madagascar periwinkle, cardiovascular and hypertension drugs from hawthorne and foxglove, and artemesinin from sweet wormwood.

- **Three recommendations for countries:** All countries should:
  - o commit to examining how best to integrate traditional and complementary medicine into their national health systems;
  - o identify <u>evidence-based and actionable recommendations</u> that can inform the next WHO traditional medicine global strategy;
  - o unlock the power of traditional medicine through science.

About Traditional Medicines

- Traditional medicine, as defined by the WHO, is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures.
- These skills are used in the maintenance of health as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness.
- Some traditional medicine systems are supported by huge volumes of literature and records of the theoretical concepts and practical skills.
  - o Others pass down these skills from generation to generation through verbal teaching.
- The most widely used traditional medicine systems today include those of China, India, and Africa.

India & Traditional Medicine

- India has been known to be rich repository of medicinal plants. The forest in India is the principal repository of large number of medicinal and aromatic plants.
- About 8,000 herbal remedies have been codified in AYUSH systems in INDIA.
- <u>Ayurveda, Unani, Siddha and Folk (tribal) medicines</u> are the major systems of indigenous medicines.

Opportunities in AYUSH Sector

- The country has witnessed unprecedented growth in the production of AYUSH medicines, supplements and cosmetics.
- This sector has seen exponential growth from more than $3 billion in 2014 to $18 billion in 2020 and is anticipated to reach $24 billion in 2023.
- Presently, 7,000 **AYUSH-based health and wellness centres** are operational in India.
- There are immense possibilities of investment and innovation in supply chain management, AYUSH-based diagnostic tools and tele-medicine.

Steps Taken by India to Promote AYUSH

- **National AYUSH Mission**
  - o Department of AYUSH, Ministry of Health and Family Welfare had launched National AYUSH Mission (NAM) during 12th Plan.
  - o The basic objective of NAM is to promote
    - AYUSH medical systems through cost effective AYUSH services, strengthening of educational systems,
    - facilitate the enforcement of quality control of Ayurveda, Siddha and Unani & Homoeopathy (ASU &H) drugs
    - sustainable availability of ASU & H raw-materials.
- **New Ministry Formed**
  - o In 2014 Department of AYUSH was made into a separate Ministry of AYUSH, dedicated to traditional medicine and treatment.

- **Recent Steps**
  - o The new category 'AYUSH Aahar' introduced by the FSSAI in its regulations will help the producers of herbal nutritional supplements.
  - o The AYUSH Export Promotion Council has been set up to encourage exports and help find foreign markets.
  - o The government is going to create a network of AYUSH Parks to encourage research and provide a new direction to AYUSH manufacturing.
  - o An incubation centre developed by the All-India Institute of Ayurveda was inaugurated by the Ministry of AYUSH.
    - ▪ This will encourage start-up culture in the field of traditional medicine.

World Health Organization | Global Centre for Traditional Medicine (GCTM)

- ▪ GCTM is a knowledge centre for traditional medicine which is the first and only global outpost centre for traditional medicine across the world.
- ▪ The Centre is located at Jamnagar, Gujarat, India.
- ▪ As lead investor in the WHO GCTM, India has committed an estimated US$ 250 million to support the Centre's establishment, infrastructure and operations.

Goals of GCTM

GCTM lays down five goals. These are:

- ▪ It aims to create a database of traditional knowledge system using technology.
- ▪ It will create international standards for testing and certification of traditional medicines so that confidence in these medicines improves.
- ▪ GCTM should evolve as a platform where global experts of traditional medicines come together and share experiences.
- ▪ GCTM should mobilize funding for research in the field of traditional medicines.
- ▪ GCTM should develop protocols for holistic treatment of specific diseases so that patients could benefit from both traditional and modern medicine.

Recognition & Grant of Equivalence to Qualifications Obtained From Foreign Educational Institutions Regulations, 2023

The UGC has placed *draft guidelines* - Recognition and Grant of Equivalence to Qualifications obtained from Foreign Educational Institutions Regulations 2023 - in public domain for comments/feedback. The norms come at a time foreign universities are setting up campuses in India's GIFT city and Indian universities collaborating with universities abroad to offer dual or joint degrees.

About The Draft Guidelines

- **It covers internationally relevant curricula**, academic and research collaboration with foreign universities and credit recognition under twinning arrangements.

- **Qualification obtained from a foreign higher educational institution** (HEI) shall be recognised and granted equivalence provided the qualification has been awarded by a foreign HEI that is duly recognised in its home country.

- **The student should have pursued the programme through regular**, in-person instruction (and not through online or distance learning).

- **The entry-level requirements for admission** to the programme should be similar to that of a corresponding programme in India.
- **The "similarity" of entry criteria** will be determined through due process by the standing committee set up for the purpose based on -
  - Similarity of minimum duration of the programme in India and the foreign country;
  - Minimum credit requirements
  - Evaluation processes.
- **The regulations will not be applicable** to professional qualifications awarded by foreign educational institutions in disciplines such as Medicine, Pharmacy, Nursing, Law, and Architecture.

Significance Of The Draft Guidelines

- **These guidelines restrict degrees** obtained through distance learning and online mode as well as through franchise agreement and for qualification obtained from schools affiliated to foreign boards.
- **A dedicated online portal** to receive applications for granting equivalence will be created **for a smooth movement of students to the Indian setup.**
- **This equivalence certificate** will certify the "**parity of a qualification**" between a foreign qualification and that awarded by an Indian board or university at the same level.
- The certificate will be valid for **admission** to Indian universities or **employment** purposes.

Issues With The Draft Guidelines

- **The guidelines could be in contravention** with the gazetted notification whereby the Association of Indian Universities' (**AIU**) is currently the competent authority to award equivalence to foreign degrees.
- **UGC should first look at equivalence of Indian degrees**. Degrees issued by Indian universities as per Sec 22 of UGC Act need to be considered equivalent by all state governments.
  - This will solve many issues faced by the graduates from Indian universities.

A New SC Handbook On Gender Stereotypes

The Supreme Court has launched a handbook that contains a glossary of gender unjust terms and suggests alternative words and phrases which may be used.

- The 30-page *Handbook on Combating Gender Stereotypes* aims to free the judiciary and the legal community from the mechanical application of gender stereotypical language in judgments, orders, and court pleadings.

What Is The Handbook?

- The SC handbook aims to <u>assist judges and the legal community in identifying, understanding and combating stereotypes about women</u>.
- The handbook identifies common stereotypical words and phrases used about women, many of them routinely found in judgements.
  - E.g., in the 2017 SC ruling awarding the death penalty for the convicts in the Delhi gang-rape case, the verdict repeatedly uses the word "ravished" to say raped.
  - The handbook quotes other judgements where judges unwittingly use stereotypical characterisations of women.
- This handbook flags some of the stereotype promoting language and suggests alternative language (preferred).
  - E.g., instead of using words like "seductress", "whore" or "woman of loose morals", the word "woman" has to be used.

- o The handbook also prohibits use of words like "hooker" and "prostitute" and said the term "sex worker" be used instead.
- o The word "housewife" will now become "homemaker" for judicial discourses.

- **An attempt to break the false assumptions**

  - o The handbook deals with the so-called inherent characteristics of women.

    - ▪ One of the identified stereotypes is the idea that women are overly emotional, illogical, and cannot take decisions.

    - ▪ The reality is that a <u>person's gender does not determine or influence their capacity for rational thought</u>.

Stereotype promoting language (INCORRECT)	Alternative language (PREFERRED)
Adulteress	Woman who has engaged in sexual relations outside of marriage
Affair	Relationship outside of marriage
Bastard	Non-marital child or, a child whose parents were not married
Biological sex / biological male / biological female	Sex assigned at birth
Born a girl / boy	Assigned female / male at birth
Career woman	Woman
Carnal intercourse	Sexual intercourse
Chaste woman	Woman
Child prostitute	Child who has been trafficked
Concubine / keep	Woman with whom a man has had romantic or sexual relations outside of marriage
Dutiful wife / Faithful wife / Good wife / Obedient wife	Wife
Easy virtue (e.g., a woman of easy virtue)	Woman
Effeminate (when used pejorative-ly)	Accurately describe the characteristic using a gender neutral term (e.g., confident or responsible)
Eve teasing	Street sexual harassment
Faggot	Accurately describe the individual's sexual orientation (e.g., homosexual or bisexual)

- o It also refers to assumptions made about a woman's character based on her expressive choices, such as the clothes she wears, and her sexual history.
- o Such assumptions may impact the judicial assessment of her actions and statements in a case involving sexual violence.
  - ▪ For instance, they diminish the importance of consent in sexual relationships.

Why Is It Important For Judges To Use The Right Words?

- The language a judge uses reflects not only their interpretation of the law, but their perception of society as well.
- Even when the use of stereotypes does not alter the outcome of a case, stereotypical language may reinforce ideas contrary to our constitutional ethos.
- Words transmit the ultimate intention of the lawmaker or the judge to the nation.

National Social Assistance Programme (NSAP)

The Ministry of Rural Development (MoRD) diverted funds from the National Social Assistance Programme (NSAP) for publicising some of its other schemes. This was highlighted by the Comptroller and Auditor General of India's (CAG) performance audit of the NSAP from 2017-18 to 2020-21, tabled in the Lok Sabha.

CAG's Audit of The NSAP

- **The MoRD in 2017** decided to campaign through hoardings in states and UTs for giving due publicity to all programmes/schemes of the ministry.
- The funds for the said campaign were stated to be available under N**ational Rural Employment Guarantee Scheme** and were approved by the competent authority to be incurred under the same head.
- However, **the audit observed** that funds were actually incurred from social security welfare-NSAP schemes.
- Hence, **planned IEC (Information, Education and Communication) activities under NSAP** were not undertaken as envisaged and funds of Rs 2.83 crore were diverted for campaigning in respect of other schemes of the ministry.

- - **MoRD** said the matter had been taken up with the IEC division of the department.
- The CAG also reported **diversion of Rs 57.45 crore across six states/UTs** - Rajasthan, Chhattisgarh, J&K, Odisha, Goa and Bihar.
  - - **For instance,** in Rajasthan, NFBS funds were diverted for payment of insurance premium to LIC for BPL and Aastha Card holders under Pannadhay Jeevan Amrit Yojana (Aam Aadmi Beema Yojana).
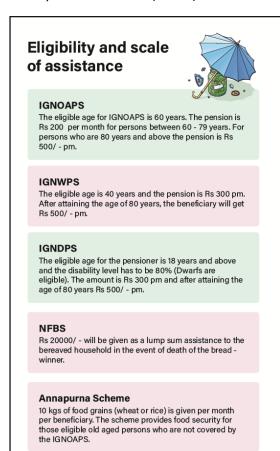
About NSAP

- **Introduction:**
  - It was launched in **1995** as a **Centrally Sponsored Scheme** of the MoRD.
  - **It provides financial assistance** [to Below Poverty Line (BPL) individuals] to the elderly, widows and persons with disabilities and bereaved families on death of primary breadwinner, in the form of **social pensions**.
  - It represents a significant step towards the fulfillment of the **Directive Principles in Article 41 of the Indian Constitution.**
    - **Article 41** directs the State to provide public assistance to its citizens in case of unemployment, old age, sickness, disablement, etc., within the limit of its economic capacity and development.
- **Components of NSAP:**
  - **At its inception,** NSAP had three components namely National Old Age Pension Scheme (NOAPS), National Family Benefit Scheme (NFBS) and National Maternity Benefit Scheme (NMBS).
    - The National Maternity Benefit Scheme (NMBS) was subsequently transferred to the **Ministry of Health and Family Welfare** in 2001.
  - **Presently,** NSAP comprises of five schemes:
    - Indira Gandhi National Old Age Pension Scheme (IGNOAPS),
    - Indira Gandhi National Widow Pension Scheme (IGNWPS launched in 2009),
    - Indira Gandhi National Disability Pension Scheme (IGNDPS launched in 2009),
    - National Family Benefit Scheme (NFBS)
    - Annapurna (launched in 2000).
- **Performance of the NSAP:**
  - According to the CAG report, **about 4.65 crore beneficiaries** availed the old age, widow, disability pensions and family benefit annually during 2017-21.
  - **The Centre released Rs 8,608 crore per annum** on an average during 2017-21.
  - **In addition**, states and UTs have also allocated Rs 27,393 crore per year on an average during the said period for pension and family benefit.

Eligibility and scale of assistance

IGNOAPS
The eligible age for IGNOAPS is 60 years. The pension is Rs 200 per month for persons between 60 - 79 years. For persons who are 80 years and above the pension is Rs 500/ - pm.

IGNWPS
The eligible age is 40 years and the pension is Rs 300 pm. After attaining the age of 80 years, the beneficiary will get Rs 500/ - pm.

IGNDPS
The eligible age for the pensioner is 18 years and above and the disability level has to be 80% (Dwarfs are eligible). The amount is Rs 300 pm and after attaining the age of 80 years Rs 500/ - pm.

NFBS
Rs 20000/ - will be given as a lump sum assistance to the bereaved household in the event of death of the bread - winner.

Annapurna Scheme
10 kgs of food grains (wheat or rice) is given per month per beneficiary. The scheme provides food security for those eligible old aged persons who are not covered by the IGNOAPS.

Seven Multi-tracking Projects Approved For Railways

- The Cabinet Committee on Economic Affairs (CCEA) chaired by the Prime Minister has approved seven multi-tracking projects of the Ministry of Railways.

- The seven projects are estimated to cost around **Rs 32,500 crore** with 100% funding from the Central Government.

- The projects are result of **PM-Gati Shakti National Master Plan** for multi-modal connectivity which have been possible through integrated planning and will provide seamless connectivity for movement of people, goods and services.

- The projects covering **35 Districts in 9 States** i.e. Uttar Pradesh, Bihar, Telangana, Andhra Pradesh, Maharashtra, Gujarat, Odisha, Jharkhand and West Bengal will increase the existing network of Indian Railways by **2339 Kms.**

- These are essential routes for transportation of varied basket of commodities such as foodgrains, fertilizers, coal, cement, fly-ash, iron and finished steel, clinkers, crude oil, lime stone, edible oil etc.

- The capacity augmentation works will result in additional freight traffic of magnitude **200 MTPA** (Million Tonnes Per Annum).

- The Railways being environment friendly and energy efficient mode of transportation, will help both in achieving climate goals and for reducing logistics cost of the country.

- Furthermore, it will provide employment of **7.06 crore man-days** to the people of the states.

Matti Banana

- The Matti banana native to **Kanniyakumari district** was granted the Geographical Indication (GI) tag.

- While the GI tag is rooted in geography, the chemical and biological factors also play a role, contributing to the Matti's distinctiveness.

- The unique climate and soil of Kanniyakumari district provides an ideal ground for the Matti banana to flourish in the district.

- Even if it takes root and yields in other areas, the fruit is without the sweet fragrance and honey-like taste unique to the Matti bananas grown in Kanniyakumari.

- Commonly known as '**Baby Banana**' due to its nipple-like appearance, it flourishes mainly in Kalkulam and Vilavancode taluks.

- Unlike typical banana bunches that grow straight, the Matti's fingers have a distinct wind-blown appearance. Due to its low total soluble solids content (TSSC) it is recommended as a baby food.

Types of Matti Bananas

- There are six known varieties of Matti bananas.

- Nal Matti has a yellowish-orange colour and fine aroma, while Theyn [honey] Matti's pulp tastes like honey.

- Kal Matti gets its name from the *calcium oxalate crystals* forming in its pulp and black dots on the skin.

- Nei Matti has an aroma of ghee, and Sundari Matti, a Matti clone, with its elongated fingers, thick peel, and creamy white rind, is facing extinction.

- Semmati (red) is a fusion of Matti and Red banana, with a mix of red and yellow pulp containing ascorbic acid beneficial to the growth of children. It is also called Sanna Kathalai and the sugar level is very low and suitable even for diabetics.

Youthful Country With An Ageing Population

- In his Independence Day speech, the Prime Minister highlighted India's comparative advantage in terms of demography.

- He pointed that while many countries are witnessing an age structure that is growing old, India is moving towards a youthful age structure.

- However, an analysis of India's workforce based on CMIE's Economic Outlook data shows that India may be the country with the most youthful population, but its workforce is rapidly ageing.

- In other words, the young are increasingly getting driven out of the job market.

An Ageing Workforce

- An **ageing workforce** basically means that if one looks at all the employed people in India, the share of young people is going down while the share of those closer to 60 years of age is going up.

- The table shows that the share of India's youth – defined as those between ages 15 and 29 — in the workforce has **fallen from 25 per cent in 2016-17 to just 17 per cent at the end of 2022-23**.

- Further, even the share of those falling in the next 15-year age bracket (30 to 44 years) has fallen from 38 per cent to 33 per cent over the same period.

Table 1: Composition of the workforce by age group (%)

Year	Share of >15 and <30 in workforce (in %)	Share of 30 to <45 in workforce (in %)	Share of 45 years and more in workforce (in %)
2016-17	25	38	37
2017-18	23	38	39
2018-19	22	38	40
2019-20	21	37	42
2020-21	18	36	45
2021-22	18	35	47
2022-23	17	33	49
Source: CMIE's Economic Outlook and Indian Express Research			

- While the share of these two categories has shrunk, that of the oldest cohort — 45 years and above — has grown from 37 per cent to 49 per cent.

- In other words, just in the past seven years, India's workforce has aged so much that the share of people 45 years and older has gone from one-third to almost one-half.

- Looking at absolute numbers, the total number of people with jobs has fallen from 41.27 crore to 40.58 crore, but the biggest decline has happened in the involvement of India's youth.

- In 2016-17, there were 10.34 crore people under the age of 30 years in the workforce. By the end of 2022-23, this number had fallen by over 3 crores to just 7.1 crore.

- At the same time, those aged 45 and above grew in numbers even though the overall employment levels fell.

- In fact, the one cohort that seems to be doing the best, both in terms of proportion as well as absolute numbers, is the age bracket of 55 to 59 years.

Employment Rate

- The Employment Rate (ER) for any population or age group shows what proportion of that age group or population is employed. So, if there are 100 people in the ages 15 to 29 and only 10 are employed then the ER would be 10%.

- Even though the population belonging to the youth category grew in size from 35.49 crore in 2016-17 to 38.13 crore in 2022-23.

- So while this young population grew by 2.64 crore, the number of employed youth fell by 3.24 crore. This is reflected in the sharp fall in the ER for this age-group. It fell from 29% to just 19%.

- The ER fell from 55% in 2016-17 to 48% in 2022-23, for the next category (30-45 years).

- For the age group of 45 years and above the ER declined the least i.e. from 47% in 2016-17 to 44% in 2022-23.

- Moreover, this is the only age group where the absolute number of people with jobs has actually grown. *It is another matter that the overall population of this cohort grew by even more and that is why the ER has fallen to some extent.*

Significance

- The data clearly shows that even though India has a fast-growing youth population, that by itself does not guarantee more jobs for the youth.

- To an extent, this result is hardly surprising. India has **witnessed rising levels of youth unemployment in the recent past**. This means a high percentage of the youth that joins the labour force, or effectively asks for work, fails to get employed.

- Moreover, India has a *low labour force participation rate, especially for women*. India's female labour force participation rate is one of the lowest in the world. This means a very small percentage of young women enter the labour force asking for work, to begin with.

- The combined effect of a low labour force participation rate and high unemployment rate is that India's youth have a worsening employment rate.

- If the possibility that a lot of young people may be pursuing higher studies is accounted, the trend should still be a matter of concern for India's policymakers.

- Policymakers need to examine why this is happening but prima facie this trend suggests a **skills deficit.**

- Thus, raising the employability of India's youth should be treated at par with the broader concern of creating more jobs in the economy.

- Unless these trends are reversed, India may continue to experience this phenomenon of being a *youthful country with an ageing workforce.*

> **Extra Mile: Employment & Challenges Associated with It**
>
> Recently, a report was published by a non-governmental organization named **Lokniti-CSDS**. Centre for the Study of Developing Societies (CSDS) is a social science research institute, based out of Delhi.
>
> **Major Takeaways of the Report**
>
> - The report has been composed based on the survey conducted in 18 states with a sample of around 9,300 respondents.
>
> - The report offers insights into **career aspirations**, **job preferences**, and **expectations of younger Indians**.
>
> - More than one in three (36%) Indians between the ages of 15 and 34 believe **unemployment** is the biggest problem before the country.
>
>   - About one in six (16%) think it is **poverty**, and 13% think it is **inflation**.
>
> - **Concerns over Jobs –**
>
>   - The proportion of youth identifying unemployment as the biggest problem has increased by 18 percentage points from the results of a similar survey in 2016.
>
>   - The share of those identifying price rise as the primary concern has increased by 7 percentage points. It is particularly pronounced among **middle-class youth**.
>
>   - Also, as many as 40% of highly educated respondents (graduate and above) identified

unemployment as the most pressing concern.

- In contrast, only 27% of non-literate individuals cited unemployment as their primary concern, likely due to their greater willingness to take on a range of jobs.

o 42% of men said unemployment was the most significant problem; among young women, this number was 31%.

- **Occupational Status –**

o Almost half of respondents (49%) said they were engaged in some form of work — 40% had full-time jobs; 9% were working part-time.

o Almost a fourth (23%) of youth with jobs were self-employed.

o 16% were professionals such as doctors or engineers, 15% were involved in agriculture, and semi-unskilled and skilled workers made up 27% of the total.

o **Only 6% were in government jobs**.

- **Government Job vs Private Job –**

o Asked to choose from a government job, a private job, or setting up their own business.

o Three out of five respondents chose government jobs, and more than one out of four opted for own business.

Challenges Associated with Employment in India

- **Lack of Sufficient White-Collar Jobs –**

o The challenge has become more complex over time with the improvement in literacy and schooling, attainment of higher education and skills and vocational education.

o The educated and trained manpower looks not for jobs alone but for decent jobs with better work environments, regular employment and better remuneration.

o However, job creation for this kind of employment has not kept pace with the increase in the number of job seekers.

- **Uneven Growth across the Country –**

o The growth of industry and services sector has been very uneven across different regions and states.

o This has resulted in a mismatch in employment opportunities and the supply of labour at local levels.

- **Structural Challenges -**

o The **industry** and **services** sectors, which constitute more than 80 per cent of the gross value added in the country, provide employment to 54.5% of the workforce.

o On the other hand, **agriculture**, which constituted one fifth of the total economy (GVA) of the country in 2020-21, retains 46.5%workforce.

o This divergence in sectoral share in income and employment is manifested in the large and rising gap in per worker income in the agriculture and non-agriculture sectors.

- Lastly, **preference towards government jobs has increased tremendously** due to job security, assured salary and other pay and prestige associated with such jobs.
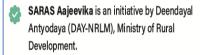
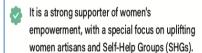**Transforming Lives, Building Futures initiative**

- The Ministry of Skill Development and Entrepreneurship (MSDE) has launched a special initiative '**Transforming Lives, Building Futures: Skill Development and Entrepreneurship in North-East**'.

- The initiative has been launched to create a robust skill-centric and industry ready ecosystem in North-Eastern Region (NER).

- The initiative has an allocation of **Rs 360 crore**. It will benefit more than **2.5 lakh youth** in phase-I, which will make them job ready for domestic as well as international markets.

- The initiative will include the following components:
  - 2 lakh skill training under Pradhan Mantri Kaushal Vikas Yojana (PMKVY).
  - 30,000 Apprenticeship Engagement under National Apprenticeship Promotion Scheme (NAPS).
  - 20,000 to be skilled under Jan Shikshan Sansthans (JSS).
  - Quality enhancement of ITIs under _Skill strengthening for industrial value enhancement_ (STRIVE).
  - Strengthening of Polytechnics.
  - Special projects will be taken up for the special needs of North-East region under SANKALP.
  - Skill India International Centre to be set up to promote overseas job opportunities.

ODOP wall

- In order to promote the indigenous crafts and artisans of India the One District One Product (**ODOP**) program has collaborated with the **Ministry of Rural Development**.

- Under this strategic collaboration, the **ODOP wall** was inaugurated at SARAS Aajeevika store.

- As part of the collaboration, innovative features such as product tagging and story cards will be implemented.

- These additions aim to guide consumers and enthusiasts towards emporiums, thereby boosting sales and magnifying the visibility of India's exceptional products.

SARAS Aajeevika

- SARAS Aajeevika is an initiative by Deendayal Antyodaya (DAY-NRLM), Ministry of Rural Development.

- It is a strong supporter of women's empowerment, with a special focus on uplifting women artisans and Self-Help Groups (SHGs).

- By creating a special marketplace for their well-crafted products, SARAS Aajeevika boosts the skills and talents of these women, helping them become independent entrepreneurs.

- DOP was launched by the Ministry of Food Processing Industries, to help districts reach their full potential, encourage economic and socio-cultural growth, and create employment opportunities, especially, in rural areas.

- It aims to do this by identifying, promoting and branding one product from one district. It intends to turn every district in India, into an export hub through promotion of the product in which the district specialises.

- The initiative plans to accomplish this by scaling manufacturing, supporting local businesses and finding potential foreign customers.

Project AMBER

- The Ministry of Skill Development and Entrepreneurship (MSDE) is providing **cloud skills training** to 1,500 learners and connecting them to employment opportunities, **under project AMBER, of the SANKALP programme.**

- The initiative has been undertaken in collaboration with _Generation India Foundation (GIF) and Amazon Web Services India_ with a focus on women to improve gender diversification in the tech industry and underprivileged groups.

- As part of this collaboration, the learners take part in **AWS (re/Start),** *a workforce development program* for unemployed and underemployed individuals, that covers fundamental AWS cloud skills as well as practical career tips.

- Through <u>real-world scenario-based exercises, labs, and coursework, learners are trained in multiple technologies, including Linux, Python, networking, security, and relational databases</u>.

- The program also covers the cost for learners to take the AWS Cloud Practitioner Certification exam, an industry-recognized credential that validates their cloud skills and knowledge and connects them with job interview opportunities with local employers.

- AWS re/Start brings entry-level talent into the workforce and helps individuals to launch successful cloud careers, organizations to increase their competitive edge with in-demand talent, and communities to thrive.

Skill Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP)

- SANKALP is an **outcome-oriented centrally sponsored programme** of MSDE with loan assistance from the World Bank.

- It aims to <u>improve short term skill training qualitatively and quantitatively</u> through strengthening institutions, bring in better market connectivity and inclusion of marginalised sections of the society.

- It focuses on the overall skilling ecosystem covering both Central & State agencies.

- The outcomes in the project are measured through the Results Framework, and **Disbursement Linked Indicators (DLIs)** agreed between MSDE and World Bank.

Project AMBER

- Project AMBER is a joint initiative of the National Skill Development Corporation (NSDC) – under the aegis of MSDE and Generation India Foundation (GIF).

- Co-funded by MSDE (under the SANKALP program) and private philanthropy, project AMBER aims to train 30,000 youth, 50% of whom will be women.

INTERVENTIONS UNDER SANKALP ARE CATEGORIZED AS FOLLOWS:

RESULT AREA 1: INSTITUTIONAL STRENGTHENING

RESULT AREA 2: ENHANCING MARKET RELEVANCE AND QUALITY

RESULT AREA 3: INCLUSION AND ACCESS OF MARGINALISED COMMUNITIES

PROJECTS ACROSS MULTIPLE RESULT AREAS

Public Tech Platform for Frictionless Credit

- In a move aimed at easing access to credit, the Reserve Bank of India (RBI) has launched a pilot project in the form of a "Public Tech Platform for Frictionless Credit".

- The move seeks to give digital information to lenders to expedite access to credit or loans.

- The public platform has been developed by the **Reserve Bank Innovation Hub (RBIH)**, a **wholly-owned subsidiary of the RBI**.

- It is an end-to-end digital platform that will have an open architecture, open Application Programming Interfaces (API) and standards, to which all financial sector players

Frictionless Credit

- Frictionless credit is a borrowing approach that seeks to streamline the lending process for consumers.

- Unlike the traditional credit systems, where individuals need to go through extensive paperwork, credit checks and lengthy approval procedures, frictionless credit promises a smoother and faster experience.

would be able to connect seamlessly in a 'plug and play' model.

Significance

1. Smoother Credit Appraisal

- Before a credit or loan is approved, it often takes lenders several days, a week or even months to process several sets of information.

- Digital delivery of credit (or delivering credit/loans though digital means) is preceded by a process of scrutiny known as credit appraisal.

- The process attempts to evaluate and accordingly predict the prospective borrowers' ability for repayment of credit/loan and adhering to the credit agreement.

- This pre-disbursal process is particularly important for banks since it would in turn determine their interest income and impact on the balance sheet.

- Currently, data has to be sourced from different entities like central and state governments, account aggregators, banks, credit information companies, and digital identity authorities, which has led to obstacles in the timely delivery of lending.

- The public tech platform seeks to make this process seamless by providing all the required information in one place to facilitate credit.

2. Cost Reduction

- Availing formal credit generally leads to multiple visits to the bank along with tiresome documentation. All of this translates to higher operational costs for lenders which may also get distributed to borrowers. An RBI survey indicated that processing of farm loans took two to four weeks and cost about 6% of the loan's total value.

- Thus, the platform will bring about efficiency in the lending process in terms of **reduction of costs, quicker disbursement and scalability**.

3. Service Linkages

- The platform will also facilitate linkages with services such as Aadhaar e-KYC, PAN validation, Aadhaar e-signing, account aggregation and house/property search data, among other things.

4. Future Outlook

- During its pilot run, the public tech platform will emphasise products such as Kisan Credit Card loans of up to Rs 1.6 lakh per borrower, dairy Loans and MSME loans (without collateral).

- Based on the learnings, the scope and coverage would be expanded to include more products, information providers and lenders during the pilot.

Fitch Downgrades US Economy

Global credit rating agency Fitch has downgraded US **Sovereign rating** to AA+ from AAA. The US had been holding the AAA rating at the agency since 1994.

Fitch Ratings

- Fitch Ratings Inc. is an American credit rating agency and is one of the Big Three credit rating agencies, the other two being Moody's and Standard & Poor's.

- It is one of the three **Nationally recognized statistical rating organizations (NRSRO)** designated by the U.S. Securities and Exchange Commission.

- Fitch Ratings is the smallest of the big three NRSROs, covering a more limited share of the market than S&P and Moody's.

- Fitch rates credit quality from 'AAA' (its highest rating) to 'D' (lowest rating). 'AAA' is assigned to entities with "exceptionally strong capacity for payment of financial commitments".

- **Investment grade ratings** from Fitch range from AAA to BBB.

- **Non-investment grade ratings** go from BB to D, with the lowest grade (i.e. D) meaning the debtor has defaulted.

- Fitch also uses **intermediate +/− modifiers** for each category between AA and CCC (e.g., AA+, AA, AA−, A+, A, A−, BBB+, BBB, BBB−, etc.).

- The current US downgrade in discussion, that is 'AA', denotes "very low default risk". In other words, "very strong capacity for payment of financial commitments". Importantly, both reflect strong profiles — varying only on a comparative basis.

Ratings Methodology

- Credit rating agencies rate the financials and business models of companies, as well as economic management by sovereign governments.

- It analyses official and other data and interacts with government officials, business leaders, and economists, while doing so.

- The agencies then rate instruments such as bonds, debentures, commercial papers, deposits, and other debt offerings of companies or governments to help investors make informed decisions.

- The agencies do this on a continuous basis, either upgrading or downgrading the instrument based on performance, prospects, or events likely to have an impact on the balance sheet or the fiscal position.

Fitch's Observation for US Economy

- Fitch held that there has been a steady deterioration in standards of governance over the last 20 years, including on fiscal and debt matters.

- It observed that the repeated debt-limit political standoffs and last-minute resolutions have reduced confidence in fiscal management.

- The second observation relates to lacking a medium-term fiscal framework, unlike most peers, and having a complex budgeting process.

- These combined with several economic shocks, tax cuts and new spending initiatives has led to successive increases in debt over the last decade.

- Fitch expects the **general government deficit** (balance of income and expenditure) to rise to 6.3% of the GDP in 2023 from 3.7% in 2022. Furthermore, the deficit is projected to rise to 6.6 per cent of GDP in 2024 and to 6.9 per cent in 2025.

- This results from cyclically weaker federal revenues, new spending initiatives and a higher interest burden.

- Moreover, it held that over the next decade, higher interest rates and rising debt would translate to an **increased interest service burden**.

- The U.S. Congressional Budget Office (CBO) projects that interest costs will double to 3.6% of the GDP by 2033.

Sovereign Credit Rating

- A sovereign credit rating is an independent assessment of the creditworthiness of a country or sovereign entity.

- Sovereign credit ratings can give investors insights into the level of risk associated with investing in the debt of a particular country, including any political risk.

- **Several key factors** come into play in deciding how risky it might be to invest in a particular country or region. They include its debt service ratio, growth in its domestic money supply, its import ratio, and the variance of its export revenue.

- Obtaining a good sovereign credit rating is usually essential for developing countries that want access to funding in international bond markets.

- In addition to issuing bonds in external debt markets, another common motivation for countries to obtain a sovereign credit rating is to attract foreign direct investment (FDI).

- Many countries seek ratings from the largest and most prominent credit rating agencies to encourage investor confidence.

- Additionally, Fitch stated, an ageing population and rising healthcare costs would require more spending on the elderly absent fiscal policy reforms.

- Separately, Fitch also projected that tighter credit conditions, weakening business investment and a slowdown in consumption would push the U.S. economy into a mild recession in Q4 of this year and Q1 of next year.

- It also sees U.S. annual real GDP growth slowing to 1.2% this year from 2.1% in 2022.

MSME Card

- The Ministry of MSME in association with National Payments Corporation of India (NPCI) has launched the **MSME RuPay Credit Card** on pilot basis, pan-India **for Udyam registered MSMEs**.

- **The Card provides a** simplified payment mechanism to MSMEs to meet their business-related operational expenses like digital payments, utility bills payments, tax/statutory payments etc.

- MSME borrowers can also take benefit of **interest-free credit period** on their business spends as per the bank's policy.

National Payments Corporation of India (NPCI)

- Set up in 2008, NPCI is an umbrella organisation for operating retail payments and settlement systems in India.

- It is an **initiative of RBI and Indian Banks' Association (IBA)** under the provisions of the Payment and Settlement Systems Act, 2007, for creating a strong Payment & Settlement Infrastructure in India.

- It has been incorporated as a **Not-for-Profit Company** to provide infrastructure to the entire banking system in India for physical as well as electronic payment and settlement systems.

Surety Bonds

In an effort to reduce liquidity difficulties in the construction sector, the National Highways Authority of India (NHAI) is advocating for the adoption of surety bond insurance products for highway projects.

Background

- To boost private sector capital expenditure in infrastructure, the Union Budget 2022-23 had allowed the use of surety bonds as a substitute for bank guarantee in government procurements.

- The government has planned investment worth Rs 7 trillion for infrastructure projects to be spent over the next 2-3 years.

- After the Union Budget, the Insurance Regulatory and Development Authority of India (IRDAI) had come out with the detailed norms on the issuance of Surety Bonds by the general insurers.

Need For Surety Bonds

- A contract requires the developer to provide various bonds during the life cycle of a project, which together may account for up to 20 per cent of the total project cost.

- Currently, 100 per cent of the guarantee requirements for the infrastructure sector are catered to by banks.

- These guarantees are an inefficient way of doing business as they block a lot of working capital from a contractor.

Surety Bond

- A surety bond is a **legally binding tripartite agreement** signed between the **principal, obligee and the surety**.

- Simply put, the surety is provided by an **insurance company** on behalf of a **principal or contractor** to the **obligee or government entity** awarding the project.

- When a principal breaks a bond's terms, the harmed party can make a claim on the bond to recover losses.

- Surety bonds are a favoured financial instrument in several developed western economies. The global surety bond market is valued at $29.5 billion.

Advantages

- Since contractors *do not have to offer collateral money in surety bonds*, it will help to reduce indirect cost for suppliers and work contractors which can help them to participate in other projects at the same time.

- It can reduce the initial project cost and improve the overall project viability by reducing the risks due to cost overrun, project delays and poor contract performance.

- India is projected to become the world's third-largest construction market, according to government estimates. The infrastructure sector alone may need an estimated Rs 2.70 lakh crore of Bank Guarantees in 2023.
- Replacing Bank Guarantees with surety bonds could offer capital relief of up to Rs 50,000 crore to Indian contractors.
- Surety bonds tend to be in force for the life of the project, while bank guarantees have to be renewed periodically.
- More importantly, bank guarantees *are unconditional and payable on demand*, while surety bonds can be reimbursed like an insurance policy if the claim is valid.
- Adoption of surety bonds will result in enhanced participation by contractors in project bids resulting in more efficient price discovery.

Issues

- According to insurance experts, surety bonds are risky and insurance companies in India are yet to achieve expertise in risk assessment in such business.
- There is no clarity on pricing, the options available against defaulting contractors and whether surety bonds will get the required reinsurance support.
- The general insurance industry wants changes in Indian Contract Act and Insolvency and Bankruptcy Code (IBC) so that surety bonds can be at par with bank guarantees in terms of options available to them in case of a default.
- Thus, the use of surety bonds as a substitute for bank guarantees is likely to take time for implementation by the insurance industry.

Mega Container Terminal

- An agreement has been signed between Deendayal Port Authority and DP World for a project at Tuna Tekra, Gujarat.
- The project involves the construction of a **mega-container terminal at Tuna-Tekra** near the existing Deendayal Port, at a cost of **Rs 4,243.64 crores (~$510 million)** through a Public Private Partnership (PPP).
- An initiative of the **Ministry of Ports, Shipping & Waterways**, the container terminal will cater to future trade demand from Northern, Western and Central India, connecting the regions to global markets.
- Once completed the terminal will have an **annual capacity of 2.19 million TEUs** (twenty-foot equivalent units), and will include a 1,100m berth capable of handling next-generation vessels carrying more than 18,000 TEUs.
- The terminal is expected to transform the economic landscape of Kutch, with creation of several ancillary services like warehousing.
- It will also result in creation of direct and indirect employment opportunities to hundreds of people.
- The project is expected to add operational efficiency to the Port in terms of reduced congestion at Kandla creek, enhanced ability to handle deep draft vessels, reduction of turnaround time to 0.5-1 day and drive the port towards becoming a Mega Port.
- The terminal will be fully **compliant with the green port guidelines** ensuring sustainability in port operations by adopting best practices of port environment management contributing towards the long-term sustainability goals set out by the government.
- The project aligns with India's Vision 2047 to quadruple port handling capacity and develop multimodal logistics infrastructure to promote economic growth.

Khanan Prahari App

- The Khanan Prahari mobile app has received a significant response with a total of 483 complaints registered till now.

- The app's corresponding web portal is called **Coal Mine Surveillance & Management System (CMSMS)**.

- Illegal coal mining poses a threat to the environment, the lives of those involved in illegal mining, and the general decay in the traditional subsistence base and the country's economy.

- The government aims to take transparent action against illegal mining, **using space technology**, as an e-Governance initiative and recognizes the importance of public participation in fighting this issue.

- Thus, the basic objective of the app and CMSMS is reporting, monitoring and taking suitable action on unauthorised coal mining activities like rat hole mining, pilferage etc.

Key Features Of The App

- **Reporting Incidents**: Users can easily report incidents of illegal mining by taking photographs and providing comments on the incident. The app allows for the geo-tagging of photographs by enabling the GPS location feature.

- **Confidentiality**: The user's identity is kept confidential, ensuring privacy and security.

- **Complaint Tracking:** Complainants receive a complaint number, which they can use to easily track the status of their reported complaints on the Khanan Prahari mobile app.

Complaint Procedure

- There are two ways in which illegal coal mining is reported/ identified. One way is through periodic scanning of Satellite imagery (In house). The second is through the information provided by responsible citizens using the Khanan Prahari mobile app.

- The basic platform used in the system is of **Ministry of Electronics & Information Technology's (MeiTY) map** which provides village level information.

- The **leasehold boundary** of all the coal mines are displayed on this map. The system will use satellite data to detect changes by which unauthorised mining activity extending beyond the allotted lease area can be detected and suitable action can be taken on it.

- The complaint originating from coal mines allotted to Coal India will go to Coal India Offices and those originating from coal blocks not allotted to Coal India will go straight to the State Government Officers.

- Moreover, for each complaint the alert will also go to the District Magistrate and SP of the district.

Nagarnar Steel Plant

- The Nagarnar Steel Plant in Chhatisgarh has achieved the feat of producing its final product **hot rolled (HR) coil** in just nine days of the production of hot metal.

- Located in Nagarnar in Bastar region of Chhattisgarh, the **3 million tonne per annum** capacity steel plant has been built at a cost of approximately ₹24,000 crores.

- Nagarnar Steel Plant's **competitive advantage** also stems from its **iron ore supply linkage with Bailadila mines**, barely 100 kms. from Nagarnar.
- The plant has the unique distinction of internationally being the <u>only steel plant to be set up by a mining company</u>.
- Though there have been instances of faster steel making, Nagarnar Steel Plant's production of HR Coil within nine days of hot metal production is unusual.
- This was made possible by testing the capability of the Mills by rolling slabs and producing HR Coil even as preparations were underway for commissioning of the blast furnace.
- Generally, it takes a couple of weeks for the functioning of the blast furnace itself to stabilize which is followed by the <u>synchronization of blast furnace production with the working of the Steel Melting Shop.</u>
- This being a very dangerous zone, it is approached with extra caution after which the production process at the Mills is stabilized. That this was successfully accomplished in such a **short duration** certifies the **latest equipment** and **technology** used.

Application

- The HR coils, sheets and plates from the plant will meet the demand for quality HR needed for the manufacture of LPG cylinders, bridges, steel structures, ships, large diameter pipes, storage tanks, boilers, railway wagons and pressure vessels.
- It is also required for manufacturing of tanks, railway cars, bicycle frames, engineering and military equipment and automobile and truck wheels, frames and body parts.

Restrictions on Laptop Imports

- India has imposed restrictions on the import of personal computers, laptops, tablets, all-in-one PCs, ultra-small form factor computers, and servers falling under HSN code 8741.
- However, this restriction will not apply to imports under baggage rules. Travellers entering or leaving India are subject to certain checks under customs, referred to as **Baggage Rules**.
- These imports will be subject to a valid license for restricted imports. Duty on imports will have to be paid as required.
- The move aims to promote domestic manufacturing of these products and reduce reliance on imports from China.

Exemptions To The License

- Individuals can import one laptop, tablet, all-in-one PC, or ultra-small form factor computer, even purchased from e-commerce portals, without needing an import license. Duties will still apply to these imports.
- Additionally, laptops, tablets, all-in-one PCs, and ultra-small form factor computers essential for **capital goods** are also exempt from import licensing requirements.
- For **research and development**, testing, benchmarking, evaluation, repair, re-export, and product development purposes, up to 20 items per consignment can be imported without a license.
- However, these items must not be sold; after the intended purpose, they must be either destroyed or re-exported.
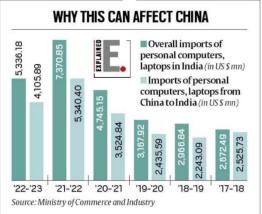
Reasons For The Restrictions

- The measure is to push companies to manufacture locally in India, as the country looks to strengthen its domestic production prowess in the electronics sector.

- It is being seen as a direct boost to the Centre's recently renewed production-linked incentive (PLI) scheme for IT hardware.

- The scheme was revised in May with an outlay of Rs 17,000 crore, more than doubling the budget for the scheme that was first cleared in 2021.

- The incentive scheme is key to India's ambitions to become a powerhouse in the global electronics supply chain, with the country targeting annual production worth $300 billion by 2026.

- India has seen an increase in imports of electronic goods and laptops/computers in the last few years.

- Of the seven categories restricted for imports by India, the majority share of imports is from China. The highest share of imports is in the category of personal computers including laptops and palmtops.

- During April-June this year, _the import of electronic goods_ increased to $6.96 billion from $4.73 billion in the year-ago period, with a share of 4-7 per cent in overall imports.

WHY THIS CAN AFFECT CHINA

- Overall imports of personal computers, laptops in India _(in US $ mn)_
- Imports of personal computers, laptops from China to India _(in US $ mn)_

Source: Ministry of Commerce and Industry

Import Licenses

- All notifications on restrictions, quotas and conditions on the import of goods into India are managed by the **Directorate General of Foreign Trade (DGFT)**.

- The DGFT comes under the Ministry of Commerce and Industry and is responsible for administering laws regarding foreign trade, including import regulations.

- Import Licenses are valid for _24 months for capital goods and 18 months for raw materials components_, consumables and spares, with the license term renewable. Computers and **laptops would fall under capital goods**.

HSN Code

- The Harmonised System Nomenclature, or HSN is a **six-digit identification code** developed by the **World Customs Organization (WCO)**.

- Over 200 countries use the system as a basis for their customs tariffs, gathering international trade statistics, making trade policies, and for monitoring goods.

- The system helps in harmonising of customs and trade procedures, thus reducing costs in international trade.

- The system currently comprises of around 5,000 commodity groups, each identified by a unique six-digit code. Of the six digits, the first two denote the HS Chapter, the next two give the HS heading, and the last two give the HS subheading.

- The HSN code for pineapple, for example, is 080430, which means it belongs to Chapter 08 (Edible fruit & nuts, peel of citrus/melons), Heading 04 (Dates, figs, pineapples, avocados, etc. fresh or dried), and Subheading 30 (Pineapples).

Deflation In China

- China's economy has slipped into deflation after consumer prices declined in July for the first time since February 2021.

- According to reports the cost of food, transportation, and household goods all declined in July in China.

- Earlier, China experienced a short period of deflation at end of 2020 and early 2021, due largely to a collapse in the price of pork, the most widely consumed meat in the country.

- Prior to that, the last deflationary period was in 2009.
- According to reports, the official consumer price index, a measure of inflation, fell by 0.3% in July from a year earlier. Official figures showed that China's exports fell by 14.5% in July compared with a year earlier, while imports dropped 12.4%.

Deflation

- Deflation is when the prices of goods and services decrease across the entire economy, increasing the purchasing power of consumers. It occurs when the inflation rate falls below 0% (a negative inflation rate).
- Inflation reduces the value of currency over time, but sudden deflation increases it. This allows more goods and services to be bought than before with the same amount of currency.
- And while cheaper goods may appear beneficial for purchasing power, deflation poses a threat to the broader economy.
- It can be considered bad for a nation as it can signal a downturn in an economy, leading to a recession or depression.
- As prices fall, consumers tend to postpone purchases in the hopes of further price cuts.
- A lack of demand then forces companies to reduce production, freeze hiring or lay off workers, and agree to new discounts to sell off their stocks— weighing on profitability even as costs remain the same.

Deflation vs. Disinflation

- Deflation is distinct from disinflation, a slow-down in the inflation rate, i.e., when inflation declines to a lower rate but is still positive.
- Disinflation could be a change from 4% annual inflation to 2% annual inflation, meaning a good that used to cost Rs 10 now sells for Rs 10.20, instead of a projected Rs 10.40.
- Deflation, on the other hand, describes actual decreases in prices. With 2% deflation, a good that used to cost INR 10 would now cost Rs 9.80.

Causes of Deflation

There are two big causes of deflation: a **decrease in demand** or **growth in supply**. A decline in aggregate demand leads to a fall in the price of goods and services if supply does not change.

- **Monetary policy:** Rising interest rates may lead people to save their cash instead of spending it and may discourage borrowing. Less spending means less demand for goods and services.
- **Declining confidence:** Adverse economic events—such as a global pandemic—may lead to a decrease in overall demand. If people are worried about the economy or unemployment, they may spend less so they can save more.
- **Higher aggregate supply** means that producers may have to lower their prices due to increased competition.
  - ✓ This boost in aggregate supply may stem from a drop in production costs. If it costs less to produce goods, companies can make more of them for the same price. This can result in more supply than demand and lower prices.

Impact Of China's Deflation On The World

- The extended period of deflation in China may help to curb rising prices in other parts of the world. This is because China remains one of the largest producers of goods sold around the world.
- On the other hand, low prices of China manufactured goods could impact employment as it could hit investment by businesses.
- Therefore, decreasing prices, even though lucrative for consumers initially, may lead to a vicious cycle of decreasing economic activity.

- Reduction in demand, due to a constant pattern of falling prices would mean lower production, reduced business revenues, and increased unemployment, which in turn further reduces consumer spending.

Impact Of China's Deflation On India

- **Positive effect**: If investment in the Chinese economy is lowered due to the increasing slowing rate of their economy, and now deflation, India could potentially emerge and take over as the manufacturing hub for the developed economies.

- This is also something the developed countries seem to have been pushing for in a bid to eliminate the monopoly-like hold China has over the manufacturing sector.

- For India, if economic reforms are accelerated, India can become the next manufacturing hub.

- **Negative effect:** China remains one of the biggest importers of iron ore from India. It imports almost 70% of Iron-ore from India.

- Therefore, a slower economy for China would mean the amount of import into China could fall, which would negatively hurt Indian's economy.

Debt-Fossil Fuel Trap

- The Debt-Fossil Fuel Trap was recently published by the anti-debt campaigners Debt Justice and partners in affected countries.

- The report shows that poor countries with heavy debts have been forced to rely on fossil fuels for generating revenue to return the loans taken from richer countries and private lenders to meet various economic emergencies like the pandemic three years ago.

Key Findings

- The global south — a term used for developing, less developing and underdeveloped countries, located in Africa, Latin America, and Asia — countries are increasingly being burdened by enormous debts in recent years.

- Their **external debt payments** (money borrowed from richer countries, or multilateral creditors like the World Bank and IMF, or private lenders such as banks) has **gone up by 150% between 2011 and 2023**, reaching their highest levels in 25 years.

- Moreover, <u>54 countries are in a debt crisis</u> — they had to cut their public spending budgets during the pandemic to repay the loans.

- The situation is worsened by extreme weather events, which force these countries to borrow more money as they lack adequate finances and resources for adaptation, mitigation and tackling loss and damage.

- For instance, Dominica's debt as a percentage of GDP rose from 68% to 78% after Hurricane Maria hit the island in 2017.

- To deal with the rising debts, these countries have turned to extracting more fossil fuels.

- For example, Argentina has been supporting fracking projects in the Vaca Muerta oil and gas field in Northern Patagonia to generate revenues to ease the country's debt crisis. Notably, the IMF has also backed these projects.

- The country's strategy to reduce debt may end up adding to debt levels without generating adequate revenue to repay, which could force Argentia to further expand its fossil fuel projects. This is known as the debt-fossil fuel trap.

Resource Backed Loans

- Despite many assurances, to stop investing in fossil fuels in global south countries, richer countries and multilateral and bilateral lenders have financed fossil fuel projects, often through loans, adding to debt burdens locking countries in fossil fuel production.

- One of the ways this happens is through loan contracts like resource backed loans (RBLs).

- In RBLs, repayment is *either made directly in natural resources (in kind) such as oil or minerals, or from a resource-related future income stream;*

- For example, Suriname, a South American country, defaulted on its debt in late 2020, and in 2021. Following this, it started negotiations with its bilateral and private creditors to reduce its debt down to a sustainable level.

  - ✓ In the final deal, it was agreed that creditors would get the right to 30% of Suriname's oil revenue until 2050, up to a maximum of $689 million after Suriname received the first $100 million in royalties.

- Once again, this deal keeps Suriname trapped in oil exploitation while being incentivised to maximise oil revenues.

Surplus Sugar Production In India

- In 2021-2022, India surpassed Brazil to become the largest sugar producer in the world, producing **359 lakh tonnes** – an all-time high.

- However, the extensive use of resources in sugar production is depleting rapidly, leading to a potential crisis in the future.

- For farmers across most of India, sugarcane is one of the most profitable cash crops. This has led to chronic over-cultivation of sugarcane, reflected in the country's sugar surplus and high sugar exports.

- The impact of this on the country's groundwater is, disastrous – and it has also been overlooked.

Reasons for Excess Sugar Production

- India is the world's largest consumer of sugar, and thus has to produce enough to meet its huge domestic demand. But the excess production comes from policies and measures that make farmers favour sugarcane cultivation.

- The Central government offers a **fair and remunerative price (FRP)** scheme, which mandates a minimum price that sugar mills have to pay to sugarcane farmers, ensuring that farmers always get fair profits for their crop.

- State governments also offer **heavy subsidies** to incentivise sugarcane cultivation. The resulting sugar surplus has led to higher exports, with a record **110 lakh tonnes exported in 2021-2022**.

- In fact, Brazil, Australia, and Guatemala filed a complaint with the World Trade Organisation against India for violating international trade rules.

- They had complained that India offers excessive export subsidies and domestic support to farmers to outcompete other countries in the global sugar market. The Organisation ruled against India and India also lost its appeal.

Efforts To Address Issue Of Surplus Cultivation

- To deal with the sugar surplus, the Indian government considered diverting it to the production of ethanol, an organic compound made by fermenting sugarcane molasses or sugar.

- Ethanol is the active ingredient in alcoholic beverages and is also used in the chemicals and cosmetics industries.

- In the transport sector, the use of **ethanol-blended petrol (EBP)** significantly reduces harmful emissions, such as of carbon monoxide and various hydrocarbons, from vehicles.

- The government launched the EBP programme in 2003 to reduce crude oil imports and reduce greenhouse gas emissions from petrol-based vehicles and has been fairly successful.

- The government also <u>reduced the Goods and Services Tax on ethanol from 18% to 5%</u> in 2021.
- In the same year, about <u>35 lakh tonnes were diverted to produce ethanol</u>, while India achieved a blending rate of 10% months ahead of target.

Impact Of Sugarcane Cultivation On Groundwater

- Sugarcane is a highly resource-intensive cash crop and it needs large portions of land and consumes a lot of groundwater.
- There is abundant research on sugarcane's land needs, with experts recommending that installing solar panels would be a better use of land than sugarcane cultivation, <u>to reduce net emissions.</u>
- But relatively little attention has been paid to the crop's significance consumption of water.
- India's **top sugarcane-growing states** are **Maharashtra, Uttar Pradesh, Karnataka, Gujarat, and Tamil Nadu**. The first three account for 85-90% of the sugar produced in the country.
- If sugarcane were a purely rainfed crop, it will need around **3,000 mm of rainfall a year** to be irrigated. But these three states receive around 1,000-1,200 mm a year. The remaining water requirement is met by groundwater.
- Most of this groundwater resides in confined aquifers, i.e. the water is trapped between two impermeable layers of rock. It can only be extracted by drilling a borewell through the upper layer. <u>Such groundwater can't be recharged by rainfall, so it is a limited resource.</u>
- Normally, 100 kg of sugar is produced from one tonne of sugarcane, which consumes around 2 lakh litres of groundwater for irrigation alone.
- Add to this the water for industrial sugar-manufacturing and -refining. In other words, the 110 lakh tonnes of sugar that India exported in 2021-2022 includes 26 lakh crore litres of groundwater.
- In a 2022 report, the Central Ground Water Board (CGWB) noted that a third of all its groundwater assessment units in Maharashtra, Uttar Pradesh, and Karnataka were 'semi-critical', 'critical' or 'over-exploited'.

Recommendations

While the environmental implications of excess sugar production should be clear, surplus production and export have enormous financial gain, amounting to lakhs of crores of rupees a year. So simply cutting sugar production isn't a viable solution.

Correct Imbalance In Incentives

- A better and more sustainable way would be to <u>assess and then correct incentives that skew in favour of sugarcane over other crops</u>, leading to the consistent surplus.
- Introducing fair and comprehensive subsidy schemes for a variety of crops can <u>help farmers diversify as well as distribute cultivation evenly, prevent monocultures, and ensure an equitable income</u>.
- Availability of a wider range of profitable and less resource-intensive crops can lower the stress on vital natural resources.

Water-saving and Management Systems

- This must be supplemented by environmentally responsible sugarcane cultivation practices that prioritise groundwater, such as **drip irrigation**, to tackle the issue in the long run.
- In drip irrigation, water is allowed to drip slowly but directly to the roots of sugarcane plants, **reducing water consumption by up to 70%** relative to the current flood irrigation method.
- Efforts to adopt cleaner practices such as rainwater harvesting, wastewater treatment, and canal irrigation networks, will help minimise stress on groundwater reservoirs as other water sources become available for irrigation.

- Although the Central Ground Water Board (CGWB) conducts significant research and generates valuable data, many aspects of groundwater availability and distribution remain poorly understood and/or mapped. Thus, **investment in groundwater research**, needs to be considered seriously.

Bharat New Car Assessment Programme

- The Ministry of Road Transport and Highways has rolled out an indigenous star-rating system for crash testing cars.
- Under the new system, vehicles will be assigned between one to five stars indicating their safety in a collision.

Bharat NCAP

- It is a testing protocol, wherein automobiles in India shall be accorded Star Ratings based upon their performance in crash tests.
- Under the Bharat NCAP, cars voluntarily nominated by automobile manufacturers will be crash tested as per protocols laid down in the soon-to-be-published **Automotive Industry Standard 197.**
    o The testing protocols adopted by the Bharat NCAP are modelled on the **Global NCAP**.
- While India has mandatory crash test norms for cars, the Bharat NCAP rating will be of **superior standard** and will be aligned with global crash-test protocols.
- Unlike in other countries where the NCAP are carried out by non-government entities, **there will be a Bharat NCAP Authority in India.**
- The authority will also host the safety ratings of all new car models on a website for public knowledge**.**
- **Applicability**
    o The programme is applicable to <u>passenger vehicles with not more than eight seats</u> in addition to the driver's seat with gross vehicle weight not exceeding 3,500 kgs.
    o Only the base model of a particular variant will be tested.

- **Assignment of rating**
    o Cars will be assigned a rating between **one star to five stars** after being evaluated on three parameters:
        ▪ adult occupant protection,
        ▪ child occupant protection, and
        ▪ safety assist technologies present in the car.
    o The first two parameters will be calculated with the help of three different kinds of tests:
        ▪ A frontal offset test where a vehicle is driven at 64 kmph and with 40% overlap into a deformable barrier which represents the oncoming vehicle,
            ✓ This replicates a crash between two cars of the same weight.
        ▪ The side impact test at 50 kmph, and
        ▪ The pole-side impact test (where a car is crashed into a rigid pole sideways) at 29 kmph.

- **Voluntary in nature**
    o Bharat NCAP is a voluntary programme under which the cost of a new car for the purpose of assessment shall be borne by the respective vehicle manufacturer or importer.
    o However, in certain cases cars may be subjected to a crash test such as:
        ▪ for a base model of a popular variant (minimum clocked sale of 30,000 units), or
        ▪ when the Ministry of Road Transport and Highways recommends a model for testing based on market feedback or in the interest of public safety.

- **Need of Bharat NCAP**

    o India sees nearly 1.5 lakh road fatalities in a year, accounting for 10% of deaths due to road crashes globally with only 1% of the world's vehicles.

    o According to a World Bank study, road crashes are estimated to cost the Indian economy between 5 to 7% of GDP a year.

- **Way forward**

    o India will need to develop its crash testing capabilities and knowledge expertise for the Bharat NCAP programme to be implemented meaningfully.

        ▪ E.g., A software system wired to the dummies placed inside cars to assess the nature and extent of injuries to analyse scores.

    o Over the years, India will also have to align Bharat NCAP with global standards by expanding testing parameters.

Global New Car Assessment Programme (Global NCAP)

- It is a major project of the **Towards Zero Foundation** which is a UK registered charity.

- It promotes the universal adoption of the United Nations (UN) most important motor vehicle safety standards worldwide.

- Global NCAP adopted a Road Map for Safer Vehicles 2020 which provides a recommended timetable for UN Member States to apply the most important UN vehicle safety regulations.

Vivad se Vishwas 2 Scheme

- The **Department of Expenditure, Ministry of Finance**, has launched the **Vivad se Vishwas 2 – (Contractual Disputes) scheme**, to effectively settle the pending contractual disputes of government and government undertakings.

- Announced in the Union Budget 2023-24, the scheme aims to resolve the government's contractual disputes with private parties, clear the backlog of litigation, and improve the ease of doing business.

- The scheme will apply to all **domestic contractual disputes** where one of the parties is either the Government of India or an organisation operating under its control. The deadline for submitting claims under the scheme is 31 October 2023.

    o Government-held entities such as the Oil and Natural Gas Corporation (ONGC) and the National Highways Authority of India (NHAI) have numerous disputes with private contractors.

- Under the scheme, the central government is aiming to resolve **approximately 500 cases**, involving an **estimated Rs 1 trillion**.

- The one-time settlement scheme will cover cases where the court order was passed by 30 April 2023, and the arbitral order was given by 31 January 2023.

    o For **court orders** passed on or before 30 April 2023, the settlement amount offered to the contractor will be up to **85 per cent** of the net amount awarded or upheld by the court.

    o For **arbitral orders** passed on or before 31 January 2023, the settlement amount offered is up to **65 per cent** of the net amount awarded.

- Guidelines issued by the Department of Expenditure has stated that the scheme will be applicable to all kinds of procurement, including the procurement of goods, services, and works.

- The scheme is also applicable to all '**earning contracts**' (i.e., contracts where the government receives money in exchange for goods, services, rights, etc.) as well as contracts under Public Private Partnership (PPP) arrangements.

- To facilitate a smooth and transparent process, the **government e-marketplace (GeM)** has created a dedicated web-page for the implementation of the scheme.

- Eligible claims will be processed exclusively through the GeM platform, streamlining the settlement process and ensuring expeditious resolution.

Amrit Bharat Station Scheme

- The Prime Minister recently laid the foundation stone for the redevelopment of 508 railway stations as part of the Amrit Bharat Station Scheme.

- The Amrit Bharat Station Scheme was launched in February 2023 to redevelop 1309 stations nationwide.

- The 508 stations being redeveloped are **spread across 27 states and union territories** and will be redeveloped at a **cost of Rs 24,470 crores**.

- Master Plans were being prepared for the **development of these stations as 'City Centres'**, with proper integration of both sides of the city.

- This integrated approach is driven by the holistic vision of the overall urban development of the city, centred around the railway station.

- These stations will have better seating on platforms, upgraded waiting rooms and free Wi-Fi amongst other things.

- The redevelopment will provide modern passenger amenities along with ensuring well-designed traffic circulation, inter-modal integration, and signage for the guidance of passengers.

- The **design** of the station buildings will be inspired by local culture, heritage, and architecture.

- For example, Jaipur Railway Stations will have glimpses of Hawa Mahal and Amer Fort from Rajasthan, Jammu Tawi Railway Station will be inspired by the famous Raghunath Mandir and Dimapur Station of Nagaland will showcase the local architecture of 16 different tribes from the region.

- Furthermore, all the Amrit Bharat stations will be built to meet the standards of **green buildings**. By 2030, India will be a country whose railway network will run on net zero emissions.

Incremental Cash Reserve Ratio

- RBI has announced that it will be imposing an incremental cash reserve ratio (ICRR) of 10% on the increase in banks' net demand and time liabilities (NDTL) between May 19 and July 28.

- This measure is intended to absorb the surplus liquidity in the banking system, which has been building up in the recent months due to several factors, including the return of ₹2,000 notes to the banking system.

- It will **apply to all scheduled banks, including commercial banks, cooperative banks, and regional rural banks**.

- It is a **percentage of the incremental increase in a bank's net demand and time liabilities (NDTL)** that the bank is required to maintain as cash reserves with the RBI.

- The RBI had been using other tools such as variable rate, repo rate and the reverse repo rate, to manage liquidity, but these tools were not having the desired effect.

- The ICRR is a **more targeted tool** that is specifically designed to absorb excess liquidity.

- It is a **temporary measure** which will be reviewed in three months. The RBI may decide to extend the measure if it believes that it is necessary to continue to absorb surplus liquidity in the banking system.

ICCR's Impact

- It will **reduce the amount of money that banks have to lend**, *which could lead to higher interest rates.* It could probably make it more difficult for banks to raise capital, and it could impact their profitability.

- However, the ICRR is also expected to <u>help to stabilise the rupee</u>, which has been under pressure in recent months. It could also <u>help to reduce inflation</u>, which has been rising recently.
- Higher interest rates could make it more expensive for businesses to borrow money, which <u>could slow down growth</u>.
- However, higher interest rates could also <u>help to reduce inflation</u>. ICRR could also <u>strengthen the rupee making imports cheaper</u>, which help to reduce inflation. However, a stronger rupee also <u>makes exports more expensive</u>, hitting export sectors and growth.

Stock Market Impact

- The ICRR is also likely to impact the stock market. A higher CRR leads to lower stock prices, as investors become more cautious about the economic outlook.
- However, if the ICRR helps to reduce inflation and stabilise the rupee, stock prices will look up in the long run.
- Overall, the impact of the incremental CRR on economic indicators and exchange rates is uncertain as of now.
- It depends on various factors, including the extent to which the ICRR reduces liquidity in the banking system, the reaction of businesses and consumers to higher interest rates, and the global economic environment.

Chokuwa Rice

- Recently, Chokuwa rice from Assam was given the Geographical Indication tag.
- Also known as **Magic rice**, Chokuwa rice is a part of Assam culinary heritage and has been a staple of the troops of the mighty Ahom dynasty.
- This unique and healthy rice is **cultivated around the Brahmaputra area** and is cultivated in several parts of Assam like Tinsukia, Dhemaji, Dibrugarh, Lakhimpur, Sivasagar, Jorhat, Golaghat, Nagaon, Morigaon.
- It is basically a **semi-glutinous winter rice**, known as Sali rice. The sticky and glutinous variety is **categorized as Bora and Chokuwa based on their amylose concentration**.
- The **low amylose Chokuwa rice variants** are used to make soft rice, which is known as Komal Chaul or soft rice.
- This whole grain <u>can be consumed after soaking the rice in the cold or lukewarm water</u>. Basically, this rice is pre-boiled, dried, then stored and soaked right before consumption.
- It is widely consumed for its convenience of preparation and nutritional value.
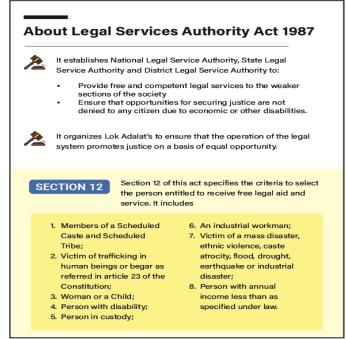
Free Legal Aid and Advice Through Nyaya Bandhu Program

The Nyaya Bandhu Program of the **Department of Justice** will provide free legal aid and advice to all the people eligible under **Section 12 of the Legal Services Authority Act 1987.**

The Nyaya Bandhu Program

- It was launched in 2017 and is being implemented by National Legal Services Authority (NALSA).

- Nyaya Bandhu provides legal aid in a variety of areas, including civil, criminal, and family law. The program also provides legal aid to people who are facing discrimination or who are being denied their basic rights.

- It is a **mobile application** which provides pro bono legal services to the ones who are unable to afford legal advice and/or cannot access legal aid.

  ✓ Pro bono short for "pro bono publico", is a Latin term which means "for the public good". In the legal profession, it refers to the practice of giving voluntary legal advice to individuals and organizations unable to afford/access legal advice and aid.

About Legal Services Authority Act 1987

It establishes National Legal Service Authority, State Legal Service Authority and District Legal Service Authority to:
- Provide free and competent legal services to the weaker sections of the society
- Ensure that opportunities for securing justice are not denied to any citizen due to economic or other disabilities.

It organizes Lok Adalat's to ensure that the operation of the legal system promotes justice on a basis of equal opportunity.

SECTION 12 Section 12 of this act specifies the criteria to select the person entitled to receive free legal aid and service. It includes

1. Members of a Scheduled Caste and Scheduled Tribe;
2. Victim of trafficking in human beings or begar as referred in article 23 of the Constitution;
3. Woman or a Child;
4. Person with disability;
5. Person in custody;
6. An industrial workman;
7. Victim of a mass disaster, ethnic violence, caste atrocity, flood, drought, earthquake or industrial disaster;
8. Person with annual income less than as specified under law.

- Using this application, practicing lawyers will be able to register themselves and connect with registered beneficiaries, _provide them services for free or at a minimal cost_ and present them with an opportunity to address their legal problems meaningfully.

- It also provides the feature of tracking case status.

- Nyaya Bandhu Panel Framework at High Courts

  o To ensure optimum utilization and impact of the program, the Department of Justice has proposed setting up a pro bono panel of lawyers at **each high court.**

  o Under this, every High Court (through its Registrar General) _invites applications from advocates_ keen to volunteer pro bono legal services to the marginalized, to become part of the **'Nyaya Bandhu panel'**. Volunteering advocates are expected to render timely & quality pro bono advice to beneficiaries appearing before the respective High Court.

  o The implementation and moderation framework for this initiative is **web based.** For this purpose, each High

Court is <u>provided with a unique login</u> to register the names of the Nyaya Bandhu panel members.

- o Once nominated to the panel, the concerned Advocates are required to complete their registration process on the application.

Extra Mile: DISHA Scheme (Designing Innovative Solutions for Holistic Access to Justice)
• This Scheme launched for a period of five years 2021-2026 to advance the cause of access to justice.   • It aims to design and consolidate various initiatives to provide citizen-centric delivery of legal services.   • In order to ensure its widened reach, dedicated Information Education and Communication (IEC) including (Technology) component has been embedded in DISHA.   There are _three components_ under DISHA at present   **1) The Nyaya Bandhu Programme**   **2) Tele-Law:** Reaching the Unreached: In order to enhance the effectiveness of legal advice and consultation **prior to litigation**, the Tele-Law Service establishes a connection between citizens and Panel lawyers. This connection is facilitated through the utilization of video/teleconferencing resources accessible at the Common Service Centres (CSCs), as well as through the Tele-Law Mobile App.   **3) Legal Awareness Programmes:** In order to establish a stronger and more comprehensive structure, the network of Legal Service Institutions is set up at the national, state, district, and taluk levels as stipulated by the Legal Services Authorities Act of 1987.

Reservation to Paharis and Paddaris

The Tribal Affairs Ministry introduced the **Constitution (Jammu and Kashmir) Scheduled Tribes Order (Amendment) Bill, 2023** in the Lok Sabha that proposes to amend The Constitution (Jammu and Kashmir) Scheduled Tribes Order, 1989 to include 4 new communities, namely "Gadda Brahmin", "Koli", "Paddari Tribe", and "Pahari Ethnic Group" in the list of STs in Jammu and Kashmir (J&K).

Pahari	**Paddari**
• It is primarily a **linguistic group forming 8.16% of J&K's population.** • It includes Hindu, Muslim, Sikh, and Kashmiri origin people settled in the districts of Poonch and Rajouri in the Pir-Panjal region of Jammu. • The tribe also includes upper caste Hindus and people displaced from Pakistan Occupied Kashmir. ➤ Paharis were always considered a linguistic group ("Pahari Speaking People") and were thus unable to fulfill the requisite criteria to be considered as ST. That is why the Bill refers to the "Pahari Ethnic Group", and not "Pahari Speaking People".	• They live in the remote Paddar area of the hilly Kishtwar district. Their homeland is spread over two districts and borders Zanskar (Ladakh) in the north and the east, Pangi in Himachal Pradesh in the south, and the rest of J&K in the west. • As per the, the 2011 census, their population is 21,548 (83.6% Hindus, 9.5% Buddhists, and 6.8% Muslims) and includes the ones who have migrated and settled in J&K and speak the Paddari language.
Objections Raised	
• Currently, Jammu and Kashmir has 12 communities that have been notified as STs. With the addition of the four new communities, J&K will have a total 16 ST communities. • The proposal has triggered unrest among the Gujjar-Bakerwal community, who are already a part of the ST list. They are afraid of their shrinking share of the quota benefits pie and have accused the Central Government of vote-bank politics in response to this move.	

- ✓ Gujjars and Bakerwals are the dominant & largest ST communities of J&K (with a population of almost 10% of J&K's population).

- ✓ Most of them, especially the Bakerwals, are nomadic who migrate to the higher reaches in the summer with their livestock and return before the onset of winter.

- ✓ They were given ST status in 1991, along with two smaller groups of Gaddis and Sippis and were empowered politically in 2019 after the Centre announced a 10% quota for them in Lok Sabha and Assembly seats in J&K.

Scheduled Tribes in India

- According to the 1931 Census, Scheduled Tribes were referred to as "backward tribes" residing in areas categorized as "Excluded" and "Partially Excluded." The Government of India Act of 1935 marked the first instance of requiring representation for these "backward tribes" in provincial assemblies.

- The Constitution does not establish specific criteria for the recognition of Scheduled Tribes. Therefore, in the early years after independence, the definition provided in the 1931 Census was employed for reference.

- However, the constitution defines scheduled tribes under Article 366(25) which states that the scheduled tribes are the ones included in the list under Article 342 of the constitution.

  - ✓ **Article 342(1) empowers the President** to specify by a public notification, the tribes or tribal communities or part of or groups within tribes or tribal communities as Scheduled Tribe in any State or Union Territory, and after consultation with the Governor (in case of a state).

  - ✓ **Article 342(2) allows the Parliament** to include in or exclude by law any tribes or tribal communities or part of or groups within tribes or tribal communities from the list of STs.

- The list of Scheduled Tribes is notified for each State or UT and is valid only within the jurisdiction of that State or UT and not outside in another states. Its inclusion/exclusion as a ST is an ongoing process.

- **Criteria for specifying a community as a Scheduled Tribe:** While the Constitution is silent about such criteria, an Advisory Committee on Revision of lists of SCs & STs (**Lokur Committee**) was setup in 1965 to look into the demand of specification of new communities in the list of ST. Based on its recommendations, following specifications were finalized-

1. Primitive way of life and habitation in remote and less easily accessible areas	2. Distinctive culture

3. Shyness of contact with the community at large	4. Geographical isolation	5. General backwardness in all respects

Procedure For Inclusion Of A Tribe In The List

Whenever the **tribal affairs ministry** receives representations for inclusion of a community in ST list, it forwards that representation to concerned state/UT for recommendation under Article 342.

If the concerned State Government recommends the proposal, the same is sent to the **Registrar General of India (RGI)** for their comments/views.

If the RGI is satisfied with the recommendation, it forwards the proposal to the **Central Government** which then refers it to the **National Commission for Scheduled Tribes (NCST)** for its recommendation.

If NCST recommends it, then it is sent for the decision of the **Cabinet** after consulting the concerned administrative Ministries. Thereafter the matter is put up before the **Parliament** in the form of a bill to amend the Presidential Order.

- **Government Efforts for introducing a New Criterion-** A task force was set up in 2014 under the leadership of then Tribal Affairs Secretary, **Hrusikesh Panda** for scheduling of tribes which recommended changes to the criteria set by the Lokur Committee, terming it obsolete with present scenario. Based on those recommendations, the Tribal Affairs Ministry prepared a draft Cabinet note which gave the following criteria-

  ✓ **Socio-Economic**, including educational, backwardness, vis-a-vis, the rest of the population of the State;

  ✓ **Historical Geographical Isolation** which may or may not exist today;

  ✓ **Distinct Language/Dialect**;

  ✓ **Presence of a Core Culture** relating to life cycle, marriage, songs, dance, paintings, folklore;

  ✓ **Endogamy**, or in case of exogamy, marital relationship primarily with other STs.

Advantages To Communities From The Incorporation Into The ST List

- ST community will be eligible for reservation benefits in employment and admission to educational institutions.

- Opportunities such as post-matric scholarships, scholarships for international studies, and national fellowships. These benefits extend to education & concessional loans provided by the National Scheduled Tribes Finance and Development Corporation.

Extra Mile

- Two more bills were introduced in the Lok Sabha along with the Constitution (Jammu and Kashmir) Scheduled Tribes Order (Amendment) Bill, 2023. The other bills were-

  1. **The Constitution (Jammu and Kashmir) Scheduled Castes Order (Amendment) Bill, 2023**- It proposed to add 'Valmiki' as a synonym for the Chura, Bhangi, Balmiki, and Mehtar communities in the Union Territory's Scheduled Castes list.

  2. **The Jammu and Kashmir Reservation (Amendment) Bill, 2023:** This will change the nomenclature of "weak and underprivileged classes (social castes)" to "other backward classes". This means the addition of 15 more communities/ castes, including Chang, Jat, Saini, Perna/ Kouro(Kaurav), Acharyas, Gorkhas and West Pakistani refugees, to the list. It partially redefines "Socially and Educationally Backward Classes" (SEBC) as "Other Backward Classes" (OBC) to enable the implementation of the 105th Constitutional Amendment "in letter and spirit".

     ✓ The 105th Amendment affirms the right of state governments and Union Territories to declare their own subsets of SEBCs.

- The country's first order related to STs was The Constitution (Scheduled Tribes) Order 1950, which was issued by President Rajendra Prasad on September 6, 1950. It contained statewise lists of tribes and was followed by 16 similar orders until 2016.

  ✓ There are no notified Scheduled Tribes in Haryana, Punjab, Chandigarh, Delhi, and Puducherry.

Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023

The government introduced the Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023 in Rajya Sabha which seeks to replace the Chief Justice of India (CJI) from a panel selecting Chief Election Commissioner (CEC) and other Election Commissioners (ECs).

About The Bill

What?	It repeals the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991 and seeks to regulate the appointment, conditions of service and term of office of the Chief Election Commissioner and other Election

	Commissioners.
Background	• A five-judge Supreme Court Bench while ruling on petitions seeking an independent mechanism for the appointment of CEC and ECs ordered that until the Parliament comes out with a law, the CEC and ECs should be appointed on the recommendation of a panel consisting of the Prime Minister (PM), Leader of Opposition (LoP) and the Chief Justice of India (CJI).
	• In case, LoP is not available, the leader of the largest opposition party in the Lok Sabha will be considered.
	• Until this SC ruling, appointments were made by the President on the recommendation of the Government as per Article 324(2) of the Constitution.
	✓ Article 324(2) states that the Election Commission will consist of a Chief Election Commissioner and number of election commissioners as fixed by the President from time to time and their appointment will be made by the President subject to the provisions of a law made by the Parliament.
	• Therefore, the Government, with the aim of regulating the appointment of CEC and other ECs, introduced this bill in the Monsoon Session of the parliament.

Key Provisions Of The Bill

• **Appointment-** The CEC and other ECs will be appointed by the President.

• **Qualifications-** For being elected for the post of CEC or ECs, a person should be:

  ✓ of integrity; who have knowledge of and experience in management and conducting elections.

  ✓ holding or have held a post equivalent to the rank of Secretary to the Government of India

** Earlier, there was no rule prescribing the qualifications for appointment to the posts.

• **Search Committee-** headed by the Cabinet Secretary and including two members not below the rank of Secretary having knowledge and experience in matters relating to elections.

• **Selection Committee-** to recommend names of the persons to be appointed as the CEC and ECs, to the President. It will consist of:

  (i) Prime Minister as the Chairperson;

  (ii) Leader of Opposition in the House of the People as a Member;

  (iii) Union Cabinet Minister to be nominated by the Prime Minister as a Member.

** Any vacancy or defect in the constitution of the Selection Committee won't make the appointment of CEC and ECs invalid.

• **Process-**

  1. The Search Committee will prepare a panel of **five people** for appointment as the Chief Election Commissioner and other Election Commissioners, for consideration of the Selection Committee.

  2. This recommendation will then be sent to the Selection Committee which will regulate its procedure in a "transparent manner" and may consider any other person apart from those included in the Search Committee's panel.

  3. The Selection Committee sends its recommendation to the President who then makes the appointments.

• **Terms of Office-** It remains unchanged i.e., the CEC and other ECs shall hold office for a term of six years from the date of appointment or till attaining the age of sixty-five years, whichever is earlier. They won't be eligible for re-appointment.

  ✓ If an Election Commissioner is appointed as Chief Election Commissioner, his term of office shall not be

more than six years in aggregate as the Election Commissioner and the Chief Election Commissioner.

- **Salary and allowances:** The Bill provides that salary, allowance, and service conditions of the CEC and other ECs will be the same as that of the Cabinet Secretary.

** The 1991 Act provided that the salary of the ECs will be equal to that of a Supreme Court judge.

- **Resignation and Removal-** The CEC and other ECs may, at any time, resign from his office by writing to the President. Their removal will be according to Article 324(5) of the Constitution which states that-

  ✓ The removal of CEC will be like that of a Judge of the Supreme Court and other EC, or a Regional Commissioner shall be removed from office only the recommendation of the CEC.

- **Conduct of Business-** All business of the Election Commission is to be conducted unanimously and in case of any difference of opinion between the CEC and the other ECs on any matter, majority decision shall prevail.

Concerns Raised

1. **Questions EC's Neutrality-** By replacing the CJI (as a member suggested by the SC bench) with a cabinet minister in the selection panel, there will two members of the Government. This will have a huge impact on the final decision as the government can have constructed majority while the LoP will become redundant and the person chosen for the appointment might act as a puppet of the government.

2. **Dilutes SC's Order-** The Constitution Bench of the SC batted for an impartial panel (comprising of the PM, CJI and LoP) for the selection of CEC and ECs. This absence of CJI reduces judicial representation in the committee and might affect impartiality. The bill dilutes this order, resulting in the appointment of biased CEC and ECs, ultimately affecting EC's independence.

Kerala Assembly Passes Resolution to Rename State as 'Keralam'

The Kerala Assembly passed a resolution unanimously urging the Centre to rename its state as "Keralam" in the Constitution and all office records.

Process to Rename a State

Related Constitutional Provisions

- The Constitution of India gives the Parliament power to alter the name of a state under Article 3.

- Article 3 of Constitution explicitly lays down a procedure to *alter the area, boundaries, or name of a state.*

The Proposal

- It can be initiated either by the state government or by the Parliament.

- For initiating the proposal in the Parliament, <u>prior recommendation of President is required.</u>

- The state legislature sends a proposal in the form of a resolution to the Central government.

- If the state government sends the proposal for changing the name to the Centre, then the Ministry of Home Affairs (MHA) takes over and gives its consent only after receiving no objection certificates (NOCs) from various departments like the Ministry of Railways, Intelligence Bureau, Department of Posts, Survey of India, Registrar General of India.

- Once the state receives a **green nod from the MHA,** the resolution is then presented to Parliament in the form of a bill.

The Procedure

- The bill is referred by the President to the State Legislatures being affected by the bill for expressing their views on the bill within a specified time.

  ✓ The Procedure of sending <u>the bill to the state legislature was not a part of the original constitution and was added only through the 5th amendment act, 1955.</u>

- The views of the State Legislature are not enforceable against the President or the Parliament. The Parliament can dismiss the suggestions given by the state legislature if it wishes.

- After receiving the suggestions of the state legislature or at the end of the prescribed time, the bill returns to Parliament where it gets further deliberated upon.

- Finally, the bill is sent to the President for his assent. Once it receives the President's assent, the bill becomes an act, and the name of the state is changed thereafter.

Resolution Regarding The Name Change

The resolution urged the Central government to change the name as 'Keralam' in all the languages included under the Eighth Schedule and states that-

- The name of Kerala in Malayalam language is *'Keralam'.* States were formed on linguistic basis on November 1, 1956 which is also observed as Kerala Formation Day.

- The demand for a united Kerala for all Malayalam speaking communities has been raised since freedom struggle days.

- However, the name of the state in the 1st Schedule of the Constitution has been written as *Kerala.*

- This Assembly is unanimously requesting the Union Government to take immediate steps under Article 3 of the Constitution to change the name of the state to Keralam.

Kerala vs Keralam- The Origin

Kerala	Keralam
Emperor Asoka's Rock Edict II of 257 BC is the earliest evidence that mentions Kerala. The inscription refers to the local ruler as Kerala Putra (Sanskrit for "son of Kerala"), and "son of Chera" referring to the Chera dynasty.	• Scholars believe *'Keralam'* could have originated from *'Cheram'*. • According to scholars, the word *'keram'* is the Canarese (Kannada) form of *cheram*, and is the region between *Gokarnam* and *Kanyakumari*. • The origin of the term could possibly be from the root *'cher'*, which means to join and *'alam'* means region or land, therefore *cheralam*.

Demands for Modern State

The Aikya (unified) Kerala movement gathered momentum in 1920s aiming at the integration of Malabar, Kochi and Travancore into one territory. It led to a demand for a separate state for Malayalam-speaking people.

Kerala After Independence

- The merger and integration of princely states was a major step towards the formation of the state of Kerala post-independence.

- The two states of Travancore and Kochi were integrated in 1949 heralding the birth of the Travancore-Cochin State.

- When it was decided to reorganize states on a linguistic basis, the State Reorganization Commission of the Union Government recommended the creation of the state of Kerala.

- The Commission under Syed Fazl Ali recommended the inclusion of the district of Malabar and the taluk of Kasargod to the Malayalam-speaking people's state.

- This way the state of Kerala came into being on November 1, 1956, and was referred to as *Keralam* in *Malayalam* and *Kerala* in English.

Previous Instances of Name Change in Country

- The earliest name changes were done by the Centre in 1950 when East Punjab became Punjab and United Provinces became Uttar Pradesh.

- Uttaranchal's name was changed to Uttarakhand in 2006.
- In 2011, Orissa's name was changed to Odisha and the language became Odia from Oriya while the resolution was passed for the same in 2008.
- But the name change resolutions are not always accepted by the Centre. For instance, the West Bengal assembly passed a resolution in 2011 seeking to change the state's name to "Paschim Banga". It passed another resolution in 2016 seeking to change its name to Bengal in English and Banga in Bengali. But the proposal was turned down by the Centre.

National Manuscripts Bill, 2023

The Government is planning to introduce a National Manuscripts Bill, 2023 in the upcoming winter session of Parliament to document and catalogue Indian heritage texts.

Objective

- To document and catalogue Indian heritage texts irrespective of their location.
- Maintain accurate and up-to-date information about them.
- Detail the conditions under which they may be consulted.

Need

- According to National Mission for Manuscripts, India possesses an estimated 10 million manuscripts in 80 ancient scripts like Brahmi, Kushan, Gaudi, Lepcha, and Maithili.
- The Bakhshali manuscript, an ancient Indian mathematical text written on birch bark, is considered to be the earliest recorded example of the use of zero.
- The seminal text, dating back roughly to the third or fourth century A.D., is in one of the Bodleian Libraries of the University of Oxford.
- Many other Indian manuscripts lie in libraries across the globe or are with private collectors, both in India and abroad.
- There is a need to link studying and interpreting manuscripts with livelihood. Only then can the importance of ancient manuscripts in the socio-cultural milieu be brought back.
- Also, the survey and documentation of Indian manuscripts found abroad and in India will give a boost to an increased global interest in Indian manuscripts.

> **About Manuscripts**
>
> - It is a **handwritten composition** on paper, bark, cloth, metal, palm leaf or any other material dating back at least 75 years and has significant scientific, historical content or aesthetic value.
>   - ✓ Lithographs and printed volumes are not manuscripts.
> - They are distinct from historical records such as epigraphs on rocks, firmans, revenue records which provide direct information on events or processes in history and are found in hundreds of different languages and scripts.
> - Often, one language is written in several different scripts. For example, Sanskrit is written in Oriya script, Grantha script, Devanagari script and many other scripts.

National Manuscripts Authority (NMA)

- The bill envisages setting up the 10 member National Manuscripts Authority (NMA) as the apex policy making body regarding digitization, conservation, preservation, editing, and publication work of manuscripts.
- **Composition**- It will consist of:
  - ✓ The Union minister of Culture as the Chairperson
  - ✓ The Secretaries of Culture, Finance and Education, the Vice-Chancellor of Central Sanskrit University, special invitees representing the States, and private agencies as the members.
- **Powers**-
  - ✓ It would have the powers of a **civil court** to regulate the allocation of access to manuscripts.
  - ✓ **Conducting inquiry** into thefts and desecration of texts through its investigation wing.

✓ It will have the right to take over a manuscript from a private owner based on the uniqueness and the importance of the content. The sum to be paid would be fixed by an expert committee

- **Functions**-

  ✓ To ensure that the manuscripts are not lost by damage or theft.

  ✓ To collaborate with universities and other educational institutions or agencies for providing fellowships and scholarships for the study of manuscripts.

  ✓ To prepare a <u>dedicated digital portal for indexing</u>, cataloguing, uploading, and downloading copies of manuscripts.

Extra Mile: About National Mission for Manuscripts

It is a unique project established in 2003 by the Ministry of Tourism and Culture with the aim to unearth and preserve the vast manuscript wealth of India covering a variety of themes, textures and aesthetics, scripts, languages, calligraphies, illuminations and illustrations.

Motto- Conserving the past for the future.

Objectives	Challenges
• **Location & Promotion:** To locate manuscripts through national level Survey and Post-Survey and to promote access to manuscripts through publication of critical editions of unpublished manuscripts.	• **Challenges of Decryption:** There are around ten million manuscripts in India (perhaps the largest collection of in the world) found in a various languages and scripts, many of which can no longer be read.
• **Documentation & Digitization:** To document each manuscript and manuscript repository, for a National Electronic Database that currently contains information on four million manuscripts making this the largest database on Indian manuscripts in the world.	• **Lack of Expertise:** Scholars who can study and use manuscripts are fast disappearing and a new generation of scholars is not able to rise to the challenge.
• **Conservation:** To conserve manuscripts incorporating both modern and indigenous methods of conservation and training a new generation of manuscript conservators	• They are often found to have been neglected for decades and in very poor physical state—insect ridden, fungus infected or brittle, fading and fragile.
• **Training & Public Engagement:** To train the next generation of scholars in various aspects of Manuscript Studies like languages, scripts and critical editing and cataloguing of texts and conservation of manuscripts	• **Lack of connection** between so-called 'modern knowledge' and the knowledge contained in manuscripts.

Achievements- It has digitized 3.3 lakh manuscripts, containing about 3.1 crore folios. It has also uploaded 1.18 lakh manuscripts and has made available online about 70,000 manuscripts for public access.

Major Bills of Monsoon Session 2023

The Monsoon Session of Parliament ended with the passage of 23 bills by both the houses including the passage of controversial bills like the Government of National Capital Territory of Delhi (Amendment) Bill, 2023 and the data protection bill despite less working hours, opposition protests and no-confidence motion.

Major Bills Passed & Their Key Provisions

1. Constitution (Scheduled Tribes) Order (Third Amendment) Bill, 2023

It aims to include the **Hattee community** of Trans Giri area of Sirmour district, Himachal Pradesh in the list of Scheduled Tribes.

2.The Mediation Bill, 2023

It aims to-

- Promote and facilitate mediation, especially **institutional mediation** for resolution of disputes.

- Enforce mediated settlement agreements.

- Provide a body for registration of mediators.

- Encourage community mediation.

- Make online mediation as acceptable and cost-effective process.

For more details on this bill, please refer to 'The Recitals- October 2022' edition

3. Biological Diversity (Amendment) Bill, 2023

For more details on this bill, please refer to 'The Recitals- July 2023' edition

4. The Mines and Minerals (Development and Regulation) Amendment Bill, 2023

- This Bill aims to attract private sector investment in the exploration of critical and deep-seated minerals in the country. Bill allows activities under a **single exploration licence** in an area of up to 1,000 square kilometres.

- It amends The *Mines and Minerals (Development and Regulation) Act, 1957* and allows the private sector to mine *six out of 12 atomic minerals* and will include lithium (used for manufacturing batteries for electric vehicles and energy storage devices), beryllium, niobium, titanium, tantalum and zirconium.

  ✓Earlier, 12 atomic minerals were reserved for mining and exploration by state-owned entities.

- It will also allow mining of deep-seated minerals which include gold, silver, copper, zinc, lead, nickel, cobalt, platinum group of minerals and diamonds. It empowers the central government to exclusively auction **mining leases** and **composite license** for certain critical minerals.

- The exploration licence will be granted by the state government through competitive bidding. The central government will prescribe details such as manner of auction, terms and conditions, and bidding parameters for exploration licence through rules.

5. Offshore Areas Minerals (Development and Regulation) Amendment Act, 2023

- It will provide a fixed 50-year production lease for offshore minerals and create a transparent auction route for allocation of mines to bring major reform in allocation of operating rights in Offshore Areas.

- Two types of operating rights to be granted to private sector through auction by competitive bidding, viz. **production lease and composite licence**.

- Provision has been made for grant of operating rights only to PSUs in case of atomic minerals.

- The private sector will get the grant of production lease only through auction by competitive bidding whereas government or a government company, or a corporation will get grant of operating rights *without* competitive bidding in the mineral-bearing areas reserved by the central government.

- To ensure availability of *funds for exploration, mitigation of adverse impact of offshore mining, disaster relief, research, interest and benefit of the persons affected by exploration or production operations, etc.,* a provision has been made for setting up of a **non-lapsable Offshore Areas Mineral Trust** which will maintain a fund under the **Public Account of India.**

- This will be funded by an **additional levy** on the production of minerals, not exceeding one third of the royalty. The exact rate of additional levy will be prescribed by the Central Government.

- Royalty, auction premium and other revenues from the production of minerals from offshore areas shall accrue to the Government of India.

6. The Registration of Births and Deaths (Amendment) Act, 2023

For more details on this bill, please refer to 'The Recitals- July 2023' edition

7. Cinematograph (Amendment) Bill, 2023

It amends the Cinematograph Act, 1952 and aims at curbing transmission of pirated film content on the internet and introducing new age categories for classifying films.

Key Features-

Offence & Penalty	1) The act of piracy will be considered an offence legally and transmitting pirated content v also be punishable.
	2) Those engaged in film piracy will attract up to three years of imprisonment and ₹10 la penalty.
Age Classification	1) It will expand the U/A category (which can be viewed by minors with adult supervision) **U/A 7+, U/A 13+ and U/A 16+.**
	2) This will allow filmmakers to address mature themes without attracting an A certificate.
Uniformity	It seeks to bring about uniformity in categorization of films and content across platforms.
Re-Examination	The government will be allowed to order the Central Board of Film Certification (CBFC) to examine the films that have already been cleared for exhibition.
Authority to Grant Separate Certificate	It authorizes the CBFC to grant films with a separate certificate for their display on television other media as only Unrestricted Public Exhibition (UA) category films can be shown on television.
Blocking Websites	It allows for blocking of websites and URLs hosting pirated content under the Information Technology Act.

For more details on this bill, please refer to 'The Recitals- April 2023' edition.

8. The Constitution (Scheduled Castes) Order Amendment Bill, 2023

It will allow inclusion of two communities **'Mahra' and 'Mahara'** in the list of Scheduled Castes (SC) in Chhattisgarh.

9. Anusandhan National Research Foundation Act, 2023

It aims to set up a National Research Foundation (NRF) with a budget of about 50,000 crores for a period of five years, with contributions from the government, Science and Engineering Research Board (SERB) and the private sector.

For more details on this bill, please refer to 'The Recitals- July 2023' edition.

10. The Coastal Aquaculture Authority (Amendment) Bill, 2023

It amends the Coastal Aquaculture Authority Act, 2005 which defines coastal aquaculture as farming of shrimp, prawn, fish or any other aquatic life in saline or brackish water, under controlled conditions. It seeks to-

- Expand the scope of coastal aquaculture by including allied activities such as hatcheries and nucleus breeding centers. Specific exemption has been granted under the CAA Act, through this amendment for the establishment of aquaculture units like hatcheries, Brood stock multiplication centres (BMC) and Nucleus Breeding Centres (NBC) within the No Development Zone (NDZ) [200m from the HTL] of Coastal Regulation Zone (CRZ).

- Remove regulatory gaps and reduce the compliance burden without diluting environmental protection rules in the coastal areas. The Amendment Bill has new provisions for empowering the Coastal Aquaculture Authority to better regulate the activities connected with coastal aquaculture for coastal environment

compliance.

- The amendment bill provides for fixing the standards for emission or discharge of effluents from coastal aquaculture units, making the owner liable to pay the cost of demolition and cost of damage to the environment

- *Decriminalize* the offences committed in carrying out coastal aquaculture activities and impose only a penalty.

- Make Coastal Aquaculture Authority more responsive to the needs of the stakeholders by-
  - ✓ Simplifying its operational procedures.
  - ✓ Promote newer forms of environmentally friendly coastal aquaculture like cage culture and seaweed culture.
  - ✓ Usher in global best practices in this sector, including mapping and zonation of aquaculture areas, quality assurance and safe aquaculture products.

- Encourage the establishment of facilities in areas having direct access to seawater to produce genetically improved and disease-free broodstocks and seed for use in coastal aquaculture, besides preventing the use of antibiotics and pharmacologically active substances, which are harmful to human health in coastal aquaculture.

- Remove ambiguity in the *principal Act between farm and other verticals of coastal aquaculture*.

- It will help lakhs of small marginal aquaculture farmers avoid the need for obtaining CRZ clearances from multiple agencies by granting them registration under the Coastal Aquaculture Authority Act which will be treated as valid permission under CRZ notification.

11. The Pharmacy (Amendment) Bill, 2023

It amends the Pharmacy Act, 1948 and allows persons qualified or registered under the Jammu and Kashmir Pharmacy Act, 2011 to be registered as pharmacists under the Pharmacy Act. Thus, doing away with the ambiguity with regard to the two legislations.

12. The Central Goods and Services Tax (Amendment) Bill, 2023

- **Online Gaming and Money Gaming Definitions**: The Act introduces definitions for "online gaming" and "online money gaming." Online gaming encompasses games offered on the internet or electronic networks and includes online money gaming. Online money gaming refers to gaming where players pay or deposit money or digital assets with the anticipation of winning money or digital assets, regardless of the outcome's basis in skill or chance.

- **Specified Actionable Claims**: The Act introduces the concept of "specified actionable claim." It pertains to actionable claims connected to activities such as betting, casinos, gambling, horse racing, lottery, and online money gaming.

- Under it, **transactions involving actionable claims**, except lottery, betting, and gambling, **are not considered to be supply of goods or services**. Thus, they are **not liable to be taxed**. An actionable claim refers to a claim to any debt which is not secured by mortgage of immovable property or by pledge of moveable property.

- It amends the Central Goods and Services Tax (CGST) Act, 2017 to bring under its ambit- betting, casinos, horse racing, lottery, gambling, or online money gaming etc. as supply of goods and services and levies CGST on them.

- It makes registration mandatory under the acts for persons supplying online money gaming from outside India to persons in India.

**The GST Council recently levied 28% GST on full face value of entry level bets in online gaming, casinos and horse racing.

13. The Integrated Goods and Services Tax (Amendment) Bill, 2023
• It amends the Central Goods and Services Tax (CGST) Act, 2017 and inserts a provision to impose GST liability on **online money gaming** provided by offshore entities. Such entities would be required to get GST registration in India.
• It provides for *blocking access to online gaming platforms located overseas in case of failure to comply with registration and tax payment provisions.*

14. The Government of National Capital Territory of Delhi (Amendment) Act, 2023
• It establishes the *National Capital Civil Services Authority (NCCSA)* comprising of the Chief Minister as its chairman, Chief Secretary of Delhi and Principal Home Secretary of Delhi as members.
✓ NCCSA will make recommendations to the Lieutenant Governor (LG) regarding transfers and postings of all Group 'A' officers and officers of DANICS serving in National Capital Territory of Delhi but not officers serving in connection with Entries 1, 2 and 18 of List II of the Seventh Schedule I.e., Public order, Police and Land;
• It does away with the contentious Section 3A of the Government of National Capital Territory of Delhi (Amendment) Ordinance, 2023 that barred the Delhi legislative assembly from having any control over services under Entry 41 of List II of the Seventh Schedule of the Constitution.
✓ Entry 41 of List II pertains to the State public services and State Public Service Commission.
• The decisions taken by Lieutenant Governor (LG) will be final i.e., it will be up to him to accept or send for reconsideration any recommendation. He is empowered to summon, prorogate and dissolve the Delhi Legislative Assembly.
• It imposes a duty on the **department secretaries** to bring to the notice of the LG, the Chief Minister and the Chief Secretary, any matter that may lead the Government to any controversy with the Central Government, any state government, supreme court or any high courts.
For more details on this bill, please refer to 'The Recitals- May 2023' edition.

15. The Forest (Conservation) Amendment Bill, 2023
• The Forest (Conservation) Act, 1980 will now be addressed as **Van (Sanrakshan Evam Samvardhan) Adhiniyam,** which translates to Forest (Conservation and Augmentation) Act because the primary objective of the Bill is to increase the forest area of the country to meet the goals of forest conservation, conservation of biodiversity and the challenges posed by climate change.
• It exempts certain kinds of infrastructure or development projects from the need to get forest clearance, which is mandatory at present including strategic linear projects of national importance and concerning national security situated within 100 km of international borders.
• It ensures that private forests and agro-forestry are not considered forests in the traditional sense and the farmers or owners of these private forests are allowed to harvest their lands, for commercial or other uses, without the need for acquiring forest clearance.
For more details on this bill, please refer to 'The Recitals- April 2023' edition

16. **The Indian Institutes of Management (Amendment) Act, 2023**

- It amends the Indian Institutes of Management Act, 2017 and declare Indian Institutes of Management (IIMs) as institutes of national importance and regulates their functioning.

- It designates the President of India as **Visitor** of every Institute covered by the Act. The Bill prescribes three primary roles for the Visitor – 1) to make appointments, 2) to audit the working of institutions, and 3) to conduct an inquiry and empowers President to-

  ➢ Appoint the Director of IIM

    ✓ Until now, the director was appointed on the recommendations of search cum selection committee constituted by the board (consisting of Chairperson of the Board, and **three members** from amongst eminent administrators, industrialists, educationists.)

    ✓ Now, The Amendment Bill requires the Board to obtain prior approval of the President before appointing a director. Since the actions of the President are on the aid and advice of the Union Council of Ministers, this change essentially means the Ministry of Education can veto the choice of the Board.

    ✓ The Bill proposes that the **four-member search-cum-selection committee** to recommend names for the Director to have one member nominated by the Visitor (i.e. the President), and only two other "eminent" members (instead of three).

  ➢ Appoint and remove the Institute Director and Initiate an inquiry against an institute

  ➢ Nominate a chairperson for the Co-ordination forum.

- The central government will prescribe the procedure for the appointment of the director and dissolution of the board. The proposed amendments seek to give expanded role to central government in functioning of IIM.

- It classifies the National Institute of Industrial Engineering (NITIE), Mumbai as IIM, Mumbai.

** The President of India is the visitor of all the Central Universities and IITs and appoints their vice-chancellors and directors.

17. **The National Dental Commission Act, 2023**

This Act focuses on regulation of dentistry in India and aims to make dental education affordable and make quality oral healthcare accessible. It will repeal the Dentists Act, 1948, and setup-

- **National Dental Commission (Head Office at New Delhi)**- for (i) regulating governance standards of dental education, examination and training, (ii) regulating dental institutions, (iii) assessing infrastructure requirements and (iv) ensuring admissions only through NEET exam to Bachelor of Dental Surgery (BDS).

  ✓ The Commission will be chaired by an eminent and experienced dentist. Chairperson appointed by the central government upon recommendation of a search-cum-selection committee which is chaired by Cabinet Secretary.

  ✓ The new commission will also regulate fees for 50% seats in private dental colleges.

- The Act also mandates the formation of **State Dental Councils or Joint Dental Councils**. This structure aims to decentralize authority and enhance effective regulation.

- The Act will facilitate joint sittings with relevant statutory bodies, including the National Medical Commission, Pharmacy Council of India, Indian Nursing Council, National Commission for Indian System of Medicine, National Commission for Homeopathy, and National Commission for Allied and Healthcare Professions.

- **Dental Advisory Council**- to advise the Commission on education, training, and research standards, and enhance equitable access to dental education.

- **Three autonomous Boards** namely,

  (i) **Undergraduate and Postgraduate Dental Education Board**- for determining education standards,

developing curriculum, and granting recognition to dental qualifications.

(ii) **Dental Assessment and Rating Board (DARB)**- for determining compliance assessment procedure for dental institutions, granting permission to establish new institutions, and conducting inspections and ratings.

(iii) **Ethics and Dental Registration Board (EDRB)-** for maintaining online national registers of dentists/dental auxiliaries, suspending/cancelling licenses, and regulating standards of conduct, Ethics and the scope of the practice.

18. Multi-State Cooperative Societies (Amendment) Bill, 2023

- It amends the Multi-State Cooperative Societies Act, 2002 and seeks to- Strengthen governance, increase transparency, Reform the electoral process, Improve the monitoring mechanism, ensure ease of doing business with financial discipline and to improve the composition of boards.

- It allows "any" cooperative society to merge into an existing multi-state co- operative society by a resolution passed by a majority of not less than two-thirds of the members present and voting at a general meeting of such society

- It seeks to establish a "cooperative election authority" consisting of a chairperson, a vice-chairperson and a maximum of three members to be appointed by the Centre.

- The Bill also establishes the Co-operative Rehabilitation, Reconstruction and Development Fund for revival of sick multi-state co-operative societies.

- It proposes to appoint one or more "cooperative ombudsman" with territorial jurisdiction to inquire into members' complaints. The Ombudsman shall complete the process of inquiry and adjudication within 3 months from the receipt of the complaint. Appeals against the directions of the Ombudsman may be filed with the Central Registrar (who is appointed by the central government) within a month.

For more details on this bill, please refer to 'The Recitals- December 2022' edition.

19. Digital Personal Data Protection Act, 2023

It aims to protect the privacy of all Indian citizens by protecting their digital data from being misused. Its key features include:

a) **Applicability**- Data collected online/offline, digitized, data being processed outside the country by a company providing its service in the country.

b) **Notice & Consent**- A Data Fiduciary (persons, companies and government entities who process data) is required to give the Data Principal (person to whom the data relates) a notice in clear and plain language with details of personal data being sought and the purpose of processing it. The Data Principal has the right to withdraw her consent at any time, its consequences shall be borne by the Data Principal, and it won't have any effect on the data processed before the withdrawal of consent.

c) **Rights of Citizens**- It empowers country's citizens with following rights-

✓ Right to Information, Right to nominate, Right to Grievance Redressal

✓ Right to correction or Erasure (Erase any personal data no longer required except for legal purposes)

✓ The Act also safeguards the personal data of children. It allows a Data Fiduciary to process the personal data of children only with parental consent. The Act also does not permit processing which is detrimental to well-being of children or involves their tracking, behavioural monitoring or targeted advertising.

d) **Exemptions**- It exempts data access for the following purposes-

✓ prevention and investigation of offences, enforcement of legal rights or claims.

✓ To be used by government entities in the interest of the security of the state and public order.

✓ For research, archiving, or statistical purposes.

- ✓ To process in India personal data of non-residents under foreign contract

- ✓ For approved merger, demerger etc and to locate defaulters and their financial assets etc.

e) **Financial Penalties**- Upon non-compliance, the board may impose a financial penalty on companies in each instance. For users, a consumer who submits false documents for an online service or makes bogus grievance complaints may face a Rs 10,000 fine.

f) **Data Protection Board of India**- To be established by the Central Government. Its main functions will be to-

- ✓ Hearing public grievances, Monitor compliance and impose penalties.

- ✓ Direct Data Fiduciary to adopt urgent measures to remedy personal data breaches or mitigate any harm caused to Data Principals.

- ✓ To refer complaints for Alternate Dispute Resolution and to accept Voluntary Undertakings from Data Fiduciaries

For more details on this bill, please refer to 'The Recitals- November 2022' edition

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20. The National Nursing and Midwifery Commission Bill, 2023

Nursing involves providing healthcare services, monitoring patients, administering treatments, and assisting doctors. Midwifery specifically focuses on providing care to pregnant women before, during, and after childbirth, as well as newborn care.

- It will repeal the Indian Nursing Councils Act, 1947 and will set up a **National Nursing and Midwifery Commission (NNMC)** as a regulatory body for nursing and midwifery professionals, consisting of 29 members (Chairperson with a postgraduate degree in nursing and midwifery and 20 years of field experience) for-

  i) Framing policies and regulating standards for nursing and midwifery education with Providing standards for faculty in teaching institutions.

  ii) Providing a uniform process for admission into nursing and midwifery institutions.

- NNMC will supervise three autonomous boards-

  i) **Nursing and Midwifery Undergraduate and Postgraduate Education Board**- to regulate education and examination at undergraduate and postgraduate levels;

  ii) **Nursing and Midwifery Assessment and Rating Board**- to provide the framework for establishing, assessing and rating nursing and midwifery institutions;

  iii) **Nursing and Midwifery Ethics and Registration Board**- to regulate professional conduct and promote ethics in the profession.

- It also provides for State Nursing and Midwifery Commissions consisting of ten members for every state government where there is no such existing Commission, for-

(i) Enforcing professional conduct, code of ethics and etiquette; (ii) Maintaining state registers for registered professionals; (iii) Issuing certificates of specialization; (iv) Providing for skill-based examination.

- The central government will establish the **Nursing and Midwifery Advisory Council** to advise and support the National Commission in matters concerning nursing and midwifery education, services, training, and research.

** Bills passed by both the Houses can become Acts only after receiving President's assent.

Drilling In The North Sea

- U.K. Prime Minister recently backed plans for new fossil fuel drilling off Britain's coast.

    o The North Sea Transition Authority (NTSA), which is responsible for regulating oil, gas and carbon storage industries, is planning to conduct its 33rd offshore oil and gas licensing round.

- This move will assist Britain in becoming more energy independent. However, worrying environment experts have raised concerns while pointing that the world continues its stride towards irreversible climate change.

About North Sea

- Geographically, the North Sea lies between England and Scotland on its west, the Netherlands, Belgium, and France on its south, and Norway, Denmark, and Germany on its East.

- **It is an epeiric sea** (an inland sea either completely surrounded by dry land or connected to an ocean by a river, strait or arm of the sea) on the European continental shelf.

    o **It connects to the Atlantic Ocean** through the English Channel in the south and the Norwegian Sea in the north.

- **It hosts key north European shipping lanes and is a major fishery**. The coast is a popular destination for **recreation and tourism** in bordering countries, and **a rich source of energy resources, including wind and wave power.**

- It gained significant economic importance in the 1960s as the states around the North Sea began **full-scale exploitation of its oil and gas resources.**

A Short History of Drilling In UK North Sea

- **The 1958 Geneva Convention on the Continental Shelf** was the first international legislation to establish the rights of countries over the continental shelves adjacent to their coastlines.

    o The treaty came into force in 1964 and paved the way for exploration in the North Sea.

- **The U.K. Parliament passed the Continental Shelf Act 1964** that provides for exploration and exploitation of the continental shelf based on the 1958 convention.

- **The first licence for exploration in the U.K. North Sea** was awarded to British Petroleum (BP) in 1964.

    o The following year, BP discovered natural gas in the North Sea, off the east Anglican coast.

- According to the U.K. government, production from the North Sea peaked in 1999 to 1,37,099 thousand tonnes of crude oil and natural gas liquids. **By 2022, the total production declined to 38,037 thousand tonnes.**

Challenges Associated With Offshore Drilling

- The offshore drilling puts **workers, waters, and wildlife at risk**.

- Drilling in seas and oceans for fossil fuels not only **aggravates the threat of climate change** but also **warms oceans and raises sea levels**.

- Offshore drilling is associated with a **direct risk to marine biodiversity,** as well as with **indirect risks to coral reefs, shellfish and the marine ecosystem** from acidic waters because of carbon pollution settling into oceans.

Pak President Denies Signing Controversial Bills

- President Arif Alvi denied approving changes to the Official Secrets Act and the Pakistan Army Act, claiming that he was undermined by his own staff.

- The development comes less than two weeks after Alvi dissolved the National Assembly on the advice of then outgoing Prime minister Shehbaz Sharif – thus paving the way for the next general elections.

> ### Background: Pak President Denies Signing Controversial Bills
>
> - Few weeks ago, the Pakistan National Assembly and the Senate approved two bills and sent those bills for Presidential assent.
>   - These bills were - **the Official Secrets (Amendment) Bill, 2023** and **the Pakistan Army (Amendment) Bill, 2023**.
>   - The two bills would further enhance the Pakistan Army's already considerable powers.
>   - This Act confers more powers to the army chief and calls for imprisonment for those found guilty of defaming the army.
> - Pak President Alvi was deemed to have given his assent to both of them. Later, he denied to have signed these bills.
>   - On the social media platform, the President claimed that he ordered his staff to return the bills unsigned within the stipulated time to render them ineffective.
>   - He alleged that his staff undermined his orders and failed to follow his instructions.

Pak Constitution on Presidential Assent

- **Under Article 75(1) of the Pakistani Constitution**, after a bill has passed through both the National Assembly and the Senate, it is presented to the President for his assent.

- The President, at this juncture, has two options – either to give assent within 10 days or to return the bill along with his objections to the legislature.

- If the legislature passes it again, with or without incorporating the President's objections, as per the Constitution, the President shall give his assent within ten days, failing which such assent shall be deemed to have been given.

- As per constitutional experts of Pakistan, the concept of deemed assent only kicks in with bills that have already been sent back to the Parliament by the President one time.
  - No where does 75(1) provide that if President has not assented to the Bill within 10 days it will automatically be deemed that the President has assent and the Bill becomes an Act.

Pakistan President Alvi dissolves Parliament

- Recently, Pakistan President Arif Alvi dissolved the National Assembly at outgoing Prime Minister Shehbaz Sharif's advice.
  - Article 50 of the Constitution provides that the Parliament of Pakistan shall consist of President and the two Houses known as the National Assembly and the Senate.
- This marked an end to the current government's tenure and paving the way for next general elections.
- The advice from Prime Minister Sharif for the dissolution was sent to President Alvi three days before the term of the Lower House of Parliament expires.
- Since the assembly has been dissolved before time, the Election Commission of Pakistan (ECP) would hold elections within 90 days.
- If the National Assembly had completed its constitutional term, the polls would have been held within 60 days.

Gabon Coup

- The Military seized power in the West African country of Gabon, making it the eighth in the region to see a coup d'etat since 2020.
  - o Recent Coups - Gabon (August 2023), Niger (July 2023), Chad (April 2021), Burkina Faso (Jan 2022, Sept 2022), Guinea (Sept 2021), Mali (Aug 2020, Mar 2021).
- The coup was announced on national TV minutes after election results handed **President Ali Bongo his third consecutive** term in power.
- After the army deposed him in a coup and put him under house arrest, he asked his supporters to make noise in his support.
- However, the crowds that have thronged the streets have instead celebrated the coup.
  - o <u>Bongo's family ruled Gabon for more than 55 years</u>, and he faced allegations of corruption, sham elections and failure to spend more of Gabon's oil and mineral revenues on the poor.

Gabon Country Profile

- **Geographical location**
  - o Gabon is located in Central Africa, along the west coast of the continent. It is situated near the equator.
  - o Gabon is bordered by Equatorial Guinea to the northwest, Cameroon to the north, the Republic of the Congo to the east and south, and the Atlantic Ocean to the west.
  - o Its position near the equator gives Gabon a <u>tropical climate and diverse ecosystems, including dense rainforests and coastal areas</u>.
    - ▪ **Nearly 90% of the country is covered by forests**.
  - o **Libreville is the capital** and largest city of Gabon, located on the country's western coast.
- **Political profile**
  - o Gabon has had few leaders since its independence from France in 1960, with Omar Bongo ruling as President for more than four decades until his death in 2009.
  - o During his Presidency, Gabon maintained a close relationship with France under a system known as "***Francafrique***", receiving both political and military support in exchange for business favours.
  - o Gabon is a **major oil producer** but a third of its population live in poverty, according to World Bank.
    - ▪ **A member of OPEC, Gabon is Africa's seventh-largest oil producer**.

India – Gabon Relationship
• India and Gabon have enjoyed warm and friendly relations since the pre-independence era of Gabon.
• Both India and Gabon are members of the Non-Aligned Movement (NAM).
• The then Vice President of India visited Gabon in May 2022 making it the <u>first-ever high-level visit of India to Gabon</u>.
• **Bilateral Trade**
o It reached to USD 1.12 billion in 2021-22. India is the 2nd largest destination for Gabonese exports.

- **Energy Cooperation**

    o Gabon holds importance for India's energy security.

    o India imported about USD 670 million worth crude oil from Gabon in 2021-22.

- **Cooperation in Education**

    o A number of Gabonese nationals pursue scholarship/training programs.

    o These programs are offered by India under the Indian Technical and Economic Cooperation (ITEC) and Indian Council for Cultural Relations (ICCR) schemes.

US Ink New Maritime Security Pact With Palau

- The United States has signed a new agreement with Palau, which **gives American ships the authorisation to unilaterally enforce maritime regulations** in the tiny Pacific Island nation's exclusive economic zone (EEZ).

- The agreement comes as **both the U.S. and China are seeking to expand their influence in the Pacific**, and follows pleas from Palau's President for Washington's help to deter Beijing's "unwanted activities" in its coastal waters.

About Agreement Signed By US With Palau

- In the agreement, **the US Coast Guard ships can enforce regulations** inside Palau's EEZ on behalf of the nation without a Palauan officer present.

- **This agreement helps Palau monitorits EEZ** , protect against illegal, unreported, and unregulated fishing, and deter uninvited vessels from conducting questionable maneuvers within its water.

- The partnership will help toward achieving the **common goal of peace and prosperity in the region.**

Significance of This Agreement

- **Palau is one of the few countries that recognises Taiwan** and maintains diplomatic relations with the island.

- Elsewhere in the Pacific, the government of the Solomon Islands was persuaded to switch its diplomatic recognition of Taiwan to China in 2019.

- Since then, **the Solomons signed a secretive security pact with China** raising concerns that it could give Beijing a military foothold in the South Pacific.

    o The US has countered with diplomatic moves of its own, including opening an embassy in the Solomon Islands.

- The agreement with Palau is similar to one concluded with the Federated States of Micronesia at the end of 2022. The US also signed a bilateral defense agreement with **Papua New Guinea**.

- The agreements show the US' ongoing investment in protecting shared resources and an interest in maritime safety and security**.**

- This unity of effort with Pacific Island countries, including Palau,amplifies the US' collective ability to protect resources and maintain a free and open Indo-Pacific for all nations who observe the rule of law**.**

Geographical location of Palau

- Palau (officially the Republic of Palau with capital Ngerulmud) is **an island country in the Micronesia sub-region of Oceania in the western Pacific**.

- The republic consists of approximately 340 islands and has a total area of 466 sq kms, making it **one of the smallest countries in the world**.

- Having voted in a referendum against joining the Federated States of Micronesia in 1978, **the islands gained full sovereignty in 1994** under a Compact of Free Association with the United States.

- **Politically, Palau is a Presidential Republic in free association with the United States, which provides defense, funding, and access to social services.**

Fukushima Nuclear Plant Will Start Releasing Treated Radioactive Water To Sea

- Recently, Japan said that it will start releasing more than 1 million metric tonnes of treated radioactive water from the wrecked Fukushima nuclear power plant on Aug 24.

- The government says it is essential for the decades of work needed to clean up the plant facility that had reactor meltdowns 12 years ago.

  o As per the govt, the release of the water is a key step in the plant decommissioning and Fukushima prefecture's recovery from the March, 2011, earthquake and tsunami disaster.

What Does Japanese Government Want

- The water that the Japanese government wants to flush from the plant was used to cool the reactors, plus rainwater and groundwater.

  o It contains **radioactive isotopes from the damaged reactors** and is thus itself radioactive.

- Japan has said that it will release this water into the Pacific Ocean **over the next 30 years.**

  o Nuclear plants around the world regularly release water containing trace amounts of radionuclides into large waterbodies.

- For this, water is being treated to remove most radioactive isotopes. This water will be far above safety standards.

Criticism Of This Move

- **No known threshold**

  o Japanese officials claim that the water will be treated before its release. However, experts claim that there is no known threshold below which radiation can be considered safe.

- o Any discharge of radioactive materials will increase the risk of cancer and other known health impacts to those who are exposed.
- **Difficult to remove tritium from the water**
  - o Removing tritium from the water is a very difficult task.
    - **Tritium,** (T, or 3H), the isotope of hydrogen with atomic weight of approximately 3.
    - Tritium's half-life – the time it takes for its quantity to be halved through radioactive decay is 12-13 years.
  - o But removal of tritium is necessary as it is easily absorbed by the bodies of living beings and rapidly distributed via blood.
- **Impact on marine lives and livelihoods of the fisherfolk in the region**
  - o Experts expect the affected water to poison the fish.
  - o South Korea banned seafood imported from around Fukushima, to Japan's displeasure, from 2013.
- **Impact on Pacific Ocean**
  - o There are concerns about the waterbody as well as the region.
    - China, South Korea, Taiwan and Pacific Islands Forum have expressed concerns over this.
  - o Researchers across the world have also called for more studies to understand the precise composition of each tank before it is flushed.

Opinions Of The Experts

- The International Atomic Energy Agency (IAEA) in a final report in July concluded that the release, if conducted as designed, will cause negligible impact on the environment and human health.
- Scientists generally support the IAEA view, but some say **long-term impact of the low-dose radioactivity that remains in the water needs attention**.

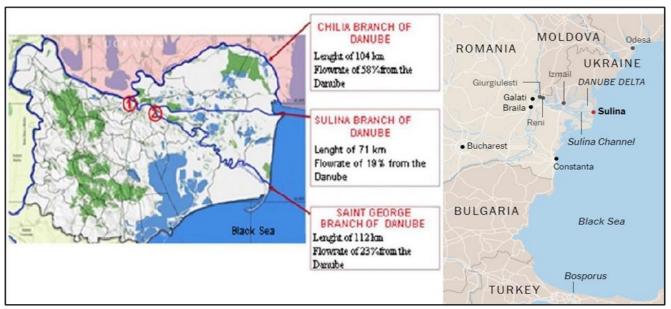## Sulina Channel And Ukraine Grain Trade

- Russia, in overnight drone strikes on August 16, targeted ports and grain storage facilities along the Danube River in Ukraine.
- The Danube delta has provided Ukraine with an alternative passage for its grain after Russia withdrew from the **Black Sea grain deal** last month.
  - o The deal, brokered by the UN and Turkey, used to provide safe passage for cargo ships carrying grain from Ukrainian Black Sea ports of Odessa, Chornomorsk and Pivdennyi.
- Of particular importance in this new trade route is the **Sulina Channel** connecting major Ukrainian ports on the river to the Black Sea, lying completely within the borders of Romania.
  - o Ships carrying grain from Ukraine leave from *Ukrainian ports such as Izmail and Reni on the mainstream (or the **Chilia Channel**), and head to the port of Sulina, at the mouth of the **Sulina Channel**.*
  - o From there, they head around 140 km south to Constanta, Romania's biggest seaport.
  - o Here the cargo is transferred to bigger ships that carry it out of the Black Sea into the Mediterranean through the Bosphorus straits.
  - o This route is under constant surveillance and protection of NATO.

About Sulina Channel

- **Location**
  - o The Sulina Channel is situated in the eastern part of Romania, near the town of Sulina.

o It connects the Danube River to the Black Sea, providing a direct passage for ships traveling to and from the river and the sea.

▪ Sulina is situated at the mouth of the Danube. This channel is a **distributary of the Danube River** with a total length of 71.7 km.

- **Navigation**

  o The Sulina Channel is the primary navigational route for ships entering or leaving the Danube River from the Black Sea.

  o It provides a well-maintained and marked passage that allows ships to traverse the delta region and reach the deeper waters of the river.

Danube River

- Danube River (approximately 2,850 kilometers long) is the second longest in Europe after the Volga. It flows through several countries and playing a significant historical, economic, and cultural role in the region.

- **Origin**

  o The Danube River originates in the Black Forest region of Germany, near the town of Donaueschingen.

  o It begins as two smaller streams, the Brigach and the Breg, which eventually merge to form the Danube proper.

  o The river then flows eastward, passing through several countries before **emptying into the Black Sea**.

- **Countries it Passes Through**

  o The Danube River passes through or forms the border of ten countries, making it one of the most international rivers in the world.

  o The countries it flows through include:

    ▪ Germany; Austria; Slovakia; Hungary; Croatia; Serbia; Bulgaria; Romania; Moldova; Ukraine.

ISRO Rocket Debris In Australia

- A large object found on the shores of western Australia has been confirmed to be the debris of an ISRO rocket.

- ISRO has agreed with the assessment, saying the debris could be from one of its Polar Satellite Launch Vehicle (PSLV) rockets.

- As per ISRO, the object was most likely an unburnt part of the PSLV rocket that launched a navigation satellite for the IRNSS constellation two months ago.

- That satellite was launched in the southward direction. It is possible that one of the parts of the rocket did not burn completely while dropping back into the atmosphere, and fell into the ocean.

- It could later have been swept towards the Australian shore.

Regulatory Framework

- **Convention on International Liability for Damage Caused by Space Objects, 1972**

  - Most space-faring countries are signatories to the Convention on International Liability for Damage Caused by Space Objects.

  - The Liability Convention deals mainly with the damage caused by space objects to other space assets, but it also applies to damage caused by falling objects on earth.

  - The Convention makes the **launching country absolutely liable to pay compensation for any damage** caused by its space object on the earth or to a flight in air.

  - The country where the junk falls can stake a claim for compensation if it has been damaged by the falling object.

  - The amount of compensation is to be decided "in accordance with international law and the principles of justice and equity".

- **The Outer Space Treaty**

  - It was adopted by the United Nations in **1967**.

  - It primarily addresses the peaceful use of outer space and prohibits the placement of nuclear weapons in space.

  - It also contains provisions related to space debris and the return of space objects to Earth.

    Provisions related to Space Debris and Earth's Safety in the "Outer Space Treaty":

  - **Benefit for All Humanity:** Space activities are meant to be for the good of everyone, which includes avoiding harm caused by space debris falling back to Earth.

  - **Preventing Harmful Contamination:** Countries must study outer space carefully and explore it responsibly to prevent any harmful pollution or changes to our planet.

  - **Avoiding Harm to Celestial Bodies:** States are obligated to avoid damaging not only space but also other celestial bodies like the Moon.

  - **Responsibility for Space Objects**: The country that launches a space object from Earth is responsible for it and must ensure its safe return or proper disposal.

  - **Consultation for Safety**: If one country believes that another country's space activities could cause problems, they can talk about it to find a solution. This could include concerns about space debris falling back to Earth.

Other Treaties Were Adopted To Reinforce The Framework Set By Outer Space Treaty

- **The Rescue Agreement of 1968:** It requires States to assist an astronaut in case of accident, distress, emergency or unintended landing.

- **The Liability Convention of 1972**

- **The Registration Convention of 1975:** It requires States to register all objects launched into outer space with UN.

- **The Moon Agreement of 1979:** It elaborates on the provisions of the Outer Space Treaty as it and confirms the de-militarization of Moon and other celestial bodies.

- **Space Debris Mitigation Guidelines of the UN Committee on the Peaceful Uses of Outer Space (COPUOS)**

  o While the Outer Space Treaty establishes important principles, it lacks specific regulations and mechanisms for dealing with space debris directly.

  o Since the treaty was adopted in 1967, other international agreements and guidelines have been developed to address space debris mitigation and the safe disposal of space objects.

  o This includes the non-binding **Debris Mitigation Guidelines** (drafted in 2007).

Centre To Look Into 'Havana Syndrome'

- The Central government has told the Karnataka High Court that it will look into the matter of the 'Havana Syndrome' in India.

- A petitioner had approached the Karnataka High Court requesting a writ of mandamus for an enquiry on Havana Syndrome in India and the prevention of high-frequency microwave transmission in India.

- It refers to a set of mental health symptoms that are said to be experienced by US intelligence and embassy officials in various countries.

Background
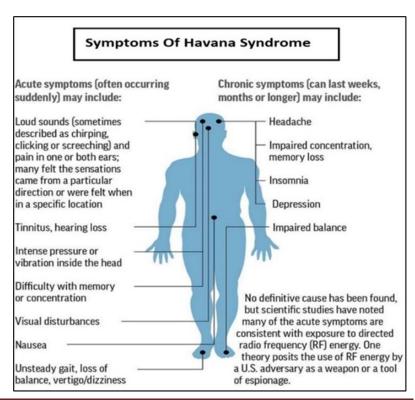
In late 2016, US diplomats and other employees stationed in Havana reported feeling ill after hearing strange sounds and experiencing odd physical sensations.

What Are The Causes Of Havana Syndrome?

- No one is entirely sure. Initially, it was speculated to be a sonic attack done by Cuban intelligence agencies.

- Later, the National Academy of Sciences noted in its report that the best explanation for the syndrome would be **pulsed, directed microwaves** that either damaged or interfered with the nervous system.

  o It is suspected that beams of high-powered microwaves are sent through a special gadget known as "microwave weapon".

- **Microwaves**

  o Microwaves are a type of electromagnetic radiation with wavelengths longer than those

Symptoms Of Havana Syndrome

Acute symptoms (often occurring suddenly) may include:

Loud sounds (sometimes described as chirping, clicking or screeching) and pain in one or both ears; many felt the sensations came from a particular direction or were felt when in a specific location

Tinnitus, hearing loss

Intense pressure or vibration inside the head

Difficulty with memory or concentration

Visual disturbances

Nausea

Unsteady gait, loss of balance, vertigo/dizziness

Chronic symptoms (can last weeks, months or longer) may include:

Headache

Impaired concentration, memory loss

Insomnia

Depression

Impaired balance

No definitive cause has been found, but scientific studies have noted many of the acute symptoms are consistent with exposure to directed radio frequency (RF) energy. One theory posits the use of RF energy by a U.S. adversary as a weapon or a tool of espionage.

of visible light but shorter than those of radio waves.

- o They fall within the electromagnetic spectrum between radio waves and infrared radiation.
- o Microwaves have frequencies ranging from about 300 megahertz (MHz) to 300 gigahertz (GHz).

Havana Syndrome In India

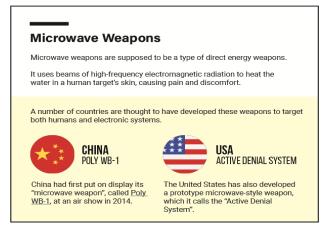- In India, the first such case was reported in September 2021, when a US intelligence officer travelling to New Delhi with CIA director reported symptoms of Havana Syndrome.
- As of July 2023, the 2021 incident was the only reported occurrence of the syndrome in India.

Microwave Weapons

Microwave weapons are supposed to be a type of direct energy weapons.

It uses beams of high-frequency electromagnetic radiation to heat the water in a human target's skin, causing pain and discomfort.

A number of countries are thought to have developed these weapons to target both humans and electronic systems.

CHINA
POLY WB-1

China had first put on display its "microwave weapon", called Poly WB-1, at an air show in 2014.

USA
ACTIVE DENIAL SYSTEM

The United States has also developed a prototype microwave-style weapon, which it calls the "Active Denial System".

India And The Northern Sea Route

Murmansk, popularly called the capital of the Arctic region and the **beginning point of the Northern Sea Route (NSR)**, is witnessing the rising trend of Indian involvement in cargo traffic. India has been showing greater interest regarding the NSR for a variety of reasons.

Driving Factors For India To Participate In The NSR Development

- With India increasingly importing crude oil and coal from Russia in recent years, **NSR provides a reliable and safe transport route**.
- The NSR, as a transit route, assumes importance, given India's geographical position and the major share of its trade associated with sea transportation.
- The **Chennai-Vladivostok Maritime Corridor** (CVMC) project is being examined as one linking with another organise international container transit through the NSR.
  - o The 10,500 km-long CVMC, passing through the Sea of Japan, the South China Sea and Malacca Strait, will bring down transport time to 12 days.
  - o This is almost a third of what is taken under the existing St. Petersburg-Mumbai route of 16,000 km.
- Experts are discussing the possibility of China and Russia gaining collective influence over the NSR.

About Northern Sea Route (NSR)

- The Northern Sea Route (NSR), the shortest shipping route for freight transportation between Europe and countries of the Asia-Pacific region, straddles **four seas of the Arctic Ocean**.
- Running to 5,600 km, the Route begins at the boundary between the **Barents and the Kara seas** (Kara Strait, near Russia's border with Norway) and ends in the **Bering Strait** (between Siberia and Alaska).
  - o Basically, it connects the eastern and western parts of the Arctic Ocean.
  - o Since the Barents Sea is not a part of the Northern Sea Route itself, the Atlantic is not reached.

- As per one research paper, **distance savings along the NSR can be as high as 50%** compared to the currently used shipping lanes via Suez or Panama.
- The 2021 blockage of the Suez Canal, which forms part of the widely-used maritime route involving Europe and Asia, has led to greater attention on the NSR.

Significance of Arctic Region for India

- The Arctic region is above the Arctic Circle and includes the Arctic Ocean with the North Pole at its centre.
- The vulnerability of this region to unprecedented changes in the climate may have an impact on India in terms of economic security, water security and sustainability.
- The region also constitutes the largest unexplored prospective area for hydrocarbons remaining on the earth.
- As per experts, the region may hold over **40 percent of the current global reserves of oil and gas**. There may also be significant reserves of coal, zinc and silver.

India's Engagement with the Arctic

- India's engagement with the Arctic can be traced to the signing of the Svalbard Treaty in February 1920 in Paris.
- India is undertaking several scientific studies and research in the Arctic region. This encompasses atmospheric, biological, marine, hydrological and glaciological studies.
- Apart from setting up a **research station, Himadri**, at Svalbard, in 2008, the country launched its inaugural multi-sensor moored observatory and northernmost atmospheric laboratory in 2014 and 2016 respectively.
- Till last year, thirteen expeditions to the Arctic were successfully conducted.
- In May 2013, **India became an observer-state of the Arctic Council** along with five others including China.

India UK FTA

- India and the UK are very close to concluding negotiations for the proposed Free Trade Agreement (FTA) and discussions on 19 out of total 26 chapters have been closed.
  - FTAs are arrangements between two or more countries or trading blocs that primarily agree to reduce or eliminate customs tariff and non-tariff barriers on substantial trade between them.
- The **negotiations for the India-UK FTA are likely to be concluded much before the end of this year**.

Challenges Involved in India – UK Free Trade Agreement

- **Services & Investment**
  - The UK wants India to liberalize its highly protected services markets in telecommunications, finance, and legal services.
  - However, India remains apprehensive due to opposition at domestic level.
  - As both countries are large services exporters, a deal without considerable services liberalization may be a shallow FTA.
- **Temporary Movement**
  - India is looking for simplification in the UK's business and temporary visas for professionals.
    - Earlier, PMs Modi and Sunak agreed to a **reciprocal Young Professional visa scheme** that will offer a degree-educated young Indians the right to live and work in the UK (and vice-versa) for up to 2 years.

- ▪ Building on this, additional easing in immigration rules could focus on the IT and healthcare sectors.
- **Data Policies**
  - o Data protection is a major concern for UK firms that may operate in India under the FTA due to the absence of GDPR like protection in India.
- **IPR and Medicines –**
  - o The leaked intellectual property rights (IPR) chapter of the FTA calls for the harmonization of intellectual property (IP) regulations, especially patent laws in the UK and India.
  - o Such relatively strict laws could affect the provision of affordable and life-saving generic medicines in India.
- **Agriculture –**
  - o Agriculture is a sensitive sector in both countries.
  - o The UK is a net agricultural importer and an FTA could boost India's agricultural export share from just 1.1% in the UK's import basket for goods like rice, marine products, spices and bovine meat.
  - o India could revisit its apprehensions about allowing British food imports, especially with its expanding middle class that is willing to spend on higher-value added agri-based food products.
  - o To compensate farmers for losses from increased British imports, India could establish a structural fund like those of the EU, and the UK could contribute aid-for-trade.

RPF Man Held For Killing 4 On Train

- A constable of the Railway Protection Force (RPF) allegedly shot and killed four people on board Jaipur-Mumbai Superfast Express.

- Later, the accused was arrested by Government Railway Police (GRP).

RAILWAY PROTECTION FORCE (RPF)

About
- The RPF is an armed force under the **operational and administrative control of the Union Ministry of Railways.**
- It is tasked with protecting and securing railway property, the passenger areas, and the passengers themselves.

Constitution
- The RPF was set up as a consequence of **The Railway Protection Force Act, 1957.**
  - This act was enacted by Parliament to provide for the constitution and regulation of an armed force of the Union for the better protection and security of railway property.
- The Act came into force after Parliament passed significant modifications to it through The Railway Protection Force (Amendment) Act, 1985.

Function and area of operation
- The force is distributed over the entire length and breadth of the country.
- India Railways carry approximately 22 million passengers and over 3 million metric tons of freight everyday over more than 63,000 kilometres of railway network.
- The Railway Protection Force guards this vital artery of the economy of the Nation

Reasons for its creation
- Security problems of the Railway passengers, especially those relating to the security of his person and property during his rail journey, are really serious.
- The fear of terrorist activity in the form of blowing up of tracks and trains further aggravates this problem.
- Unscheduled stoppages and delays due to law-and-order problems such as demonstrations, dharnas en route, compound the miseries.

Government Railway Police (GRP)

- **About**

  o The GRP is a part of the district police force, reporting to the state government.

  o It works alongside the RPF, and should, under ideal circumstances, complement and strengthen its operations.

- **Functions**

  o The Government Railway Police are responsible generally for the prevention and detection of crime on railways.

  o But their remit does not extend to protecting Railway property.

    ▪ The protection of goods sheds, goods wagons at stations and parcel offices is not duty of the Railway Police, but of the Railway Protection Force

  o Its function is to:

    ▪ maintain order at railway stations and in trains;

    ▪ maintain order in passenger trains halted at stations;

    ▪ prevent overcrowding in carriages, "

    ▪ arrest of persons guilty of committing nuisance, etc.

  o GRP can also be utilised for *track patrolling* and for effective investigation in cases of sabotage.

Challenges In The Current System

- **Division of responsibilities**

  o While the role of the RPF has diversified over the years, the primary role of maintaining law and order remained the liability of the State Government.

- Hence, the system as it developed, led to a division of responsibilities between the State Police and the RPF.

- **No continuity of jurisdiction for GRP**

  o GRP is organised on provincial lines, there is no continuity of jurisdiction.

    ▪ For instance, for a distance of 70 kilometres involving travel time of about an hour, between Ambala to Kalka, four GRP units look after a passenger.

  o A seamless line of control and a single chain of command is lacking because of the boundaries of States and therefore, of their Police Forces.

- **Confusion due to multiplicity of forces**

  o With a multiplicity of security agencies operating on the Railway i.e. the Railway Protection Force (RPF), the Government Railway Police (GRP) and the District Police, people get confused.

    ▪ They are not sure whom to report to in case of a crime on the railway.

Inter-services Organisation Bill

The Parliament has passed the **Inter-Services Organisation (Command, Control & Discipline) Bill – 2023**.

What Was The Need For This Bill

- The **heads of the existing inter-services organisation**s presently do not have these powers.

  o The inter-services organisations include the <u>Strategic Forces Command, the Andaman and Nicobar Command and joint training establishments</u> such as the National Defence College, among others.

- Hence, any disciplinary or administrative action against personnel attached to these organisations have to be referred to their respective services.

- The enactment of the Bill will ensure maintenance of effective discipline in inter-services establishments by their heads.

- There will be no requirement of referring personnel undergoing disciplinary proceedings to their parent services.

- It will also lead to faster disposal of cases of misdemeanour or indiscipline.

Key Provisions

- **Applicability**

  o It is applicable to all personnel of <u>regular Army, Navy and Air force, and to persons of other forces as notified by the Central Government,</u> who are serving in or attached to an Inter-Services Organisation.

- **Empowers Commander-in-Chief of Inter-Services Organisations**

  o The bill seeks to empower Commander-in-Chief and Officer-in Command of Inter-Services Organisations **with all disciplinary and administrative powers**.

  o This is to enable them to take decisions related to personnel serving in or attached to such organisations.

    ▪ At present, all Army, Navy and IAF personnel are governed by their service-specific acts.

    ▪ The service personnel serving in or attached to an Inter-Services Organisation will continue to be governed by their respective Service Acts.

    ▪ However, this bill will empower heads of Inter-Services Organisations <u>to exercise all the disciplinary and administrative powers</u> as per the existing service acts, and related rules and regulations, irrespective of the service they belong to.

- **Empowers the central government to constitute an Inter-Services Organisation**
  - The bill also empowers the central government to constitute an Inter-Services Organisation.
  - This paves the way for the creation of *integrated theatre commands* — a major military reform on cards.
  - The bill will aid better coordination among the defence forces, and bring about better jointness and integration within the military.
  - This is significant against the backdrop of new challenges involved in modern warfare which is more technology and network-centric.
- **The bill is an Enabling Act**
  - The bill is essentially an Enabling Act and it does not propose any change in the existing Service Acts/Rules/Regulations. Service personnel when serving in or attached to an Inter-Services Organisation will continue to be governed by their respective Service Acts.

Criminal Case Against Assam Rifles

- In an unprecedented move, the Manipur Police have registered a criminal case against the Assam Rifles for obstruction of duty and criminal intimidation.
- The police have accused the personnel of the 9th battalion of the Assam Rifles of the arrogant act of giving a chance to the accused Kuki militants to escape freely to a safe zone.
- Army, however, refuted the claim. It said that the Assam Rifles Battalion acted strictly in accordance with the mandate of the unified headquarters of strict enforcement of buffer zone guidelines.
  - As per the defence officials, the place where the police team wanted to proceed to was a "buffer zone".
    - The Centre has deployed Central armed police forces and the Army in the "buffer zones" in the foothills where Kuki and Meitei settlements lie adjacent to each other.
  - There were instructions from the combined headquarters that only Central security forces would operate there.

[For detailed discussion on Assam Rifles, refer the topic "Assam Rifles' ration trucks blocked in Manipur" from The Recitals – June 2023]

Air Force's Ops in Mizoram: Quelling of Operation Jericho

The use of air power in Mizoram in 1966 has become a hot topic of discussion after the PM of India mentioned it in the Lok Sabha while replying to the no confidence motion.

> **Background: Mizoram of 1966**
>
> - **A period of protests and armed insurgency followed in the 1960s.**
> - **A separatist movement** (seeking independence from India) led by Mizo National Front (MNF) was gathering steam in the area now known as Mizoram, and then referred to as the Mizo Hills.
> - The Centre had decided to station another **Assam Rifles battalion** in the Hills, in addition to the one Assam Rifles battalion and a few BSF companies already present.
> - Outraged by this, the MNF leadership decided to launch '**Operation Jericho**' to take control of Aizawl and overran Aizawl in a few days' time (in late February).
>   - Operation Jericho had been described by a military writer as an **expression of confidence and clinical planning not witnessed hitherto fore in the Indian subcontinent**.
>   - A large number of volunteers who joined in the armed struggle were either **ex-servicemen or**

> **personnel of the Assam Regiment battalions** dismissed for lack of discipline.

- **The Mizo rebels had besieged** the HQs of 1 Assam Rifles and released all prisoners from the local jail.
  o There was widespread **looting** of arms and cash from the government treasury.
  o **Proclamations of "independence"** were made and a demand raised for the Assam Rifles to surrender.

Response of The Government

- **The Army operations** on the ground to clear rebel-held positions was led by Brig (later Maj Gen) Rustom Zal Kabraji, who was commanding the 61 Mountain Brigade, located at Agartala.
- **Attempts were made to re-supply the Assam Rifles battalion** with helicopters, but these were shot at by the Mizo rebels.
- **The operations on the ground** faced stiff resistance from the rebels, taking several days to reach Aizawl.

Involvement of The IAF

- As the Army struggled to dislodge the rebels, the Indian Air Force (IAF) was called in.
  o **The IAF's initial role was to re-supply the army installations**, for which Dakotas and Caribou transport aircraft were pressed in from Guwahati and Jorhat.
  o In one such mission, the Dakota received 21 bullet holes before it landed at Kumbhigram air base near Silchar.
  o This was the event that necessitated the **offensive air operations.**
- The two IAF Squadrons, **29 Squadron and 14 Squadron**, were primarily involved in the air ops.
  o The 29 Squadron flew the Toofani (French origin Dassault Ouragan) based at Bagdogra, while the 14 Squadron flew Hunters out of Jorhat.
- **The actual missions** started on March 5. The air attack helped the Army regain control of vast areas that had been declared independent.
- By the end of the month, Brig Kabraji's Brigade had regained control of Mizoram.

What Followed After The Quelling Of Operation Jericho?

- Like several other northeastern states of India, **Mizoram was previously part of Assam**.
- In 1971, the government agreed to convert the Mizo Hills into a **Union Territory (UT)**, which became UT of Mizoram in **1972**.
- **Following the Mizoram Peace Accord (1986)** between the Government and the MNF, the Indian Parliament adopted the 53rd amendment of the Indian Constitution in 1986.

- This allowed for the creation of the **State of Mizoram on 20 February 1987, as India's 23rd state.**

President Droupadi Murmu launched INS Vindhyagiri, the last in the **series of threefrigates**of Project 17A (Alpha) built by Indian Navy at Kolkata-based Garden Reach Shipbuilders and Engineers (GRSE).

Key Highlights

- **Sixth vessel to be rolled out as part of the Project 17A Frigate**
  o Stealth frigate Vindhyagiri is the sixth vessel rolled out as part of the Project 17A Frigate.
  o The five other ships – **INS Nilgiri, Udaygiri, Himgiri, Taragiri, and Dunagiri** – were launched between 2019 and 2022.

- **Features**
    - The P17A ships are guided missile frigates.
    - They are 149 m long, with a displacement of approximately 6,670 tonnes and a speed of 28 knots.
    - These ships are capable of neutralising threats in all three dimensions of air, surface and sub-surface.

About Project 17A

- **Project 17 Alpha frigates** (P-17A) were launched by the Indian Navy in 2019.
    - Project 17A Frigates are the **follow-on class of the Project 17 (Shivalik Class) Frigates**, with improved stealth features, advanced weapons and sensors and platform management systems.
- The project was launched by the defence forces of India to construct a series of stealth guided-missile frigates.
    - A stealth frigate is a type of naval warship designed with advanced stealth technology and features to minimize its radar cross-section and overall visibility to enemy detection systems.
- These frigates are currently being constructed by two companies - **Mazagon Dock Shipbuilders (MDL) and Garden Reach Shipbuilders & Engineers (GRSE)**.
    - Under Project 17A program, a total of four ships by MDL and three ships by GRSE are constructed
    - The project's first five ships have been launched by MDL and GRSE, between 2019-2022.
    - The first stealth ship launched under Project 17A was the Nilgiri, which was launched in 2019.
    - Udaygiri, the second ship, was launched in May 2022.
- Project 17A ships have been designed in-house by Indian Navy's Warship Design Bureau (WDB).
- Aligning with country's resolute commitment to Aatma Nirbharta, a substantial 75% of the orders for equipment and systems of Project 17A ships are from indigenous firms, including MSMEs.

1532 Paramilitary Personnel Died By Suicide In Last 13 Years

According to data provided by the Ministry of Home Affairs (MHA) to Parliament recently, 432 personnel of the Central Armed Police Force (CAPF) died by suicide in the last three years.

- The Committee on Estimates, chaired by **Dr. Murli Manohar Joshi**, had submitted its report on '*Central Armed Police Forces and Internal Security Challenges – Evaluation and Response Mechanism '*in March, 2018.

About Central Armed Police Force (CAPF)

- Central Armed Police Forces is the collective name of central police organizations in India under the authority of **Ministry of Home Affairs**.
- These are technically paramilitary forces formerly known as "**Central Para-Military Forces (CPMF)**".
- Since 2011, India adopted the term "Central Armed Police Forces" to drop the word "paramilitary".
- These forces are responsible for internal security and guarding the borders.

Classification of CAPF

- The Central Armed Police Forces refers to seven security forces, all functioning under the authority of **Ministry of Home Affairs**.
- These seven security forces are –
    - Assam Rifles (AR)
    - Border Security Force (BSF)
    - Central Industrial Security Force (CISF)

- o Central Reserve Police Force (CRPF)
- o Indo Tibetan Border Police (ITBP)
- o National Security Guard (NSG)
- o Sashastra Seema Bal (SSB)
- Each of the seven has its own cadre of officers, but they are headed by officers of the **Indian Police Service**.

Challenges Faced By CAPF In India And Suggestions

- **Deployment and Training of CAPFs –**
  - o The Committee observed that there was heavy dependence of states on central armed police forces (CAPFs), even for everyday law and order issues.
  - o This was likely to affect the anti-insurgency and border guarding operations, besides curtailing the training needs of these forces.
  - o The Committee recommended that states must develop their own systems, and augment their police forces by providing adequate training and equipment.

- **Modernizing of CAPFs –**
  - o The Modernization Plan II (2012-17), approved by the Cabinet Committee on Security, aims at providing financial support to CAPFs for modernizing arms, clothing, and equipment.
  - o However, the Committee observed that the procurement process under the Plan was cumbersome and time consuming.
  - o The committee recommended that bottlenecks in procurement should be identified and corrective action taken.
  - o Further, the Ministry of Home Affairs and CAPFs should hold negotiations with ordnance factories and manufacturers in public or private sector to ensure uninterrupted supply of equipment and other infrastructure.

- **Stress among CAPF Personnel –**
  - o According to data provided by the Ministry of Home Affairs (MHA) to Parliament recently, 432 personnel of the CAPF died by suicide in the last three years. Overall, 1,532 personnel died by suicide since 2011.
  - o In April 2023, the MHA had informed the Lok Sabha that the causative factors in most cases of fratricide in the CAPFs are generally –
    - ✓ **personal & domestic problems**, **family issues**, **depression** & **work-related issues**.
  - o The Committee emphasized the need of accommodation near the deployment of the respective force, to enable personnel to meet their family members.

- **Youth in Jammu & Kashmir –**
  - o The Committee noted that there was an urgent need to engage with the youth in Jammu and Kashmir, to bring them into the mainstream.
  - o The central government has introduced schemes to increase employability of youth in Jammu and Kashmir, including Udaan and Himayat.
  - o The Committee recommended that the impact of these schemes needs to be evaluated by the central and state governments.

Economic Community of West African States (ECOWAS)

- In a recent coup, soldiers in the West African nation of Niger installed Gen. Abdourahmane Tchiani as head of state after ousting President Mohamed Bazoum.

- Apart from the expected international players, such as Russia and the US, the regional bloc Economic Community of West African States (ECOWAS) has been playing an active role.

What Is ECOWAS

- Also known as CEDEAO (in French), ECOWAS [**HQ - Abuja, Nigeria**] is the **regional group** established in **1975** through the **Lagos Treaty** - with a mandate of promoting **economic integration** among its members.

- **ECOWAS' larger aims** are to have a **single common currency and create a single, large trading bloc** in areas of industry, transport, telecommunications, energy, financial issues, and social and cultural matters.

The West African bloc of nations has indicated that it is planning to intervene in the coup in Niger

15 ECOWAS members: Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Senegal, Sierra Leone, and Togo *(in blue)*, and Niger *(in red)*

- **The vision of ECOWAS** is the creation of a "**borderless region**" that is well-integrated and governed in accordance with the principles of **democracy, rule of law and good governance.**

- **The new vision** of ECOWAS is to move from an ECOWAS of States to an "**ECOWAS of the People: Peace and Prosperity to All**" by 2050.

- Following coups in recent years in some of the biggest countries in the bloc - namely **Mali, Guinea and Burkina Faso** - it suspended the three members and refused to recognise their new governments.

Role Played By ECOWAS In The Region

- Beyond the goals of economic cooperation, **ECOWAS has attempted to end military conflicts in the region.**

- ECOWAS also operated **a regional peacekeeping operation known as ECOMOG** - Economic Community of West African States Monitoring Group, led by Nigeria in the 1990s and early 2000s.

    o **Forces were first deployed** in Liberia (1990) during the deadly civil war and in Sierra Leone (1997) when a democratically elected government was overthrown.

    o **In 2017**, it intervened in the **Gambia** after long time President Yahya Jammeh refused to step down after losing the elections.

ECOWAS and India

- Both have strong ties with India achieving the status of **Observer** to ECOWAS in 2004.

- Since then, **India has been extending Line of Credit (LOCs)** to supplement its **Focus Africa program** along with aiding regional integration for ECOWAS.

- This resulted in **additional opportunities for Indian companies** to contribute in sectors such as energy, telecom and transportation in West Africa.

- ECOWAS has supported India's claim to a seat in the **United Nations Security Council** (UNSC).

G-20 Nations Arrive At Consensus On Issues Of Cultural Heritage

- After the meeting of G-20 Culture Ministers in Varanasi, the Outcome Document titled 'Kashi Culture Pathway' was unanimously agreed to by all G-20 members.

- **Highlights of the Outcome Document 'Kashi Culture Pathway':**

- **It highlights the need to address** -
  - The destruction of cultural heritage in situations of conflict,
  - The curbing of illicit trafficking of artifacts,
  - The restitution of cultural property and
  - The need to protect living heritage, especially of indigenous people.

- The document said the nations were **united against destruction of cultural heritage** whether intentional or collateral, notably in situations of conflict.

- They called for a **strengthened and effective global coalition** to bolster the fight against the illicit trafficking of cultural property.

- **The document sought cooperation among nations** and strengthening of appropriate tools to increase the effectiveness of law enforcement collaboration through **voluntary data and information exchange.**

- It sought **enhanced research, documentation, awareness-raising and capacity-building** of specialised cultural professionals, judiciary and law enforcement authorities, etc., to the fight against the illicit trafficking of cultural property.

- The document also sought **preventive action and regulation of illicitly exported cultural property** specially in online trade.

- It sought **an inclusive dialogue on the return and restitution of cultural property** by enabling **alternate dispute resolution mechanisms.**

- The countries **recognised the misuse and misappropriation of living cultural heritage**, particularly of local communities as well as of indigenous peoples, especially for commercial use.

Culture Under India's G20 Presidency

- India firmly believes in the philosophy of **Vasudhaiva Kutumbakam** - the earth is one family, and all individuals are collectively responsible towards each other and their shared future.
  - **This shapes India's vision of sustainable living.**

- **India's G20 Presidency aims to nurture, celebrate, and incorporate** the cultural diversity of the member states while striving towards achieving holistic living and building a pro-planet society.

- The G20 Culture Working Group stands among the **13 thematic Working Groups** set up by the Indian Presidency to frame the G20 process in 2023.

- **Four culture-related priorities set forth by the Indian Presidency are -**
  1. Protection and Restitution of Cultural Property
  2. Harnessing Living Heritage for a Sustainable Future
  3. Promotion of *Cultural and Creative Industries and the Creative Economy*
  4. Leveraging Digital Technologies for the Protection and the Promotion of Culture

- The working group met 4 times across the working process in **Khajuraho, Bhubaneshwar, Hampi and Varanasi**, leading up to a G20 culture ministerial meeting.

Palaeo Proxies

It was declared that a particular day of July 2023 was the hottest day in over 100,000 years, which is scientifically baseless.

➢ This claim is based on temperature estimates from before the invention of the thermometer, which relies on palaeo proxies.

About Palaeo Proxies	• It is short form used for paleo-climate proxies. • These are indicators of past environmental conditions. • These proxies are biological, chemical, or physical indicators that respond to temperature changes or other climatic conditions

Example of Palaeo Proxies	• **Tree Rings** - Tree rings can tell us a lot about the climate in the past.
	
	  ➢ For example, if a tree grew a lot in one year, it probably means that the weather was warm and wet. If a tree didn't grow much in a year, it probably means that the weather was cold and dry.
	
	• **Ice Cores** - Ice cores are long cylinders of ice that are drilled out of glaciers and ice sheets. By studying the layers in the ice, scientists can learn about the climate in the past.
	
	  ➢ For example, they can look for layers that contain a lot of volcanic ash or other materials that might have been deposited in the ice during a specific event.
	
	• **Sediment Cores** - It can be taken from lakes or the ocean floor, and corals, which can be used to study the ocean's temperature and chemistry.
	
	• **Pollen Analysis:** Pollen grains from plants are preserved in sediment layers and provide information about past vegetation and climate. By identifying different pollen types, researchers can infer changes in plant communities and climate conditions.

Significance of Palaeo Proxies	• It can help us understand how the environment has changed over time and how it might change in the future. ➢ By studying the past, we can learn about how the environment has responded to changes in the past and use that information to make better decisions in the future. • It can also help us understand how human activities are affecting the environment.
Limitations of Palaeo Proxies	• It can only provide temperature anomalies on long timescales, such as centuries or thousands of years. • Even the best proxies only offer estimates on weekly or seasonal timescales. • Additionally, all temperature proxies are local or regional, making global temperature estimates uncertain.

75 Endemic Birds of India

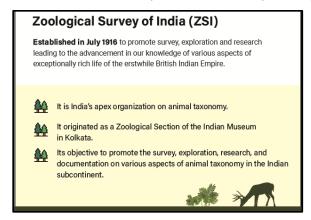The publication, titled '75 Endemic Birds of India', was released on the 108th foundation day of the Zoological Survey of India (ZSI).

Major Highlights Of The Publication

• It points out that about 5% of birds found in the country are endemic and are not reported in other parts of the world.

• India is home to 1,353 bird species, which represents approximately 12.40% of global bird diversity.

- o Of these 1,353 bird species, 78 (5%) are endemic to the country.

- o Three species among these have not been sighted for decades: the Manipur Bush Quail ('Endangered', last recorded sighting in 1907.), the Himalayan Quail (Critically Endangered' with its last recorded sighting in 1876), and Jerdon's Courser (Critically Endangered' with its last confirmed sighting in 2009).

Zoological Survey of India (ZSI)

Established in July 1916 to promote survey, exploration and research leading to the advancement in our knowledge of various aspects of exceptionally rich life of the erstwhile British Indian Empire.

- 🌲🌲 It is India's apex organization on animal taxonomy.
- 🌲🌲 It originated as a Zoological Section of the Indian Museum in Kolkata.
- 🌲🌲 Its objective to promote the survey, exploration, research, and documentation on various aspects of animal taxonomy in the Indian subcontinent.

Of the 78 endemic species:
- 25 are categorized as 'Threatened' by the IUCN.
- 3 as 'Critically Endangered'.
- 5 as 'Endangered'.
- 17 as 'Vulnerable'.
- 11 as 'Near Threatened

- The highest number of endemic species have been recorded in the Western Ghats, with 28 bird species. The Andaman and Nicobar Islands also have significant endemism, hosting 25 bird species unique to the region.

Air Pollution Linked to Rise in Antibiotic Resistance

A global study suggests that air pollution is helping to drive a rise in antibiotic resistance that poses a significant threat to human health worldwide (mainly found in South Asia, North Africa, and the Middle East).

Key Findings of This Study

- **Particulate matter PM2.5** can contain antibiotic-resistant bacteria & genes, which may be transferred between environments and can be inhaled directly by humans.

- Antibiotic resistance increases with PM2.5 air pollution, with a 10% rise in pollution associated with a 1.1% increase in resistance.
  - ➢ Sources of PM2.5 include industrial processes, road transport, and domestic coal and wood burning.

- It suggests that without changes to current air pollution policies, antibiotic resistance could rise by 17% by 2050, resulting in around 840,000 annual premature deaths attributed to resistance.

- It indicates that Africa and Asia may experience the largest increases in antibiotic resistance due to rising PM 2.5 levels.
  - ➢ China and India are thought to be the countries where changes in PM 2.5 have the greatest impact on premature death toll from antibiotic resistance. In India, a 10% PM 2.5 increase could lead to a 2.5% rise in antibiotic resistance.

Antibiotic Resistance

- Antibiotic resistance is a problem that is caused by the overuse and misuse of antibiotics. When bacteria are exposed to antibiotics over time, they can develop resistance to them.
  - ➢ This means that the antibiotics are no longer effective at treating infections caused by these bacteria.

- It can affect people of any age in any country and is already killing 1.3 million people a year, according to estimates.

Government Initiatives in India to deal with Antibiotic resistance:

1. **The National Action Plan on Antimicrobial Resistance (2017-21):** It highlighted the effectiveness of governmental initiatives concerning hand hygiene and sanitation programs like Swachh Bharat Abhiyan, Kayakalp, and Swachh SwasthSarvatra.

2. **Raising Public Awareness:** The government has also taken steps to enhance public awareness regarding

healthier and improved practices in food production, particularly within the animal food industry.

3. **Specific Directives on Antibiotic Usage:** The National Health Policy 2017 also provided specific directives concerning antibiotic use, including *restrictions on over-the-counter access and the prohibition or regulation of antibiotic usage for livestock growth promotion.*

4. **Advocated for Examination of Antibiotic Prescriptions:** The policy further advocated for the review of antibiotic prescriptions to evaluate their usage in hospitals and by medical practitioners.

Small Modular Nuclear Reactors Can Help Decarbonize Power Grids

As the world moves away from fossil fuels, decarbonization of the electricity sector becomes critical.

➢ To address this challenge, small modular reactors (SMRs) have emerged as a potential solution for providing reliable low-carbon electricity.

Decarbonization

- It refers to the process of reducing carbon dioxide (CO_2) emissions related to human activities, particularly the burning of fossil fuels such as coal, oil and natural gas.

- Its objective is to achieve a low-emission global economy to attain climate neutrality via the energy transition.

About Small Modular Reactors (SMRs)

- These are advanced nuclear reactors that have a power capacity of up to 300 MW(e) per unit, which is about one-third of the generating capacity of traditional nuclear power reactors.

- It is built in a modular fashion in a factory and shipped as a unit to where it will produce power, rather than assembled on-site13.

- There are only a few models of SMR reactors operating worldwide at present, although there are several dozen more under construction.

- SMRs are economical and time-efficient, and unlike traditional reactors that require refuelling every 1-2 years, SMRs only need refuelling every 3-7 years.

Why Small Modular Reactors?

1. **Reduced Size:** Their compact design allows for factory-based construction, streamlined transport, and easier installation.

2. **Modularity:** The "modular" aspect refers to the ability to produce multiple reactor units that can be combined to meet specific energy demands. This modularity allows for phased construction and more adaptable power output.

3. **Enhanced Safety:** Such as passive cooling systems and simplified designs, which enhance their ability to manage potential accidents or incidents.

4. **Flexibility:** SMRs can be used for various applications beyond electricity generation, including district heating, desalination, and industrial processes.

5. **Reduced Environmental Impact:** SMRs are designed to be more efficient in terms of resource utilization and waste production, contributing to lower greenhouse gas emissions and reduced nuclear waste generation.

6. **Cost Efficiency:** SMRs' smaller size and modular construction can potentially lead to cost savings in terms of both initial investment and operational expenses.

7. **Grid Stability:** Their modular nature allows for easier integration with existing power grids, enhancing energy stability and adaptability.

Challenges In Decarbonizing Power Sector In India

- **Grid reliability** - Solar and wind energy alone will not suffice to provide reliable and affordable energy for everyone. As the time of the day and the weather conditions continuously affect the production of power.

- **Geopolitical risks** - According to the International Energy Agency, the demand for critical minerals like lithium, nickel and rare earth elements, required for clean-energy production technologies, is likely to increase by up to 3.5x by 2030.

  o This jump implies that within a short time span new mines and processing facilities needs to be developed in China, Indonesia, Africa, and South America which control 50-100% of the current global extraction and processing capacities.

- **Lack of Adequate Finance** - Electricity production, which is by far the largest source of carbon emissions, accounts for 5.2% of outstanding credit, but only 17.5% of this lending goes to renewables.

- **High Dependence on Coal** - Coal-fired power plants account for nearly 50% of the country's electricity generation.

- **Underutilization** - Renewable energy-rich states for instance, even the top performer Karnataka has utilized only 11% of its total renewable energy potential.

India's Efforts Towards Decarbonization

- **Ministry Evolution:** India set up the Ministry of Non-Conventional Energy Sources in 1992 and renamed it Ministry of New and Renewable Energy (MNRE) in 2006, laying the foundation for renewable energy growth.

- **Ambitious 2030 Goal:** India set to achieve 450 GW renewable energy installed capacity by 2030.

- **Robust Investment:** In the past eight years, ₹5.2 lakh crore has been invested in renewable energy.

- **Global Collaboration:** India helped set up the International Solar Alliance in 2015, to promote solar energy in 121 tropical countries.

- **Resilient Growth:** Despite the pandemic, steady growth helped India to cross the 100GW target of installed capacity of renewable energy in 2021.

Way Forward

- **Use of smart grids to Address underutilization** - AI-driven technologies could forecast energy data for power production and load; this enables optimal grid management by the use of analytics.

- **Adequate Finance** - Centre owned financial institutions, such as the Indian Renewable Energy Development Agency Limited (IREDA) and the Power Finance Corporation (PFC), should provide adequate finance in order to ensure smooth transition towards renewable energy.

- **Improving storage infrastructure** - In order to reduce dependence on coal, India needs to invest in renewable energy storage technologies.

Forest Fire

Hawaii is experiencing several forest fires, particularly on the islands of Maui and Lahaina.

About Forest Fire	• It is an unplanned, uncontrolled fire in an area of combustible vegetation.
	• The behaviour and severity of forest fires result from a combination of factors such as available fuel, physical setting, and weather.
	• According to data from the Global Forest Watch, forest fires in India witnessed a rise of 125% between 2015 and 2022. On a global scale, the planet is currently grappling with a wildfire crisis, as evidenced by reports of wildfires in diverse regions such as Siberia, the Amazon basin, South America's Pantanal wetland, Australia, and Indonesia's rainforests.

Cause of Forest Fire	• Natural causes- Many forest fires start from natural causes such as lightning which set trees on fire. High atmospheric temperatures and dryness offer favourable circumstances for a fire to start. • Man-made causes- Fire is caused when a source of fire like naked flame, cigarette, electric spark or any source of ignition comes into contact with inflammable material. • Other human-led causes are land clearing and other agricultural activities, maintenance of grasslands for livestock management, extraction of non-wood forest products, industrial development, resettlement, hunting, negligence, and arson.
Negative Effect of Forest Fire	• It can cause damage to the valuable natural resources (timber) and degradation of catchment areas and loss of biodiversity and extinction of plants and animals • It can cause loss of carbon sink resource and increase the percentage of CO2 in the atmosphere which ultimately leads to Global Warming. • Many tribal and rural people lose their livelihood due to forest fires, as about 300 million people are directly dependent on the collection of non-timber forest products from forest areas for their livelihood.
Positive Effect of Forest Fire	• They help clear out dead vegetation, promote new growth, and create habitat for certain species. • Forest fires release nutrients stored in vegetation back into the soil. This nutrient enrichment can promote the growth of new plants and help replenish soil fertility. • Fires can help reduce overgrown vegetation, which can improve the health and vigor of remaining plants by reducing competition for resources like sunlight, water, and nutrients. • Forest fires can reduce the populations of pests and disease vectors, promoting a healthier ecosystem.
Way Forward	• **Early Detection:** Employ advanced technology like satellites and drones for quick fire spotting. • **Community Involvement:** Educate locals, enhance firefighting resources, and ensure prompt reporting. • **Collaboration:** international partnerships for shared resources and knowledge. • **Prevention Strategies:** Use controlled burns, reforestation, and sustainable land management. • **Climate Action:** Address climate change and enforce policies for responsible land use and fire prevention.

Forest Fires in India

• The study, 'Managing Forest Fires in a Changing Climate', found that there has been a ten-fold increase in forest fires in the past two decades.

• More than 62 % of the Indian states are at risk from severe forest fires.

  ➢ These comprise the Northeastern states as well as Andhra Pradesh, Odisha, Madhya Pradesh, Maharashtra, Chhattisgarh, Uttarakhand, and Telangana.

• According to the 2021 assessment, more than 36% of India's forest cover is at risk for regular forest fires, 6% is "very highly" at risk, and over 4% is "extremely" at risk.

Initiatives Taken For Forest Fire

• **National Action Plan for Forest Fires (NAPFF)** - It aims to reduce forest fires by educating, equipping, and encouraging people around forests to work with state forest departments.

- **Forest Fire Prevention and Management Scheme (FPM)** – It is the only centrally funded program specifically dedicated to assisting the states in dealing with forest fires.

- **Use of technology -** Use of remote sensing technology and *Moderate Resolution Imagine Spectroradiometer (MODIS)* satellite data for detection of active forest fires is also advised.

Way Forward

The forest fires be treated as "natural disasters" and be brought under the National Disaster Management Authority for a financial allotment.

Microplastics in Blood

A team of scientists in China found micro plastics in the human heart for the first time.

Key Findings of this Study

- The study involved analyzing heart tissue from 15 patients who underwent cardiovascular surgery.

- The researchers found numerous individual micro plastics pieces in most tissue samples, and plastic particles were also present in all blood samples.

- Among the eight types of plastics found was Polyethylene terephthalate, which is used in clothing and food containers as well as polyvinyl chloride (PVC), which is widespread in window frames, drainage pipes, paint and more.

About Microplastics

What are they?	• Microplastics are tiny particles of plastic that are less than 5 millimeters in size, often much smaller.
Sources	• **Fragmentation:** Larger plastic items, such as bottles, bags, and packaging, can degrade into smaller pieces due to exposure to sunlight, water, and mechanical forces. These smaller fragments become microplastics. • **Microbeads:** Some personal care products, such as exfoliating scrubs and toothpaste, used to contain microbeads made of plastic. These were intentionally added to products but have been banned in many places due to environmental concerns. • **Synthetic Fiber Shedding:** Clothes made from synthetic fibers (like polyester and nylon) shed tiny plastic fibers during washing. These fibers can enter wastewater and end up in aquatic environments. • **Industrial Processes:** Certain industrial processes can generate microplastics, such as those used in the production of plastic products and materials.
Types	• **Primary Microplastics:** These are microplastics that are intentionally manufactured at the small size range. They can include microbeads used in personal care products or small plastic pellets used in industrial processes. • **Secondary Microplastics:** These are microplastics that result from the breakdown of larger plastic items. They include fragments, fibers, and particles that have broken down over time.

Concerns with Microplastics

- **Environmental impact** - It can accumulate in water bodies, air and soil, posing a threat to aquatic life, soil fertility and ecosystems.

- **Wildlife ingestion** - Marine animals and birds may mistake microplastics for food, leading to ingestion and potential harm.

- **Human health risks** - There is growing concern about the potential health effects of microplastics. They enter the food chain & water sources and can be consumed by humans.

- **Limits Oxygen transportation:** Microplastics can latch on to the outer membranes of red blood cells (RBC) and may limit their ability to transport oxygen.

Canalisation of Rivers & Flood Management

Intense rainfall across Punjab, Haryana, and Himachal Pradesh, causes a massive influx of water into Punjab's rivers.

➢ It was discussed that the canalisation of rivers could be a solution.

About Canalisation of Rivers

- It involves regulating or diverting the flow of water from a water source, such as a river.
- This can include directing river water into specific channels, utilising mini dams for regulation, establishing interconnections between canal systems and rivers, and fortifying earthen embankments in times of need.
- This is done to achieve various objectives such as irrigation, flood control, navigation, and water supply.

Canalization Projects on Rivers in India

River	Implemented By	Purpose
Ganges	The National Ganga River Basin Authority	To improve navigation and control flooding.
Yamuna	The Delhi Development Authority	To manage the flow of the river and prevent erosion
Godavari	The Polavaram Project Authority in Andhra Pradesh	To provide irrigation water and generate hydropower
Kaveri	The Kaveri River Integrated Development Project in Tamil Nadu	To enhance irrigation and water supply
Krishna	The Prakasam Barrage in Andhra Pradesh	To regulate water flow and facilitate irrigation

Canalization Projects in World

- **Suez Canal:** One of the most famous examples, the Suez Canal in Egypt, connects the Mediterranean Sea to the Red Sea. It allows ships to bypass the lengthy and hazardous trip around the southern tip of Africa.
- **Panama Canal:** This engineering marvel connects the Atlantic and Pacific Oceans, providing a shortcut for vessels and significantly impacting global trade routes.

Significances	Challenges of Canalization of Rivers
- Flood control - Navigation improvement - Water supply - Erosion control - Drought mitigation	**Environmental impact** - It can disrupt natural ecosystems **Cost** - These projects can be expensive to plan, design, and implement. **Displacement of communities** - It may require the relocation of communities living along the river. **Sedimentation** - Canalized rivers may experience increased sedimentation, requiring regular maintenance. It can cause increased flood risk downstream due to altered water flow.

Deemed Forest

The Odisha government has withdrawn the controversial order that announced the closure of the 'Deemed Forest' category under the amended Forest Act.

> The withdrawal comes after concerns were raised about the implication of the order on forest classification and protection.

About Deemed Forest

- The concept of deemed forests has not been clearly defined in any law including the Forest Conservation Act (FCA) of 1980.

- These are forests which have <u>not been classified by the Center or the States in their records</u>.

- The Supreme Court in 1996 (T N GodavarmanThirumalpad case) conceptualized & widened definition of deemed forests, as areas that have not been notified under the law but are recorded as forests in government records.

- These are lands that have characteristics of forests, irrespective of ownership. Once forests are "deemed", they cannot be de-reserved or utilized for non-forest purposes without prior approval of the Centre. The deemed forests comprise 1% of forest land in India.

Challenges with Deemed Forest

- The States have full liberty in defining the deemed forest and sometimes the statutory forests had been wrongly classified as deemed forest.

- Due to the random classification, farmers suffered in some areas, and lost their agricultural land.

Relationship Between El Nino and The Monsoon

A recent study by IIT-M has revealed that El Nino-monsoon link over north India is getting stronger.

About El Nino, La-Nina & ENSO

- **El-Nino:** El Nino (means Little Boy/Christ Child in Spanish) refers to an abnormal warming of surface waters in equatorial Pacific Ocean. It is known to suppress monsoon rainfall. El Nino phenomenon was first noticed by the scientists in the 1920s, though local populations in Peru and Ecuador were aware of the periodic warming much earlier.

- **La Nina:** The opposite phase, La Nina (Little Girl in Spanish), which is the abnormal cooling of sea surface waters in the same region. It is known to aid rainfall all over India. The La Nina phenomenon, on the other hand, was discovered only in the 1980s.

- **Neutral:** There is a third, neutral phase, as well in which the sea surface temperatures remain roughly in line with long-term averages.

Together, these three phases in the Pacific Ocean are referred to as El Nino Southern Oscillation, or ENSO.

How El Nino impacts Indian Monsoon?	How La Nina impacts Indian Monsoon?
- It causes the weakening of walker circulation, which disrupts the normal flow of air and moisture. - The warm waters of the Pacific Ocean during El Nino shift the Walker circulation, altering the pressure systems and wind patterns over the Indian Ocean. - This disrupts the normal monsoon flow and can lead to below-average rainfall.	- **La Nina causes drought in the South American countries of Peru and Ecuador,** - **It causes heavy floods in Australia, high temperatures in Western Pacific, Indian Ocean, off the Somalian coast and a comparatively better monsoon rains in India.**
Generally, El Nino and La Nina occur every 4 -5 years. El Nino is more frequent than La Nina.	

Cloud Bursts

The National Disaster Response Force (NDRF) rescued 51 people who were stranded in cloudburst incident sites in Mandi, Himachal Pradesh.

About Cloud Bursts

- It is a localized but intense rainfall activity and usually occurs over a small geographical region of about 20 to 30 sq. Km. The rainfall rate which is equal to or greater than 100 mm/hour is a cloudburst.

- Cloudburst events are often associated with cumulonimbus clouds that cause thunderstorms and occasionally due to monsoon wind surges and other weather phenomena. Cumulonimbus clouds can grow up to 12 to 15 kilometers in height through the entire troposphere (occasionally up to 21 kilometers) and can hold huge amounts of water.

Occurrence of Cloud Burst

- In India, cloudbursts often occur during the monsoon season, when the southwesterly monsoon winds bring in copious amounts of moisture inland.

- It occurs when moisture-carrying air moves up a hilly terrain, forming a vertical column of clouds known as cumulonimbus clouds. This upward motion of the clouds is known as an orographic lift.

- These unstable clouds cause an intense rainstorm over a small area after becoming heavy enough and locked in the ridges and valleys between the hills.

- The energy necessary for cloud burst comes from the upward motion of air.

- It mostly occurs at elevations between 1,000-2,500 metres above sea level.

- Sometimes winds flowing in from the north-west also aid the occurrence of cloudbursts.

- Cloudbursts, hence, occur mostly over the rugged terrains of the Himalayas, Western Ghats, and northeastern hill states of India.

- Recent cloudbursts that caused significant devastation occurred over the Himalayan foothills, in Himachal Pradesh (in the year 2003), Ladakh (2010), and Uttarakhand (2013), to name some.

- Cloudbursts were reported from the northeastern states and Western Ghats states during the monsoon (2022).

Effect of Cloud Bursts

- The heavy spells of rain on the fragile steep slopes trigger landslides, debris flows, and flash floods, causing large-scale destruction and loss of people and property.

Prediction of Cloud Bursts

- There is no satisfactory technique to predict a cloud burst because of their small scale.

- A very fine network of radars is required in order to detect the likelihood of a cloudburst however this technique is prohibitively expensive.

Green Hydrogen Standards

The Ministry of New and Renewable Energy (MNRE) has notified the Green Hydrogen Standard for India.

About Green Hydrogen Standard	- The ministry has decided to define Green Hydrogen as having a well-to-gate emission (i.e., including water treatment, electrolysis, gas purification, drying and compression of hydrogen) of not more than 2 kg CO_2 equivalent / kg H_2. - The scope of the definition encompasses both electrolysis-based and biomass-based hydrogen production methods.
About Green Hydrogen	- It is hydrogen that is produced by splitting water into hydrogen and oxygen using an electrolyser powered by renewable energy sources such as wind and solar. - Certified green hydrogen requires an emission reduction of >60-70% below the benchmark

emissions intensity threshold.

Benefits Of Green Hydrogen	Challenges With Green Hydrogen
• **Reducing Greenhouse Gas Emissions:** It is produced by using renewable sources of energy, it offers a sustainable alternative to fossil fuels, reducing greenhouse gas emissions and combating climate change. • **Decarbonizing Industries** - It has the potential to decarbonize various sectors, including transportation, manufacturing, and agriculture. • **Technological Advancements:** The development of green hydrogen can drive technological advancements and innovations in various sectors (eg Fuel Cell Technology) • **Economic Opportunities & Job creation:** The development of green hydrogen can create new industries and jobs, particularly in the renewable energy sector.	• **Cost** - The production of green hydrogen is currently more expensive compared to traditional fossil fuel-based hydrogen. ➢ According to The Energy and Resources Institute (TERI), the cost of green hydrogen production is $5-$6 per kg. ➢ At this rate, it is not easy for industries like steel, fertilizer and long-range shipping to adopt this fuel. • **Infrastructure** - The establishment of a widespread infrastructure for the production, storage, and distribution of green hydrogen is a significant challenge. • **Scaling Up Production** - Scaling up the production of green hydrogen to meet the growing demand is a challenge. It requires the deployment of large-scale renewable energy projects and the development of efficient electrolysis technologies. • **Storage and Transportation** - It has lower energy density compared to fossil fuels, making storage and transportation more challenging. • **Policy and Regulations** - The lack of supportive policies and regulations can hinder the widespread adoption of green hydrogen

Extra Mile: National Green Hydrogen Mission

• It aims to make India a global hub for the production, use and export of green hydrogen and its derivatives

• The Ministry of New and Renewable Energy (MNRE) is responsible for the overall coordination and implementation of the Mission.

• The mission will develop green hydrogen production capacity of at least 5 MMT (million metric tonnes) per year by 2030 with an associated renewable energy capacity addition of about 125 GW in the country.

Types of Hydrogen based on Extraction Methods

Grey Hydrogen	Produced via coal or lignite gasification (black or brown), or via a process called steam methane reformation (SMR) of natural gas or methane (grey)
Blue Hydrogen	Produced via natural gas or coal gasification combined with carbon capture storage (CCS)
Green Hydrogen	Produced using electrolysis of water with electricity generated by renewable energy.

Global Biodiversity Framework Fund (GBFF) Ratified

The Global Biodiversity Framework Fund (GBFF) has been ratified and launched during the 7th Assembly of the Global Environment Facility (GEF) in Vancouver, Canada.

About GBFF	• GBF-Fund is a **special trust fund** under the GEF, to support the implementation of the *Kunming-Montreal Global Biodiversity Framework agreed at COP15* • The World Bank will be the Trustee of the GBFF.

	Fund Allocations:
	• 20% will be allocated to Indigenous Peoples and local communities (IPLCs)
	• 25% to GEF agencies
	• 36% to SIDS (Small Island Developing States)
	• 3% to LDCs (Least Developed Countries)
	• The allocation for IPLCs will be reviewed for two years and the allocations for SIDS and LDCs will be reviewed for three years.
About KMGBF	• It was adopted at COP15 (2022). • It includes 4 goals and 23 targets for achievement by 2030. • It aims to restore ecosystems, conserve areas, prevent species extinction, reduce pollution risks, tackle climate change, and more.

About GEF	• It is a multilateral financial mechanism that provides grants to developing countries for projects that benefit the global environment and promote sustainable livelihoods.
	
	• It was established during the Rio Earth Summit of 1992.
	
	• It is based in Washington, D.C., United States.
	
	• It is jointly managed by the United Nations Development Programme (UNDP), the World Bank, and the United Nations Environment Programme (UNEP).
	
	• It provides Financial Assistance for five major International Conventions:
	
	  1. The Minamata Convention on Mercury
	
	  2. The Stockholm Convention on Persistent Organic Pollutants (POPs)
	
	  3. The United Nations Convention on Biological Diversity (UNCBD)
	
	  4. The United Nations Convention to Combat Desertification (UNCCD)
	
	  5. The United Nations Framework Convention on Climate Change (UNFCCC)

Aqueduct Water Risk Atlas (AWRA)

New data from the Aqueduct Water Risk Atlas of World Resources Institute (WRI) has been released.

About AWRA	• It is a globally accessible online collection of <u>local-level water risk indicators, as well as a global standard for measuring and reporting geographic water risk.</u> • The global water risk mapping tool from Aqueduct enables businesses, investors, governments to understand where and how water risks and opportunities are arising around the world. ➢ Aqueduct creates high-resolution, customizable global maps of water risk using a robust, peer-reviewed approach and the best available data.
Key Findings of This Report
• As many as 25 countries or a quarter of the world's population are currently exposed to extremely high-water stress annually.
• Globally, at least 50 per cent of the world's population, around four billion people, live under highly stressed water conditions for at least one month of the year.   ➢ And by 2050, that number could be closer to 60%.
• The most water-stressed regions are West Asia and North Africa, where 83% of the population is exposed to extremely high-water stress and South Asia, where 74% is exposed.

- The five countries most affected by the floods are Bahrain, Cyprus, Kuwait, Lebanon, Oman and Qatar.

Finding About India

- India is placed 24th among the world's 25 'extremely water-stressed' countries
  - Both surface water and groundwater in India was highly exploited.
- Groundwater levels, in fact, declined at more than eight centimetres per year between 1990 and 2014 in northern India.
  ➢ Chandigarh was the most water-stressed, followed by Haryana, Rajasthan and Uttar Pradesh.

About World Resources Institute

- It is a global research non-profit organization (Head office in Washington, US) established in 1982.
- WRI is a global research organization that spans more than 50 countries and focuses on 6 critical issues at the intersection of environment and development: climate, energy, food, forests, water, cities & transport.

Species In News

Critically Endangered: CR, Endangered: EN, Vulnerable: VUL, Near Threatened: NT, Least Concern: LC

Western Tragopan (VUL)	**Distribution:** endemic to the northwest Himalaya.
	Key Features:
	• It is a medium-sized brightly plumed pheasant
	• It feeds on the ground, but is known to roost in trees.
	• It is the state bird of Himachal Pradesh.
Bhojpatra Tree	**Distribution:** It is a deciduous tree native to the Western Himalayas.
	Key Features:
	• It forms a tree-line in the Himalayan region because of high freezing tolerance potential.
	• The white, paper-like bark was used in ancient times for writing Sanskrit scriptures and texts.
	• It is still used as paper for the writing of sacred mantras, with the bark placed in an amulet and worn for protection.
Himalayan vulture (NT)	**Distribution:** It is native to the Himalayas and the adjoining Tibetan Plateau and also found in the Central Asian mountains.
	Key Features: (one of the largest Old World vulture species**)**
	• It has a bald white head, wings that are very wide and short tail feathers.
	• These are diurnal and mostly solitary species.
Yellow-bellied Sea snake (LC)	**Distribution:** It is widely distributed across the warm tropical and subtropical waters of the Indian and Pacific Oceans.
	Key Features:
	• It is a highly venomous species of snake that belongs to the subfamily Hydrophiinae (the sea snakes).
	• This species is renowned for its striking appearance, potent venom, and unique adaptations to a marine lifestyle.
Clouded leopard (VUL)	**Distribution:** It is a wild cat found in dense forests from the foothills of the

	Himalayas to mainland Southeast Asia and South China. **Key Features:** State animal of Meghalaya • It prefers grassland, shrubs, subtropical and dense tropical forest up to a height of 7,000 feet.
Vaquita Porpoise (CR) 	**Distribution:** It only lives in a small 1,500 square-mile area in Mexico's upper Gulf of California. **Key Features: (**world's smallest cetacean**)** • Its name means "little cow" in Spanish. • It has a dark ring around the eyes is its most striking feature, along with a proportionally large dorsal fin.
Monitor Lizards (LC) 	**Distribution:** It mainly native to Asia, Africa, and Australia.India is home to four Monitor lizards, Bengal Monitor, Asian Water monitor, Yellow monitor and Desert monitor. **Key Features: (**most intelligent of all lizards**)** • Most monitor lizards are terrestrial and largely carnivorous. • It is listed as Schedule 1 in the Wildlife (Protection Act), 1972.
Takakia 	**Distribution:** It is found exclusively on the Tibetan Plateau. **Key Features:** • It is a rare genus of moss that adapted over millions of years to life at high altitudes. • It has developed the ability to survive frost, life-threatening UV radiation and other hazardous conditions. • It is a moss that separated from other mosses 390 million years ago, not long after the first land plants evolved.
Indian FlyingFox bat (LC) 	**Distribution:** It is the largest bat in the world and belongs to the species of megabats native to the Indian subcontinent. **Key Features: (**also called the Great Indian Fruit Bat**)** • These bat species have been identified as carriers of the Nipah Virus, which is fatal for humans. • It is listed in Schedule II in Wildlife (Protection) Act, 1972.
Tylototriton zaimeng 	**Distribution:** This species is native to China and is primarily found in the Guizhou and Yunnan provinces. **Key Features: (**commonly known as the Zaimeng newt**)** • Its head is massive and wide, with a rounded snout and protruding supratemporal bony ridges. • Phylogenetic analysis revealed that the new salamander is a sister species of the T. panwaensis and T. houi found in northern Myanmar and southern China.
Tachymenoides harrisonfordi	**Distribution:** It is a recently discovered species of snake named after actor Harrison Ford. **Key Features:** • It measures 16 inches (40.6 centimetres) in length.

	• It is yellowish-brown with scattered black blotches, a black belly and a vertical streak over its copper-coloured eye. • As a non-threatening species, it stands as a poignant symbol underscoring the significance of exploring and safeguarding the planet's rich and varied biosphere.
Yellow-Legged Hornet 	**Distribution:** It is a species of hornet native to Southeast Asia. **Key Features:** It is a predatory insect that commonly feeds on other social bees and wasps, including honey bees. • It has a dark velvety appearance on its body, with a characteristic yellow color on its legs and the first segment of its abdomen. • Human activities, such as global trade and transportation, have contributed to its invasive spread.
Palm cockatoo (LC) 	**Distribution:** It is native to New Guinea, Aru Islands, and Cape York Peninsula. **Key Features:(**Also known as the great black cockatoo**)** • It has a unique appearance, characterized by its large, strong bill, prominent crest, and striking black plumage. • It is a large smoky-grey or black parrot of the cockatoo family.

Akira Ransomware

The Computer Emergency Response Team of India (CERT-In) issued an alert for ransomware dubbed "Akira" which has emerged as a significant cybersecurity threat.

About Akira	• Akira is a new family of ransomware that was used for cyber-attacks in the US and Canada in March this year.
	• It is found to target both Windows and Linux devices, steals and encrypts data, forcing victims to pay <u>double ransom for decryption and recovery</u>. In case a user refuses to pay, the ransomware actors threaten to release their data on the dark web.
	➤ Ransomware is essentially a kind of malware — a software used to gain unauthorised access to systems to steal data. This data can then be used by cyber criminals to demand a ransom.
Features	• It is designed to close processes or shut down Windows services that may keep it from encrypting files on the affected system.
	• It uses VPN services, especially when users have not enabled two-factor authentication, to trick users into downloading malicious files.
Mode of Operation	• It is typically spread through spear phishing emails that contain malicious attachments in the form of archived content (zip/rar) files.
	• Once sensitive data is stolen and encrypted, the ransomware leaves behind a note named akira_readme.txt which includes information about the attack and the link to Akira's leak and negotiation site.
Impact of Akira	• Ransomware can lead to the loss of valuable data. In the case of organisations, an attack by Akira can lead to a loss of reputation and integrity.
	• Besides, sensitive information is likely to be lost, misused, or sold on the dark web.
About CERT-IN	• It is an organisation of the Ministry of Electronics and Information Technology with the objective of securing Indian cyberspace.
	• It is empowered under Section 70B of the Information Technology Act, 2000 to collect, analyse and disseminate information on cyber incidents (like hacking and phishing), and issues alert on cybersecurity incidents.
	• The Central Government recently informed that the Indian Computer Emergency Response Team (CERT-in) may soon be exempt from responding to queries under the Right to Information (RTI) Act.

GSAT-24

Direct-to-home (DTH) company Tata Play is set to expand its bandwidth capacity by 50% by adding 24 new Ku-band transponders on the communication satellite GSAT-24.

About GSAT-24

- It is built by ISRO with a lifespan of around 15 years for New Space India Limited (NSIL).

- It was launched by French company Arianespace.

- It is a 24-Ku band communication satellite weighing 4180

New Space India Limited (NSIL)

It was incorporated in March 2019, under the Companies Act, 2013.

- ✔ It is a wholly owned Government of India company, under the administrative control of Department of Space (DOS).

- ✔ It is the commercial arm of ISRO with the primary responsibility of enabling Indian industries to take up high technology space related activities.

- ✔ It is also responsible for promotion and commercial exploitation of the products and services emanating from the Indian space programme.

kg with Pan India coverage for meeting DTH application needs.

- It was the 1st demand driven communication satellite mission undertaken by NSIL post space sector reforms.

Extra Mile
Types Of Bands For Satellite Communication
K Band: The K band covers a range of microwave frequencies from approximately 18 to 27 GHz. It is used for various <u>communication and radar applications, including military and scientific uses</u>. However, it <u>is less commonly used in commercial satellite communication</u> due to potential atmospheric absorption and rain fade issues.   **Ku Band:** The Ku band covers a range of microwave frequencies from approximately 12 to 18 GHz. It is widely used for satellite communication, broadcasting, and data transmission.   **Ka Band:** Ka-band refers to a range of frequencies from 27 GHz to 40 GHz. It offers even higher data rates than the Ku band and is often used for <u>broadband satellite communication and data transmission</u>, especially for applications such as satellite internet services. However, the Ka band is more susceptible to rain fading due to its higher frequency, which can result in a decrease in signal quality during heavy rainfall.
Major Business Areas of NSIL Include
- Production of Polar Satellite Launch Vehicle (PSLV) and Small Satellite Launch Vehicle (SSLV) through industry;   - Production and marketing of space-based services, including launch services and space-based applications like transponder leasing, remote sensing and mission support services;   - Building of Satellites (both Communication and Earth Observation) as per user requirements.   - Transfer of technology developed by ISRO centres/ units and constituent institutions of Dept. of Space;   - Marketing spin off technologies and products/ services emanating out of ISRO activities   - Consultancy services

Carbon-Enhanced Metal-Poor (CEMP) star

Scientists at the Indian Institute of Astrophysics, Bangalore have discovered a unique star named HE 1005-1439 classified as a carbon-enhanced metal-poor (CEMP) star.

About CEMP Star

- Carbon-Enhanced Metal-Poor (CEMP) stars are celestial time capsules that offer a glimpse into the early stages of the universe's formation.

- These are classified into **dwarf stars, sub-giant stars, giant stars, and stars**

- These stars are unique due to their distinct composition, characterized by high levels of carbon and low levels of heavier elements, such as metals.

- This extraordinary chemical composition offers a story of the early cosmos, when the building blocks for the development of stars and planets were very different from what we see now.

- At the evolutionary stages in which the stars exist, they are not expected to produce heavy elements. However, the surface chemical composition of these stars exhibits abundances of heavy elements those are about 100 to 1000 times higher than that of the Sun.

  ➤ The team analyzed high quality, high-resolution spectra of the stars acquired using 2-m Himalayan Chandra Telescope (HCT) at the Indian Astronomical Observatory, Hanle, 1.52-m Telescope at the

European Southern Observatory at La Silla, Chile, and the 8.2-m SUBARU Telescope at the summit of Maunakea, Hawai'i, operated by the National Astronomical Observatory of Japan, to resolve this puzzle.
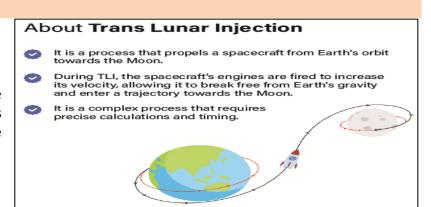
Significance of CEMP Star

- **Clues to Ancient Element Formation:** The high carbon content in CEMP stars hints at the processes that created vital elements in the early universe, helping us piece together the cosmic puzzle.

- **Galactic Evolution Insights:** Studying different CEMP stars lets us unravel the histories of galaxies, revealing how they grew and evolved over billions of years.

- **Unveiling Stellar Life Cycles:** CEMP stars teach us about the lives and deaths of ancient stars, illuminating how materials were recycled to create new generations of stars.

- **Tracing Solar System Origins**

Trans Lunar Injection (TLI)

ISRO performed the Trans Lunar Injection (TLI) to slingshot Chandrayaan-3 towards the moon.

o The TLI is performed when the spacecraft is at a specific point in its orbit known as the 'perigee' or the closest point to Earth.

About Trans Lunar Injection

- It is a process that propels a spacecraft from Earth's orbit towards the Moon.
- During TLI, the spacecraft's engines are fired to increase its velocity, allowing it to break free from Earth's gravity and enter a trajectory towards the Moon.
- It is a complex process that requires precise calculations and timing.

Key Objectives of TLI	• **Escape Earth's Gravity:** The primary goal of TLI is to provide the spacecraft with enough velocity to overcome Earth's gravitational influence and enter a trajectory that will lead it toward the Moon. • **Navigate to Lunar Proximity:** TLI sets the spacecraft on a trajectory that will bring it within the sphere of the Moon's gravitational influence. It will lead to course corrections and maneuvers to achieve lunar orbit or landing.
Importance of TLI	• TLI is a critical milestone in space explorations, enabling missions to reach Moon & beyond. • It played a pivotal role in historic missions such as the Apollo program, allowing humans to set foot on the lunar surface for the first time. • In modern times, TLI remains an essential maneuver for lunar missions, both crewed and robotic, as we continue to explore and study the Moon's mysteries.

Challenges in Trans Lunar Injection

- The biggest challenge is calculating the precise timing and trajectory (careful planning and coordination) for the spacecraft to leave Earth's orbit and enter a trajectory towards the Moon.

- Another challenge is ensuring that the spacecraft's engines are powerful enough to achieve the necessary velocity to break free from Earth's gravity.

- It requires a large amount of fuel, which can be expensive and add weight to the spacecraft.

HeLa cells

The Henrietta Lacks family recently reached a settlement with a biotech corporation accused of using her cells for financial benefit without her permission, which revolutionised medicine.

- HeLa cells are remarkable for their ability to replicate rapidly and continuously in culture, making them a valuable tool for studying various aspects of cell biology, genetics, medicine, and virology.

Origin and Discovery	• HeLa cells are named after Henrietta Lacks, an African American woman who unknowingly contributed these cells during her treatment for cervical cancer in 1951. They were the 1st human cells to be successfully cloned in 1953.
Features	• HeLa cells are an immortal cell line, meaning they can divide indefinitely under the right conditions. This characteristic makes them invaluable for scientific research as they can be grown in large quantities over extended periods, providing a consistent and reproducible cellular model. ➢ Normally, human cell cultures die within a few days after a set number of cell divisions via a process called senescence.

Contribution to Science

- **Vaccine Development:** HeLa cells were used in the development of the polio vaccine, which marked a major milestone in the fight against polio.

- **Cancer Research:** HeLa cells have contributed to our understanding of cancer biology, including mechanisms of cell division, DNA replication, and the effects of carcinogens.

- **Genetics and Cell Biology:** They've been used to study the effects of radiation, toxins, and drugs on human cells, as well as to investigate fundamental cellular processes like apoptosis (programmed cell death) and cell signaling.

- **Virology:** HeLa cells have been used to study various viruses, including the development of vaccines and antiviral drugs.

- **Drug Testing:** These cells have been employed in early-stage drug testing to assess the potential effectiveness and safety of new drugs.

Ethical Considerations & Controversy Around HeLa Cell

- Henrietta Lacks' cells were taken without her knowledge or consent, raising ethical concerns about the use of human cells in research.

- Discussions emerged about patient rights, equitable compensation, and the acknowledgement of individuals whose contributions fuel scientific progress.

Spaceport

The Centre has approved the establishment of a new spaceport in Kulasekarapattinam, Tamil Nadu.

About Spaceport

What is Spaceport?	• A spaceport, also known as a cosmodrome or launch facility, is a specialized site designed for launching spacecraft, rockets, and satellites into space. • It serves as a base for spacecraft operations, including launch, landing, and maintenance.
How will it help India	• ISRO Small Satellite Launch Vehicles (SSLV), which are intended to provide small satellites with flexible and affordable access to orbit, will be **launched from the spaceport**. • According to the Indian Space Policy 2023, Non-Governmental Entities (NGEs) may also utilise the spaceport as long as they meet certain technical and safety conditions.

Components of a Spaceport

- **Launch Pads:** These are the platforms from which rockets or spacecraft are launched. They are equipped with various systems, including fueling connections, electrical systems, and support structures. Different launch pads may be designed for different types of vehicles or launch configurations.

- **Vertical Integration Buildings & Assembly:** These structures provide the space for assembling, integrating, and testing the rocket or spacecraft before it is moved to the launch pad. This ensures that the vehicle is properly prepared, and all systems are functioning before launch.

- **Fueling and Storage Facilities:** Spaceports require facilities for storing and handling rocket propellants and other hazardous materials. These facilities include tanks, pipelines, and safety measures to ensure proper storage and transport of fuels.

- **Control Centers, Tracking and Telemetry Stations:** These are command and control centers from which the launch and flight operations are monitored and managed. They are equipped with communication systems, telemetry stations, and tracking systems to ensure the success and safety of the launch.

- **Safety Systems:** Safety is a paramount concern at spaceports. Fire suppression systems, emergency response teams, and evacuation plans are in place to address any potential hazards during the launch process.

- **Environmental Considerations:** Spaceports must adhere to environmental regulations to minimize their impact on local ecosystems. Measures are taken to mitigate noise, air pollution, and other environmental factors.

Location of Spaceports & Prominent Examples

- Spaceports are located in areas that offer certain advantages for space missions. Proximity to the equator is desirable as it allows for more efficient launches due to the Earth's rotation.

- This is why many spaceports are situated near the equator, such as the Kennedy Space Center in Florida and the Guiana Space Centre in French Guiana.

- Spaceports are not limited to a single country or organization. Different countries and private companies have their own spaceports to support their space exploration goals.

- Examples of well-known spaceports include the Baikonur Cosmodrome in Kazakhstan, the Vandenberg Space Force Base in California, and the Wenchang Spacecraft Launch Site in China.

- The most popular example of a spaceport in India is the Satish Dhawan Space Centre, located in Sriharikota, Andhra Pradesh.

Legionnaire's Disease (Legionellosis)

About	• It is a severe form of pneumonia, lung inflammation usually caused by infection.
	• It's caused by a bacterium known as legionella.
Infection	• Legionella is usually found in freshwater settings, including lakes, rivers, and streams. It can also survive in soil.
	• Legionella thrives in warm water. It often spreads through a building's contaminated water system.
	• It's actually an airborne disease. The bacterium is can be found in water droplets such as mist and water vapor.
	• People can then breathe in these droplets, via steam from a sauna or hot tub, and from there, the bacteria make their way into your lungs.
	• The legionella bacterium also causes Pontiac fever, a milder illness resembling the flu.
	➢ Pontiac fever usually clears on its own, but untreated Legionnaires' disease can be fatal
Symptoms	Fever, muscle and abdominal pain and shortness of breath.
Vaccine & Treatment	• There are no vaccines that can prevent Legionnaires' disease.
	• It requires treatment with antibiotics and most cases of this illness can be treated

	successfully.

Indian Made MRI Scanner

The 1st India-made MRI scanner to be launched for clinical work. It is developed under the National Biopharma Mission, by Voxelgrids Innovations Pvt Ltd.

About Indian Made MRI

- The indigenously developed machine is characterised by several innovations, including avoiding reliance on scarcely available liquid helium, bottom-up software design, and customised hardware.

- This will reduce the cost of scanning by 30%.

- In place of liquid helium, it uses the far more accessible, less expensive **liquid nitrogen** to swiftly chill the magnets.

   ➢ Helium is the most commonly used coolant in large superconducting magnets powering Magnetic Resonance Imaging (MRI) scanners.

Advantages of Using Liquid Nitrogen

- **Cost-effectiveness& Safety**- Liquid nitrogen is more affordable and non-flammable and non-toxic. It is readily available compared to helium, making it a cost-effective option for MRI facilities.

- **Cooling efficiency** - Liquid nitrogen has a lower boiling point than helium, allowing for faster and more efficient cooling of the MRI scanner's superconducting magnets.

- **Longevity** - Liquid nitrogen provides a longer operational lifespan for the magnets, reducing the frequency of maintenance and replacement.

- **Environmental impact** - Helium is a finite resource, and its extraction and usage can have environmental consequences.
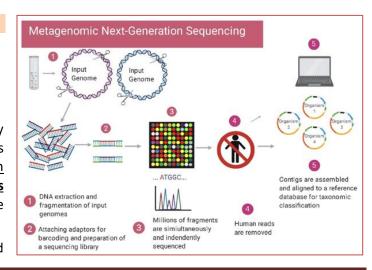
About Magnetic Resonance Imaging (MRI)

- It is a medical imaging method that uses powerful magnets and radio waves to capture detailed images of the body's internal structures.

- It helps doctors diagnose and monitor various conditions, including injuries, tumors, and diseases.

- Unlike X-rays or CT scans, MRI does not use radiation and Non-invasive, making it safer for patients.

- MRI is widely used for diagnosing and monitoring a range of medical conditions, including but not limited to: Brain and spinal cord abnormalities, Joint and musculoskeletal disorders, soft tissue injuries and tumors, Cardiovascular conditions, Abdominal and pelvic diseases, Breast cancer detection etc.

Metagenome Sequencing

Recently, scientists from the Nigerian Centre for Disease Control conducted a study utilizing metagenomic sequencing for pathogen surveillance.

- Metagenomics is a field of molecular biology and genomics. This powerful tool enables scientists to study genetic material from complex microorganism mixtures in **various environments**, providing a comprehensive view of the microbial community.

- It aids in understanding their diversity and

Metagenomic Next-Generation Sequencing

1 DNA extraction and fragmentation of input genomes

2 Attaching adaptors for barcoding and preparation of a sequencing library

3 Millions of fragments are simultaneously and indendently sequenced

4 Human reads are removed

5 Contigs are assembled and aligned to a reference database for taxonomic classification

functional potential of the community.

Significance of Metagenome Sequencing

- Traditionally, microbial studies focused on culturing individual species in the lab, which limited our understanding of the vast majority of microorganisms that cannot be easily cultured.

- Metagenome sequencing overcomes this limitation by directly extracting and sequencing the DNA or RNA from an environmental sample, such as soil, water, or the human gut.

- It has the ability to uncover new species that have not yet been cultured or characterized.

  ➢ This has led to the discovery of numerous novel microorganisms and expanded our understanding of microbial diversity.

- Additionally, it allows researchers to identify potential pathogens in environmental samples, aiding in disease surveillance and outbreak investigations.

Genome	Metagenome
It refers to the complete set of genetic material (DNA or RNA) of an organism.	It refers to the collective genetic material of all the microorganisms present in a particular environment.
It can vary in size from small viruses to complex organisms like humans.	It includes the genomes of bacteria, archaea, viruses, and other microorganisms.
It focuses on the genetic material of a single organism.	It provides a broader perspective by capturing the genetic information of multiple organisms within a specific environment.

Applications of Metagenomics

- Study of microorganisms in oceans, soils, deep oceans, glaciers, craters, and other environments.

- In the medical field, such as the identification of pathogenic microorganisms in the intestinal tract, bloodstream infections, lung infections, central nervous system infections, and other infections.

- At present, metagenomic research focuses on antibiotic-resistant bacteria (ARB) and antibiotic-resistant genes (ARGs)

Agnibaan SubOrbital Technological Demonstrator (SOrTeD)

Chennai-based start-up **AgniKul Cosmos** has commenced the process of integrating its cutting-edge **Agnibaan SubOrbital Technological Demonstrator** (SOrTeD) at its private Launchpad in Sriharikota.

About Agnibaan SOrTeD

What is it?	• It is a single-stage launch vehicle powered by Agnikul's patented Agnilet engine, which is an entirely 3D-printed, single-piece, 6 kilonewton (kN) semi-cryogenic engine.
	• It is a **customisable launch vehicle** that could be **launched in one or two stages**.
	• Agnibaan SOrTeD will lift off vertically and follow a predetermined trajectory to perform a precisely orchestrated set of manoeuvres.
Where?	It is located at the Satish Dhawan Space Centre (SDSC) SHAR in Sriharikota off the coast of Andhra Pradesh.
Features	

- It can carry payloads up to 100 kg to an altitude of 700 km in five different configurations.

- The rocket stands 18 metres tall and has a mass of 14,000 kg.

- The rocket's first stage could have up to seven Agnilet engines, depending on the mission, which are powered by Liquid Oxygen and Kerosene.

- The rocket is also designed for launch from more than 10 different launch ports.

- To ensure its compatibility with multiple launch ports, AgniKul has built a launch pedestal named 'Dhanush' that will support the rocket's mobility across all its configurations.

- The Agnilet engine, which powers the entire operation, is the world's sole single-piece 3D-printed engine.

Acoustic Side Channel Attack

A research paper titled "A Practical Deep Learning-Based Acoustic Side Channel Attack on Keyboards", revealed that Artificial Intelligence (AI) can be used to decode passwords by analysing the sound produced by keystrokes.

About Side Channel Attack (SCA)

What?	• It is a security exploit that attempts to extract secrets from a chip or a system by measuring or analyzing various physical parameters. • SCA can be performed using a collection of signals emitted by devices, including electromagnetic waves, power consumption, mobile sensors as well as sound from keyboards and printers to target devices.
Method	It does not target a program or its code directly. Rather, it attempts to gather information or influence the program execution of a system by measuring or exploiting indirect effects of the system or its hardware.
Impact	It poses a serious threat to modules that integrate cryptographic systems
Example	Van Eck phreaking attack, which is also known as a Transient Electromagnetic Pulse Emanation Standard (TEMPEST). This attack monitors the electromagnetic field (EMF) radiation emitted by a computer screen to view information before it is encrypted.

About Acoustic Side Channel Attacks (ASCA)

- In an ASCA, the sound of clicks generated by a keyboard is used to analyse keystrokes and interpret what is being typed to leak sensitive information.

- Researchers investigated the use of audio recordings taken from Zoom video conferencing calls, smartphone microphones, and off-the-shelf equipment and algorithms to launch ASCA attacks.

- An AI-driven malware of sorts can be installed on your machine, and it will listen into what you are typing.

- As soon as it detects you are on a sensitive page which involves passwords or bank details, it will relay the keystroke information and decipher the information.

Safety Measures against ASCAs

- Simple changes to typing could reduce the chances of attacks.

- Using touch-based typing can also reduce the chances of successful keystroke recognition from 64% to 40%.

- Creating stronger passwords that use a combination of upper- and lower-case alphabets can make it more difficult for criminals to launch successful ASCA attacks.

Graphene-Aurora program

The Ministry of Electronics & Information Technology (MeitY) has launched the 'Graphene-Aurora program'.

Aim	To bridge the gap between graphene research and commercialization.
Whom	The program is funded jointly by MeitY, the Government of India, the Government of Kerala, and industry partners, including Carborundum Pvt Limited.

Features	• It shall nurture the deep/emerging Graphene technology & innovation ecosystem that can guide, develop, implement, and support SMEs and startups to commercialize developed graphene technologies for scale adoption.
	• Creation of a commercialization eco-system for graphene as an emerging technology would help India take a pole position in the world's new material market.

About Graphene

- Graphene is often referred to as a wonder material for its extraordinary electrical and electronic properties. Graphene was discovered in 2004 by Andre Geim and Konstantin Novoselov, who received the Nobel Prize in Physics for this in 2010.

- It is stronger than steel, very stretchable and can be used as a flexible conductor. Its thermal conductivity is much higher than that of silver.

- Graphene has a number of properties which makes it interesting for several different applications. It is an ultimately thin, mechanically very strong, transparent and flexible conductor.

- It is used in electronics for creating faster& more efficient devices, in materials science for reinforcing composites, in energy storage for enhancing battery performance, touch screens, faster DNA sequencing, in medical fields for drug delivery and biosensors, light panels, solar cells and among other uses.

Solar Terrestrial Relations Observatory (STEREO-A) Spacecraft

NASA's Solar Terrestrial Relations Observatory (STEREO-A) spacecraft underwent its first Earth flyby, nearly 17 years after its initial launch.

➢ It will allow scientists to understand how coronal mass ejection's (CME) magnetic field evolves on its way to Earth.

About STEREO-A Spacecraft

- It was launched by NASA in 2006 (Sun was in its Solar Minimum phase) to study the Sun and its effects on space weather.

- It consists of two identical observatories that orbit the Sun, one ahead of Earth (STEREO-A) and one behind (STEREO-B). This configuration allows for stereoscopic imaging of the Sun, providing a three-dimensional view of solar phenomena.

Milestone

- On February 6, 2011, another significant milestone was achieved as both STEREO-A and -B reached a remarkable 180-degree separation in their orbits, which gave us the full sphere image of the Sun.

- However, **STEREO-B** broke contact with mission control in 2014 after a planned reset (B's mission officially ended in 2018).

- By capturing images and data from different angles, the Stereo spacecraft enables scientists to study the Sun's surface, corona, and solar wind in unprecedented detail.

Mission Objectives

- **Observing Solar Phenomena:** STEREO aims to provide 3D images of the Sun, allowing scientists to observe and understand solar phenomena such as coronal mass ejections (CMEs), solar flares, and other dynamic processes.

- **Space Weather Prediction:** By tracking solar activities, STEREO helps in improving space weather predictions, which are crucial for protecting satellites, astronauts, and technological infrastructure from the harmful effects of solar radiation and energetic particles.

- **Studying Solar Wind:** The mission aims to study the solar wind's behavior as it travels through space, interacting with Earth's magnetosphere and shaping the space environment around our planet.

India has inaugurated a National Automated Fingerprint Identification System (NAFIS).

About NAFIS
1) It is a country-wide searchable database of crime- and criminal-related fingerprints.
2) It assigns a unique 10-digit National Fingerprint Number (NFN) to each person arrested for a crime.
3) It facilitates integrated palm print, fingerprint enrolment, portrait capture, storage, and matching fingerprints.
4) It is managed by the National Crime Records Bureau (NCRB) at the Central fingerprint bureau, based in New Delhi.

The Working Process of NAFIS
• NCRB enables law enforcement agencies to upload, trace, and retrieve data from the database.
• Within 24 hours, NAFIS provides a unique 10-digit National Fingerprint Number (NFN) to each criminal who is arrested for the crime.
• The unique ID will be used for a lifetime of an offender. Different crimes registered under different FIRs will be logged as incidents belonging to the same NFN.
• The first two digits of the ID will be the **state code** of the state where the criminal is registered, followed by a **sequence number**. The state partition will have IDs belonging to a state.
• Apart from this, a digital record will be added as storage to match the fingerprints in the future.
• With NAFIS, it is possible to locate a person of interest in a matter of minutes and connect that individual's name to any active warrants, warnings, or information about related criminal conduct stored in other police information reference systems.

Benefits of NAFIS	**Challenges With NAFFIS**
• It would help in the quick and easy disposal of cases with the help of a centralised fingerprint database. • It helps in identifying suspects who may have left their fingerprints at a crime scene, linking them to previous criminal records. • It also helps in resolving cases where the identity of a deceased person is unknown.	• It is not infallible. The accuracy of fingerprint identification depends on the quality of the captured fingerprint and the condition of the database. • Factors like smudges, partial prints, or poor image quality can affect the accuracy of the matching process.

15 Minutes of Terror

After the failed attempt of the soft-landing mission of Chandrayaan-2, then chairman of ISRO, K Sivan described the landing process as '15 minutes of terror'.

15 Minutes Of Terror Includes Four Phases

- **Rough Braking phase** - It includes reducing the lander's horizontal velocity from a range of 1.68 km/sec (more than 6,000 km/h) to a height of 30 km from the lunar surface, to almost zero for a soft landing at the designated site.

- **Attitude hold phase** - At a height of 7.42 km from the surface, the lander should tilt from a horizontal to a vertical position while covering a distance of 3.48 km, it lasts around 10 seconds.

- **Fine braking phase** - It lasts around 175 seconds, during which the lander is to move fully into a vertical position, and it would reach a nominal speed of 0 m/sec.

> It was between the "attitude hold phase" and the "fine braking phase" that Chandrayaan-2 lost control and crashed.

- **Terminal descent phase** - It is the final stage, when the spacecraft is supposed to descend totally vertically onto the surface.

About Soft Landing

- It simply means landing at a gentle, controlled speed to not sustain damage to a spacecraft.
- It takes place when a spacecraft lands intact on the lunar surface and does not, intentionally or otherwise, crash.

About Chandrayaan-3

- It has made history by becoming the 1st mission to soft-land on the lunar south pole.
- It aimed to demonstrate safe and soft lunar landing, rover mobility, and in-situ scientific experiments.
- It is expected to operate for at least one lunar day (14 Earth days) on the lunar surface.
- It is a mission repeat of Chandrayaan-2, but it consists of only a lander (Vikram) and a rover (Pragyan) like Chandrayaan-2, no orbiter.

Next-Generation Photonic Analog to Digital Converters (NG-PADC) Project

A new prototype in the Next-Generation Photonic Analog-to-Digital Converters (NG-PADC) project was introduced.

About NG-PADC Project

- It was developed by IIT Madras with support from the IMPRINT programme.
- It can carry out instantaneous frequency measurement, generation and transport of Radio Frequency (RF) through optical methods.
- It could revolutionize various sectors, enabling faster digital communication, improved satellite communication, better medical imaging, and Photonic radars.

About Analog-to-digital Converters (ADCs)

- It is a crucial component in modern electronics that converts continuous analog signals into discrete digital data. This conversion allows for the processing, storage, and manipulation of real-world information in digital systems.
- It works by sampling the analog signal at regular intervals and assigning a corresponding digital value to each sample.
- The accuracy of an ADC is determined by its resolution, which is the number of bits used to represent the digital code. Higher-resolution ADCs can provide more precise measurements and capture smaller changes in the analog signal.

Applications of ADCs

- ADCs are used in a wide range of applications, including audio recording, sensor data acquisition, and communication systems.
- They enable the conversion of real-world phenomena, such as sound, temperature, and pressure, into digital information that can be processed, stored, and transmitted by digital devices.

IMPRINT (IMPacting Research, INnovation and Technology) Program

- It is a joint initiative of the Ministry of Education and the Department of Science & Technology (DST).
- It aims to address societal challenges and enhance the country's technological capabilities.
- It focuses on collaborative research projects between academia and industry, with an emphasis on

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developing solutions that have real-world impact.

- Through the IMPRINT Program, funding is provided for research projects in areas such as healthcare, energy, infrastructure, manufacturing, and sustainable development.

Nabhmitra Device

The ISRO-Space Applications Centre (Ahmedabad) successfully tested the Nabhmitra device at Neendakara (Kerala).

About Nabhmitra Device

- It is a satellite-based communication system developed for the safety of fishermen.
- It enables **two-way messaging services from/to sea**. The weather and cyclone warnings will be communicated in the local language, the boats can also send distress messages to the authorities.
- In emergency situations like capsizing and fire, fishers can press a button on the device and get in touch with the control centre.
- While the control centre will receive the alert including the location of the boat, the crew on the boat will get a response message from the control centre.
- Apart from providing information about shipping channels and maritime boundaries, the device will also help to identify fishing fields.

Several Other Programs to Ensure Safety of Fishermen

- **Weather Information Services for Fishermen** - The government provides timely weather updates and forecasts to fishermen through dedicated services, enabling them to make informed decisions about venturing into the sea.
- **GPS-based Vessel Monitoring System** - It utilizes GPS technology to track the location of fishing vessels in real-time.
- **National Marine Communication Network** - It is also known as the National Marine Communication Network. This network enables fishermen to stay connected with authorities and seek assistance when needed.

ChaSTE Probe

ISRO released a graph of the temperature variation between the moon's surface and a point around 8 cm below its surface.

➢ It was measured by an instrument named ChaSTE on board the lander module of the Chandrayaan-3 mission.

About ChaSTE (Chandra's Surface Thermophysical Experiment) Probe

- ChaSTE aims at in-situ measurements of **thermal conductivity and temperature profile** on the lunar surface to derive the _vertical temperature gradient up to a depth of 100 mm at the site of landing._
- This is carried out by means of inserting a probe consisting of thermal sensors into the lunar regolith using a motor-based mechanism. ChaSTE provides thermophysical properties of a high latitude region on the Moon for the first time.
- It was developed by a team led by the Space Physics Laboratory of ISRO's Vikram Sarabhai Space Centre (VSSC), together with the Physical Research Laboratory (PRL), Ahmedabad.
- It measured the temperature profile of the lunar topsoil around the South Pole to understand its thermal behaviour.

- Its data show that at the moon's surface (where the lander is located, a point between the craters Manzinus C and Simpelius N), the temperature is 40-50 degrees, but just 80 mm under it plunges to around -10 degrees C.

Significance Of The Findings

- The temperature variation indicates that the moon's topsoil is a powerful thermal insulator, in keeping with previous findings.

- It adds credence to the idea that it can be used to build habitats for humans to shield them from frigid conditions and harmful radiation.

Smishing

The Indian government has issued a warning about a new scam known as Smishing.

About Smishing	- It is a combination of SMS and phishing. - It is a type of cyber-attack that uses text messages instead of email to trick people into giving away sensitive information, such as passwords, credit card numbers, or personal identification details. - It often involves messages that appear to be from legitimate sources, such as banks, government agencies, or well-known companies.
How it Works?	- The text messages typically include links that direct recipients to fraudulent websites. - These websites are designed to look nearly identical to the legitimate websites of the organizations being impersonated. - When victims click on the provided links, they are taken to these fake websites, where they are prompted to input their sensitive information. - This could include usernames, passwords, credit card numbers, social security numbers, and other personal details. - Once the victim's sensitive information is divulged, the attacker might steal it to commit fraud for personal gain or to compromise the victim's device by installing malware on it.
Examples of smishing scams	**Pretending to be a financial institution:** Scammers may pose as the victim's bank alerting them to a problem with their account, often through a fake notification. **Pretending to be the government:** Scammers may pretend to be police officers, IRS representatives, or other government officials. These smishing texts often claim the victim owes a fine or must act to claim a government benefit. **Pretending to be customer support:** Attackers pose as customer support agents at trusted brands and retailers like Amazon, Microsoft, or even the victim's wireless provider. **Pretending to offer free apps:** Some smishing scams trick victims into downloading seemingly legitimate apps—e.g., file managers, digital payment apps, even antivirus apps—that are in fact malware or ransomware.
Solutions	**Mobile cybersecurity solutions:** Android and iOS operating systems have built-in protections and functionalities, like blocking unapproved apps and filtering suspicious texts to a spam folder. **Security awareness training:** Training people to recognize the warning signs of cyber-attacks and smishing attempts like unusual phone numbers, unexpected URLs, and a heightened sense of urgency can help protect an organization. Training may also set rules for handling sensitive data, authorizing payments, and verifying requests before acting on

| | them. |

ZARTH Application

The new app, called ZARTH, **('ZTF Augmented Reality Transient Hunter')**, is built on the lines of augmented reality mobile games.

- It uses **open-source sky maps** and adds data daily from the Zwicky Transient Facility (ZTF) robotic telescope at Palomar Observatory in California.

  ➢ Palomar is also home to one of the oldest, largest, and most powerful telescopes in the world: the 200-inch Hale reflector.

- The ZTF scans the entire northern sky every two days and uses the data to create large-area sky maps that have important applications in tracking near-Earth asteroids and studying supernovae.

- To ensure users have access to fresh and exciting data, ZARTH is updated daily with new transient information detected by ZTF.

- The app ranks transients by their rarity and importance, and players can compete with each other to score points and earn daily credits, which are duly listed on the leaderboards.

  ➢ Transients refer to astronomical phenomena with durations of fractions of a second to weeks or years. Typically, they are extreme, short-lived events associated with the total or partial destruction of an astrophysical object.

  ➢ Apart from supernovae, the transients include, flaring stars (variable stars that flare up for a short while), white dwarf binaries (burnt remains of dead stars that orbit one another and often merge and explode in supernovae), active galactic nuclei.

- Students from Indian Institutes of Technology Mandi and Gandhinagar were also involved in developing ZARTH.

Significance of ZARTH Application

- It will help augment the data on transients as more and more citizen scientists devote their time to it.

- Feedback on these would help improve our machine learning algorithms, especially if users find a certain pattern across multiple such sources.

- Its introduction in schools and college classrooms has vast potential for incorporating it into STEM and doing citizen science.

Crew-7 Mission

NASA and SpaceX have launched Crew-7 Mission from NASA's Kennedy Space Center in Florida.

➢ The Falcon 9 rocket will propel the Dragon spacecraft, Endurance, into space, ensuring precise timing and trajectory for a successful rendezvous with the ISS.

About Crew 7 Mission

- The Crew-7 mission is notable for its diverse team, with astronauts hailing from **different countries**. The mission includes four astronauts from USA, Denmark, Russia and Japan.

- Crew-7 is the 7th routine mission to the International Space Station for Elon Musk's SpaceX. The first mission happened back in 2020.

- Once they reached International Space Station (ISS), they will replace four astronauts living up there since March.

- During their stay at the space station, the Crew-7 astronauts will conduct more than 200 science experiments and technology demonstrations to prepare for missions to the Moon, Mars, and beyond.

- The research will include a collection of microbial samples from the exterior of the space station.

- The team will also analyse how sleeping in the microgravity environment differs from Earth by examining astronauts' brain waves while they sleep.

- Another experiment will look at the formation of biofilms in wastewater on the space station, which could be key to finding better ways to recycle water for drinking and hygiene while in space.

International Space Station (ISS)

- It is a space station, or a habitable artificial satellite, in Low Earth Orbit (approximately 250 miles above Earth).

- Several countries are involved in the ISS project, including the United States (NASA), Russia (Roscosmos), Canada (Canadian Space Agency), Europe (European Space Agency) and Japan (JAXA).

- The 1st piece of the International Space Station was launched in 1998 into space onboard a Russian rocket.

- NASA and its partners from around the world completed construction of the space station in 2011.

Khadi Rakshasoot

- The Khadi and Village Industries Commission (KVIC) has launched 'Khadi Rakshasoot' to commemorate the Raksha Bandhan.

- This **Khadi Rakshasoot (Khadi-Rakhi) was introduced under** the aegis of **Ministry of Micro, Small and Medium Enterprises**.

- The uniqueness of Khadi Rakshasoot lies in its creation by the dedicated spinner sisters from across the rural India, who spin multiple threads on the charkha.

- This product is entirely natural, without any chemical additives. It includes basil, tomato, brinjal seeds that further enhances its composition.

- The idea behind this is that, when disposed into the earth, it will sprout up to basil, tomato, and brinjal plants.

- This year, Khadi Rakshasoot has been introduced as s a pilot project in Delhi. Looking ahead, extensive preparations are being made to launch it nationwide in the upcoming year.

Khadi and Village Industries Commission (KVIC)

- KVIC is a **statutory body** formed under the KVIC Act, 1956. It comes under the Ministry of Micro, Small and Medium Enterprises.
- It seeks to promote the development of khadi and village industries in rural areas in coordination with other agencies engaged in rural development.

Objectives

- The social objective of providing employment.
- The economic objective of producing saleable articles.
- The wider objective of creating self-reliance amongst the poor and building up of a strong rural community spirit.

Independence Day's Address From Red Fort

Over the years, the Red Fort has become an integral part of India's Independence Day celebrations. To understand why the Red Fort was chosen for this honour, it is important to know how Delhi became the seat of power in India.

Capital of Hindustan

- It was under the **Delhi Sultanate (1206-1526)** that Delhi became a major capital city from where a large part of north India was ruled.

- Babur (1483-1530), the founder of the Mughal dynasty, was the first to refer to Delhi as the 'capital of all Hindustan' in the 16th century.

- Though the Mughals, under Akbar (1542-1605) shifted their capital to Agra for some time, they continued to be seen as the rulers of Delhi.

- Finally, under Shah Jahan (1592-1666), Delhi became the Mughal capital once again with the establishment of Shahjahanabad in 1648 (today known as Old Delhi).

- The Mughals would continue to rule from the fort of Shahjahanabad – more popularly known as the Red Fort – till 1857.

- Even as their power declined, they continued to be recognised as the symbolic rulers of India, in part due to their association with Delhi.

- Such was the Mughal emperor's symbolic significance as the source of legitimate sovereign authority that many of these new states, including the East India Company, continued to rule in his name, and issued coins in his name until the 19th century.

- The best example of this was the Rebellion of 1857. After mutinying, the rebels immediately headed to Delhi and declared the aged Mughal Emperor Bahadur Shah Zafar (1775-1862) as their king.

- Delhi at the time was of minor importance to the East India Company, and housed very few Europeans.

* But for the rebels, it was still the strongest symbol of indigenous authority, around which they rallied and the fall of Delhi almost finished the rebellion.

The Stamping Of British Imperial Authority Over The Red Fort

* After capturing Delhi from the rebels, the British initially planned to destroy the whole city (Shahjahanabad), their primary objective was to wipe out the memory of the Mughal Empire from the city.

* As per estimates, as much as 80 per cent of the Red Fort's original inner structures were destroyed, replaced by British buildings to house their troops and service their needs.

* The palace was converted into a British garrison and the famed Diwan-i-Aam into a hospital.

Co-opting Delhi's Symbolic Authority

* In the years following 1857, the British systematically downgraded Delhi to a minor provincial town.

* At the same time, the city still remained a strong symbol of authority in India, something the British also tapped into, notably with the Delhi Durbars (1877, 1903, 1911).

* These grand ceremonies proclaimed the British monarch as the Emperor of India, and invited rulers from Princely States across the subcontinent to Delhi to pay their tributes to the British Crown.

* The British finally decided to shift their capital to Delhi from Calcutta in 1911, building a grand new city which would be completed in 1930.

Reclaiming the Red Fort

* The Red Fort would return to the forefront of public consciousness in the years prior to Independence.

* Under Subhas Chandra Bose, the Indian National Army (INA) – comprising Indian Prisoners of War captured by Japan and civilian volunteers – moved towards India from the Burmese border in 1943, aiding the Japanese war effort.

* This effort would eventually fail – Bose died in a plane crash and between 1945 and 1946, senior officers were tried for treason.

* These highly public trials were held at the Red Fort. This led to mass sympathy for the INA and an increase of nationalist sentiments against the British.

* The trials firmly established the Red Fort as a symbol of power and resistance in the minds of the Indian public. It is in this context Nehru decided to hoist the flag over the Red Fort in 1947.

* With the coming of Independence, it was necessary that the site of the Red Fort, over which the British colonial government had sought to inscribe its power and might, be symbolically reclaimed for the Indian people.

* Each year, the Independence Day celebrations emphasise this reclamation.

Artworks Presented to Greece

* The Prime Minister recently presented several artworks and traditional items to the Prime Minister and the President of Greece during his visit to the country.

* He gifted them with Meghalaya shawls, Dokra artwork and Bidri art vase.

Meghalaya Shawls

* Meghalaya shawls were originally woven for the Khasi and Jaintia royalty, who considered them a symbol of their power and status.

* The shawls were also worn during ceremonial occasions and festivals, and their intricate designs and vibrant colours were a reflection of the royal family's wealth and prestige.

- The designs used in Meghalaya shawls were highly symbolic. For instance, the use of animal motifs such as tigers and elephants was a symbol of power and strength, while the use of floral patterns was a symbol of beauty and grace.

- Renowned for their warmth and softness, Meghalaya shawls' weaving is an art form that requires great skill and creativity.

Dokra Art

- The PM also presented a Dokra artwork featuring a peacock shaped boat.

- Artisans of Dokra art are mainly from Central and Eastern India. This particular art-piece is crafted by artisans from Chattisgarh.

- Dokra art, also called Dokra is one of India's prehistoric art forms. One of the earliest expressions of this ancient art is the dancing girl artefact found from Mohenjo-Daro and Harappan excavations.

- It is named after the **Dhokar Damar**, a nomadic Indian tribe indigenous to the central and eastern regions of the country.

- This distinctive art form's prevalent motifs features depictions of Hindu deities, goddesses and a variety of animals.

- Dokra Art involves the use of non-ferrous metal casting through the intricate lost-wax casting method.

- This metal casting technique boasts a history of more than 4,000 years in India. There are two main processes of lost wax casting: solid casting and hollow casting.

Bidri Artware

- Originating in the town of Bidar in Karnataka, Bidri in a form of metal handicraft. It was developed in the **14th century** during the rule of the **Bahmani Sultans**. It has also been accorded the **Geographical Indication (GI) tag**.

- It is an art of inlaying alloys. A new mould must be prepared to make a cast in which molten metal, an alloy of zinc & copper is poured.

- Motifs are sketched on them to be etched with a chisel and hammer. The engravings are inlaid with silver wire. It is this contrast of shining silver to the black metal that is unique to Bidri art.

- Bidri can be seen on a variety of products from showpieces to utensils to textiles.

World Sanskrit Day

- World Sanskrit Day was recently celebrated in Colombo by the cultural arm of High Commission of India. The day is celebrated to create awareness and promote one of the ancient and oldest Indian languages.

- It is celebrated on the **full moon day of the Hindu calendar month of Shravan or Sawan month**. This year it was observed on 31st August.

- The first World Sanskrit Day was celebrated in the year 1969, when Indian Government declared to celebrate the day to commemorate the great work of **Pāṇini** - great Sanskrit Scholar and grammarian.

- Sanskrit language has a great significance, and is known to be the foundation of different classical texts in fields like Literature, Philosophy, Mathematics, and Science.

- Sanskrit has also been used to write some crucial scriptures in Hinduism like Vedas, Upanishads and Bhagavad Gita.

- It is known as **Dev Vani**, meaning the **language of Gods**. It is also known as the mother of many present-day languages such as Hindi and Sinhala.

- The celebration for Sanskrit is significant, as this Indo-Aryan language has successfully left a mark not only in the Indian subcontinent but has also extended to continents like Europe.

- Carrying the most extensive vocabulary, Sanskrit is well known for contribution to languages like Greek and Latin.
- Sanskrit is one of the 22 official languages included in the Eighth Schedule of the Constitution.
- Sanskrit is also one of the 6 classical languages of India, the other five being Tamil, Telugu, Kannada, Malayalam and Odia.

Gnanamuyarchi

- Palm manuscripts from the 18th Century, titled Gnanamuyarchi, have been discovered in an Armenian monastery in Northern Italy.
- The findings highlight the rich history and cultural exchanges between different regions during that time.
- It is a prose text from the early 18th Century (likely the 1720s) and has been printed several times in the 19th Century by the Mission Press in Puducherry.
- The library had categorised the manuscripts as 'Indian Papyrus Lamulic Language–XIII Century' and the authorities were not aware that it had been written in Tamil.
- Those in charge of the monastery are of the opinion that the Armenians in Chennai could have brought the manuscripts to Italy.

Importance Of The Finding

- These palm manuscripts are of utmost importance in preserving historical and cultural knowledge. They offer valuable insights into the time period they originate from, providing a first-hand account of the social, literary, and religious practices during that era.
- The manuscripts are written in Tamil, showcasing the influence of the language and its spread beyond its homeland. Further, it also offers scope of more research into the area.

Unmesha and Utkarsh Festivals

- The President recently inaugurated Unmesha and Utkarsh festival in Bhopal.
- The two events were jointly organised by **Sangeet Natak Akademi** and **Sahitya Akademi**, in association with the culture department, Madhya Pradesh.

Utkarsh

- Utkarsh is a national festival of folk and tribal expressions.
- Utkarsh means progress and the festival is held in the spirit that the progress of the tribal group will lead to the progress of the country.
- Thus, collectively efforts should be taken to make tribals partners in development while preserving their culture, ethos, customs and natural environment.

Unmesha

- Unmesha' is India's most inclusive and Asia's largest literature festival in terms of the number of languages represented, and is on its way to becoming the world's largest literature festival.
- More than 575 authors in 102 languages from 13 countries are expected to participate in over 75 events in Unmesha 2023.
- This is the second edition of Unmesha. The first event was held in Shimla in June 2022.

Sangeet Natak Akademi

- Sangeet Natak Akademi is the apex body in the field of performing arts in the country.

- It was **set up in 1953** for the preservation and promotion of the vast intangible heritage of India's diverse culture expressed in forms of music, dance and drama.

- The <u>Chairman of the Akademi is appointed by the President of India</u> for a term of five years.

- It is presently an Autonomous Body of the Ministry of Culture and is fully funded by the Government for implementation of its schemes and programmes.

Sahitya Akademi

- Inaugurated in 1954, Sahitya Akademi - **India's National Academy of Letters**, is the central institution for literary dialogue, publication and promotion in the country.

- Functioning as an **autonomous organization**, it is the only institution that undertakes literary activities in 24 Indian languages, including English.

- The Akademi also undertakes literary exchange programmes with various countries to promote Indian literature.

- It also gives special awards called **Bhasha Samman** to significant contribution to the languages not formally recognized by the Akademi and for contribution to classical and medieval literature.

Aadi Perukku

- The Aadi Perukku festival was recently celebrated in Tamil Nadu. The festival is celebrated to show the gratitude to the mother nature and monsoon god for providing uninterrupted supply of water.

- As per Tamil Calendar, this festival is celebrated on the 18th day of Aadi month. The month of Aadi marks the beginning of the monsoon season in Tamil Nadu.

- During the time of monsoon, the water level increases in the rivers. Hence, the month is beneficial for the sowing, planting of seeds and vegetation. People of Tamil Nadu express their gratitude to the God of monsoon, mother nature and river Kaveri.

- On this auspicious day, Mother nature is worshipped in the form of Amman deities.

- This day is also celebrated as Pathinettam Perukku, Padinattam or Pathinettam means eighteen and Perukku means rising.