



THE RECITALS

Current Affairs (June 2023)



Editor's Cut

- CoWIN Data Breach
- Child Trafficking in India
- Electronic Interlocking System in Railways
- Government Contracts And Immunity From Legal Provisions
- Law On Adverse Possession
- General Consent To CBI
- Official Visit of Prime Minister of Nepal to India
- Official Visit of PM Modi to Egypt
- PM Modi's State Visit to USA
- India Set to Join Artemis Accords
- UN adopts High Seas Treaty
- NCB Busts Major Darknet-Based LSD Smuggling Syndicate

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CoWIN Data Breach

- According to reports, a bot on the messaging app Telegram is reportedly returning personal information of Indian citizens who enrolled with the COVID-19 vaccine intelligence network (CoWIN) portal for vaccination purposes.
- The bot revealed personal details like name, Aadhaar and passport numbers upon entry of phone numbers.

CoWIN Portal

- CoWIN is a **government-owned web portal set up in 2021** to administer and manage India's COVID-19 vaccine rollout.
- The platform tracks vaccines and beneficiaries at the national, State, and district levels on a **real-time basis**.
- **It monitors vaccine utilisation and wastage** and maintains an inventory of the vials.
- The platform is a microservices-based, cloud-native architecture developed from the ground up on **Amazon Web Services (AWS)**.
 - **A microservice architecture** is a pattern that arranges an application as a collection of loosely linked, fine-grained services.
 - These services interact with each other through certain set protocols.
- **Key Features of CoWIN platform**
 - Blended registration- Beneficiaries can register online or on-site (walk-in) to Vaccination Centre.
 - Beneficiaries can book online appointment based on convenience of time and choice of location
 - Track Vaccination Schedule
 - Instant Digital vaccination Certificate with certificate correction utility
 - Multilingual portal with 12 languages
 - Vaccine Stock Management
 - Publishing of Vaccine Schedules in advance
 - Real Time Dashboards
 - tracking of Adverse Event Following Immunization (AEFI)
 - Digital Covid-19 vaccination Certificate tracking
- **Achievements**
 - More than 200 crore vaccination done with the help of CoWIN platform.
 - 200 crore landmark was achieved within the 18 months of the launch.
 - It is recognized as the world's biggest digitally verifiable vaccination certificate generation platform.
 - United Nations Development Program (UNDP) had lauded India's CoWIN app.
 - During Global Conclave 2021, India offered CoWin platform as a **digital public good to other nations**.
 - In other words, CoWin platform has been made open source, available to any and all countries.

Significance Of The Portal

- **The health register-style platform** leverages existing public digital infrastructure like the -
 - Electronic Vaccine Intelligence Network (**eVIN**), an app that provides data on vaccine cold chains in the country;
 - Digital Infrastructure for Verifiable Open Credentialing (**DIVOC**), a vaccine certificate issuer; and
 - Surveillance and Action for Events Following Vaccination (**SAFE-VAC**), a vaccine adverse event tracker.

- The database captures information flowing from **four separate input streams** -
 - Citizen registration;
 - Health centres;
 - Vaccine inventory; and
 - Vaccine certificates.
- Each stream **functions independently**, and **at the same time exchanges data to minimise redundancies**.

CoWIN Data Breach

- **This is not the first-time** reports about data leaks have emerged.
- **In Jan' 2022**, the personal data of thousands of people in India were reportedly leaked from a government server. The information included COVID-19 test results, phone numbers, names and addresses of citizens.
- **In December 2022**, an Iranian hacker claimed to be in possession of data from CoWIN database.

How Did These Data Breach

- Cloud providers like AWS typically provide **security only for the underlying infrastructure** and not for securing the applications and databases.
- **Legacy systems** deployed in virtual servers are the weak links in the chain, **providing a perfect route for hackers to gain entry into a database**.
- In past data breaches, cybersecurity experts have attributed data leaks to **human error or negligence in setting up databases in the cloud**.
- **Misconfiguring a system, or involvement of third-party apps** with limited privacy features, could have also exposed user data to unauthorised people.

Government Response On Recent Data Breach

- **The Health Ministry denied** recent reports of a data breach saying that the allegations were false.
- It added that the **Indian Computer Emergency Response Team (CERT-In)** was reviewing the existing security infrastructure of the portal.
- **The Centre highlighted the three ways in which data on CoWIN can be accessed**
 - a user can access their data on the portal through an OTP sent to their mobile number,
 - a vaccinator can access data of a person, and the CoWIN system tracks and records each time an authorised user accesses the system,
 - third party applications that have been provided authorised access of CoWIN APIs can access personal level data of vaccinated people after OTP authentication.
- **Emphasised that without OTP it is not possible to access data**
- **One API has a feature of sharing the data**
 - The govt said that there is one API that has a feature of sharing the data by using just a mobile number.
 - However, even this API is very specific and the requests are only accepted from a trusted API which has been whitelisted by the CoWIN application.
- **On database accessed by Telegram bot**
 - The govt clarified that data being accessed by the bot from a threat actor database seems to have been populated with previously breached/stolen data.
 - The database was other than CoWIN.

Way Ahead

- In 2017, the Supreme Court of India (in KS Puttaswamy case) recognised **privacy as a fundamental right**, highlighting the need to protect personal information.

- However, **such leaks reveal that sensitive personal data of millions** of Indian citizens who signed up for the COVID-19 vaccination is in the hands of cybercriminals.
- **Therefore, a data protection law** could be a useful tool in fixing accountability and building safeguards around the use and processing of personal data.



Child Trafficking In India

- Child trafficking manifests in the form of domestic labour, forced child labour across industries, and illegal activities such as begging, organ trade and commercial sex purposes.
- Estimates show that children account for *one in every three* detected victims of trafficking worldwide; this rises to *one in two* in low-income countries.

Reasons Behind Child Trafficking

- **Sex trade industry and domestic labour:** Minor girls in the age bracket 15-18 years are more vulnerable to trafficking due to these reasons.
- **Economic factors:** Poverty, hunger, and lack of work are the main reasons for this.
- **Social factors:** The caste and community-based discrimination and unfair treatment in rural areas are also at the root of this problem.
- **Other factors:** Externalities such as the COVID-19 pandemic, armed conflict, and climate change further increases vulnerability for children.

What Has India Done So Far?

- **Status of India**
 - The 2022 Trafficking in Persons Report released by the U.S. Department of State categorises India as Tier 2 in terms of progress.
 - It implies that India “does not fully meet the minimum standards for the elimination of trafficking but is making significant efforts to do so.
- **Laws Governing Anti-trafficking Crimes**
 - India **doesn't have a composite anti-trafficking law** that addresses prevention, protection, rehabilitation and compensation of survivors.
 - There are, however, separate regulations that address different crimes related to trafficking.
 - **The Immoral Traffic (Prevention) Act, 1956 (ITPA)** is targeted at stopping immoral trafficking and sex work.
 - Experts, however, have criticised ITPA for falsely presuming that all trafficking is done for sex work only.
 - They say that it criminalises sex workers without providing sufficient legal recourse or scope for rehabilitation.
 - **Prohibition of Child Marriage Act, 2006**, prohibits & penalises the act of child marriage.

Child trafficking in India Statistic

• As per data from the National Crime Records Bureau (NCRB), eight children were trafficked every day in India in 2021 – for labour, begging and sexual exploitation.

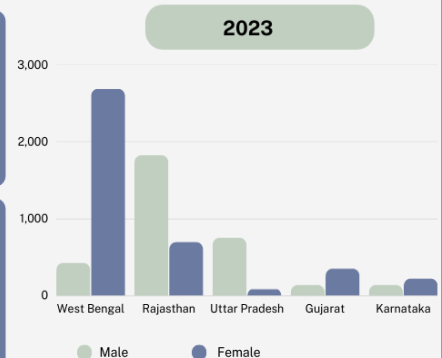
- These numbers stood at 2,914 in 2019; 2,222 in 2020.

8%

• This data only includes confirmed cases of trafficking, which does not account for missing children.

- Cases often go unreported due to a lack of awareness about the modalities of trafficking, reluctance to seek police help and socio-economic deprivation.

- One child goes missing every eight minutes in India – with millions ending up in domestic slavery, sex work and forced labour.



Five states with most children trafficked

- **The Child Labour (Prohibition and Regulation) Act, 1986**, prevents children from partaking in certain employments and regulates the conditions of work for children in other fields.
 - In 2016, an amendment completely banned the employment of children below 14 years.
 - However, adolescents aged 14-18 years are allowed to work in family-related businesses but not in fields that have hazardous working conditions.
 - **India has pledged to eliminate child labour by 2025.**
- **The Bonded Labour System (Abolition) Act, 1976**, prohibits systems of labour where people, including children, work under conditions of servitude to pay off debt, and also provides a framework for rehabilitating released labourers.
- The **Juvenile Justice (Care and Protection of Children) Act 2015**, governs laws relating to children alleged and found to be in conflict with law.
- **The Transplantation of Human Organs and Tissues Act, 1994**, makes commercial dealing in human organs a punishable offence.
- **Protection of Children from Sexual Offences (POCSO) Act, 2012**, which seeks to prevent commercial sexual exploitation of children.
- The **Criminal Law (Amendment) Act, 2013**, revised Section 370 of the Indian Penal Code, which deals with buying and selling of any person as a slave, to include the concept of human trafficking.
- **Institutional Setup**
 - India set up **Anti-Human Trafficking Units (AHTUs) in 2007**.
 - AHTUs are tasked with:
 - addressing the existing gaps in the law enforcement response,
 - ensuring a victim-centric approach which ensures the ‘best interest of the victim/ survivor’, and
 - developing databases on traffickers.

Trafficking in Persons (Prevention, Care and Rehabilitation) Bill

- MWCD published the Draft Trafficking in Persons (Prevention, Care and Rehabilitation) Bill in June 2021.
- It has 11 chapters detailing measures to prevent, protect and rehabilitate victims.
- The law will apply to **all citizens of India**, within and outside the country, persons on any ship or aircraft registered in India wherever it may be or carrying Indian citizens wherever they may be, and a foreign national or a stateless person who has residence in India.
- There are specified penalties for offences divided into “trafficking” and “aggravated trafficking”.
- The bill has:
 - widened the scope of victims to include transgender persons and others,
 - introduced mechanisms for the prevention and rehabilitation of victims (such as providing shelter and food) and
 - extended the framework to include cross-border trafficking cases.
- It proposes **district- and State-level “anti-trafficking units”** with designated police officers and a National Anti-Trafficking Bureau which looks after investigations involving two or more States.
- Investigations are required to be completed within 90 days of the offender’s arrest, and there are appointed sessions courts for speedy trials.

Challenges In Preventing Child Trafficking

- Prevailing challenges include a lack of coordination among AHTUs and disjointed operations by State and Central Governments.

- There is no comprehensive programme for tackling trafficking, an absent witness protection framework (the victim is also the witness).
- There are challenges in accessing compensation.
 - Some States had not created the fund to compensate victims.
 - A lack of awareness about compensation and opaque documentation requirements bog down survivors.

Way Forward

- There is a need to revisit existing laws, such as the Child Labour (Prohibition and Regulation) 1986 Act, to plug legal holes around the minimum working age.
- Children between the ages of 14 and 18 are also vulnerable to exploitation; in domestic labour.
- There is need to cultivate awareness about different trafficking crimes, form targeted child protection schemes, provide survivors with psychological and emotional support systems during rehabilitation, and offer incentives to keep children in school.
- The antidote to poverty-driven child labour is decent work for adults, so they can support their families and send their children to school, not to work.



Electronic Interlocking System in Railways

- An electronic track management system used by the railways has become the focus of investigations after the recent train crash in Odisha's Balasore district.
 - The crash involved two express trains and a goods train
- Minister for Railways said a change made in electronic interlocking and point machine led to the accident.

What Is Interlocking System?

- It refers to a mechanism that controls the movement of trains to ensure trains move safely through a controlled area.
- The system is an arrangement of signals and points, which may be inter-connected mechanically or electrically or both.
- These arrangements operate in a manner so that a train can move from one track or junction to another safely, without coming in the way of another train.

What Is Electronic Interlocking (EI)

- **About**
 - EI is an advanced signalling, computer-based system that uses electronic components to manage the movement of trains and the configuration of tracks.
 - The EI, which is based on software, is designed to prevent two trains from running on the same track at the same time.
 - It ensures that a train gets a go-ahead only when the route ahead is clear.
 - The system is an alternative to the conventional Relay Interlocking system.
 - The interlocking system is usually operated and monitored by trained personnel from the signalling and telecommunications department in Railways, often known as 'signallers' or signal operators.
 - They are responsible for setting the signals, monitoring track circuits, and ensuring the safe movement of trains.

- **Three crucial elements of EI**
 - **Signal:** Based on the status of the track ahead, signals are used to tell a train to stop (red light), proceed (green), or exercise caution (yellow).
 - **Track circuit:**
 - These are electrical circuits on tracks to detect the presence of a vehicle or a train on a section of track. Generally, sensors are installed on the tracks that detect the passage of wheels on the rails. These are also called **axle counters**.
 - They count how many sets of wheels or axles have passed over them in order to determine whether the entire train has passed through.
 - **Point switch:**
 - A train can change its track using a point. These are movable sections of a track which guide the wheels towards either the straight or diverging track.
 - For instance, if a train has to change lines, the switch point is activated ahead of time and the point is locked.
 - A point machine is a device used for locking point switches and plays an important role in the safe running of trains.
 - All activities in the signalling system are recorded in a microprocessor-based system called a data logger. It acts like the black box of an aircraft and can store and process signal data to generate reports.
- **How safe is this system?**
 - If any of the three components (**signals, points, and track occupancy sensors**) does not correspond to the overall 'safe' logic fed into the computer, the system will work to stop the oncoming train.
 - It is called a **fail-safe system**, so it means that even if it fails, all the signals will turn red and all train operations will stop.
- **Status of implementation**
 - As of 2022, 2,888 stations in India were equipped with an electronic interlocking system — comprising 45.5% of the Indian Railways network.

CAG's 2022 Performance Audit on Derailment in Indian Railways

According to the Performance Audit on Derailment in Indian Railways, **nearly three fourth of 217 consequential train accidents** across the country between 2017-18 and 2020-21 were caused by **derailments**.

Highlights of the 'Performance Audit on Derailment in Indian Railways':

- The audit report was tabled in Parliament in December 2022 by the **Comptroller and Auditor General of India (CAG)**.
- The focus of the audit was **to ascertain whether measures to prevent derailments and collisions were clearly laid down and implemented** by the Ministry of Railways.
- It also analysed the performance of **Rashtriya Rail SanrakshaKosh (RRSK)**.
 - The RRSK was created in **2017-18 with a corpus of Rs 1 lakh crore** over a period of five years with an annual outlay of Rs 20,000 crore (Rs 15,000 crore from Gross Budgetary Support and Rs 5,000 crore out of Railways Internal Resources).
 - **The proposed safety fund will be utilised for** track improvement, bridge rehabilitation, rolling stock replacement, human resource development, improved inspection system and safety work at level crossing, etc.

Classification of Train Accidents:

- **Consequential Train Accidents:** Includes train accidents with serious repercussions in terms of either: loss

of human life/human injury/loss of Railway property/Interruption to railway traffic.

- Out of 217 “consequential train accidents”, **163 were due to derailments** during 2017-18 to 2020-21.
- This was followed by accidents due to fire in trains (20), accidents at unmanned level-crossings (13), collisions (11), accidents at manned level crossing (8), and miscellaneous (2).
- **Other Train Accidents:** Includes all other accidents not covered under consequential train accidents.
 - In this category, **1,800 accidents took place**. The derailments account for **68% (1,229 derailments)**.

Main Reason Behind Train Accident:

- Out of 2017 consequential and non-consequential accidents (1,800 + 217), **the accidents due to derailments were 1,392 (69%)**.
- The total damages/loss of assets was reported as **Rs 33.67 crore** in the selected cases of derailments.

Major Factors Responsible for Derailments:

- Maintenance of tracks (167 cases).
- Deviation of track parameters beyond permissible limits (149 cases)
- Bad driving/over speeding (144 cases)

Performance of RRSK:

- The Gross Budgetary Support of Rs 15,000 crore had been contributed.
- But the actual generation of **internal resources** of Railways for funding of the remaining Rs 5,000 crore per year to RRSK **fell short of target during these four years**.
 - Thus, short deployment of funds by Railways to the tune of Rs 15,775 crore (78.88%) out of the total share of Rs 20,000 crore had defeated the primary objective of creation of RRSK.
- **The allotment of funds for track renewal works declined** from Rs 9,607.65 crore (2018-19) to Rs 7,417 crore in 2019-20 and even these funds were **not “fully utilised”**.
 - Out of 1127 derailments during 2017-21, **289 derailments (26%) were linked to track renewals**.

Recommendations of the CAG Report:

- **Development of a strong monitoring mechanism** to ensure timely implementation of maintenance activities by adopting fully mechanised methods of track maintenance and improved technologies.
- Railway administration must follow the **guiding principles for deployment of RRSK funds**.
- Indian Railway may prepare the **Detailed Outcome Framework** for each item of safety work.
- Ensuring strict adherence to the **scheduled timelines for conducting and finalising accident inquiries**.

Kavach

- **About**

- It is India’s very own automatic protection system (ATP) in development since 2012, under the name Train Collision Avoidance System (TCAS).
 - Later, it got rechristened to Kavach or “armour”.

- **Development**

- It has been indigenously developed by the **Research Design and Standards Organisation (RDSO)** in collaboration with the Indian industry.

- **Functioning**

- A set of electronic devices and **Radio Frequency Identification devices** installed in locomotives, in the signalling system as well the track.

- This enables the locomotives, signalling system and tracks to talk to each other using ultra high radio frequencies to control the brakes of trains and also alert drivers.

- **Features**

- It activates the train **braking system automatically** if the driver fails to control the train as per the speed restrictions.
- In addition, it prevents collision between two Locomotives equipped with a functional KAVACH system.
- It is designed to assist locomotive pilots in avoiding Signal Passing At Danger (SPAD) and over speeding.
 - SPAD - when a train passes a stop signal when not allowed to do so.
- It will also provide support for train operations during adverse weather conditions such as dense fog.
- It is a Safety Integrity Level 4 (SIL-4) certified technology with the probability of error being one in 10,000 years.

- **Other features**

- Auto Whistling while approaching Level Crossing Gates
- SoS Messages during emergency situations
- Centralised live monitoring of Train movements through Network Monitor System

- **Deployment strategy:** Around 34,000 km of network will be brought under KAVACH. At present, Kavach is under implementation on 1200 km route of South Central railway.

- **Benefits**

- Enhanced safety for Indian railways
- World's cheapest automatic train collision protection system
 - It costs ₹50 lakh per kilometre to operate compared to about ₹2 crore worldwide.

Opens avenues of export of this indigenous technology for Railways.



Government Contracts And Immunity From Legal Provisions

The Supreme Court recently held that the government when entering a contract under the President's name, cannot claim immunity from that contract's legal provisions under **Article 299** of the Constitution.

Background

- A pistol manufacturing company named Glock Asia-Pacific Limited filed an application in the Supreme Court against the Centre regarding the appointment of an arbitrator in a tender-related dispute.
- Glock Asia Pacific entered a contract with Ministry of Home Affairs for the supply of 31,756 Glock pistols but there was a dispute between the parties due to the Centre invoking a performance bank guarantee.
 - ✓ Performance Bank Guarantee is a promise by the bank that it will meet the debtor's liabilities, if he fails to meet the contractual obligations.
- Glock then issued a notice invoking arbitration and nominated a retired Delhi High Court judge as the sole arbitrator. But the government objected to this nomination and said that according to the contract's conditions, an officer in the Law Ministry, appointed by the MHA Secretary, can only be the arbitrator in case of a dispute.

- This clause was challenged by Glock under Section 12(5) of the Arbitration and Conciliation Act, 1996, which states that if any person whose relationship with the parties or counsel of the dispute falls under any of the categories in the Seventh Schedule, he will be ineligible to be appointed as an arbitrator.
 - The 7th Schedule includes relationships where the arbitrator is an employee, consultant, advisor, or has any other past or present business relationship with a party.

About Government Contracts

It is a contract to which the Central Government or a State Government is a party.

Types

Fixed Price Contracts	Cost-Reimbursement Contracts	Incentive Contracts	Indefinite Delivery Contract	Time & Materials Contract
It is an agreement for the contractual parties that set a firm price for the goods or services provided and assures certainty to both parties.	The buyer pays the seller, the cost incurred plus a percentage of the cost.	One party promises the other party additional remuneration if the other party executes the task with outstanding performance.	It ensures the supply of an indefinite quantity of services mentioned in the contract within a fixed time.	It is signed in the absence of a thorough knowledge of time or cost and requires government surveillance to monitor the work process and adherence to the terms and conditions of the contract.

Related Constitutional Provisions

Article 298- It empowers the Centre and the state governments to carry on trade or business, acquire, hold, and dispose of property, and make *contracts* for any purpose provided that

(a) the said executive power of Union is not one with respect to which Parliament may make laws, be subject to legislation by the State; and

(b) the said executive power of each State is not one with respect to which the State Legislature may make laws, be subject to legislation by Parliament

Article 299- It states that all the contracts concluded under Article 298 in the exercise of Union/State's executive power will be expressed to be made by the President or the Governor of the State and executed on their behalf. Neither of them will be personally liable for any contract made or executed shall the person executing the contract on their behalf be personally liable for the contract.

Government Contract vs Ordinary Contracts

Ordinary Contracts	Government Contract
1. Governed by the Indian Contracts Act, 1872.	1. Governed by the provisions laid down in Article 299 of the Constitution.
2. It can be expressed or implied (Mutual Understanding).	2. It must be ' <i>expressed</i> ' i.e., it must always be in writing.
3. It does not require to be executed by an authorized person.	3. It must always be executed by an authorized person duly appointed by the President or the Governor.

Governing Principles Regarding Contract

Transparency	It should be noted that the terms of the contract are fair for all the parties involved and all the third-party documents and applications are made public to ensure transparency.
Economy	The authorized person should ensure that the party to the contract has the

	appropriate financial allocations and preliminary research in place to determine the contract's aim.
Responsibility	The parties to a contract can be held accountable if any dispute arises out of the government contract.
Contractual balance	Equality between the parties must be maintained with respect to their obligations, rights and consideration stated during the execution of the contract.

Essentials

1. Fulfilment of Conditions under Article 299-

- If either party fails to fulfill the conditions stipulated in Article 299(1), then such a contract becomes null and void and it cannot be enforced by any of the contracting parties.
 - ✓ Neither the government can be sued or held liable for damages for the breach of such a contract nor can the government enforce the contract against the other party.
- For example, in the *K.P. Chowdhary v. State of Madhya Pradesh (1966)* case, a dispute arose between the bidder and the forest department for two forest contracts. As the dispute did not settle to the satisfaction of the bidder he refused to comply with the terms of the contract and the appellant admitted that the contract complying with Article 299(1) was never signed. The Supreme Court in its judgement held that under Article 299, a government contract must be written and thus, the contract between the bidder and the state government was void.

2. Written Contract- The contract must be in writing and not an oral agreement.

3. Execution by an Authorized Person-

- The contract is only valid if it is entered by a person duly authorized for this purpose by the President or the Governor.
- In *Union of India v. N.K. (P) Ltd. (1972)* case, the Director of Railway, Stores was authorized to enter a contract on behalf of the President but instead of him, the Secretary of the Railway Board entered the contract. This contract was held invalid by the Supreme Court.

4. To be Expressed in the Name of President/Governor- The contract must be expressed in the name of the President or the Governor otherwise it would not be valid or enforceable against the government.

Contractual Liability

Based on the provisions of Article 298, the Central and the State Governments can be held liable in case of any dispute or issue arising out of the government contracts.

Court's Verdict in Present Case

- The court gave the judgement in Glock's favour, and held that the arbitration clause of the contract which allowed a serving employee of the Union of India (a party to the contract) as the Sole Arbitrator was against Section 12(5) of the Arbitration and Conciliation Act, 1996.
- Referring to the 246th Law Commission Report, the court observed that when the party appointing an arbitrator is the State, the duty to appoint an impartial and independent adjudicator is even more onerous.
 - Thus, the court rejected the Centre's reliance on Article 299, saying that Article 299 only lays down the formality that is necessary to bind the government with contractual liability.
 - Thus, the substantial law relating to the contractual liability of the Government is to be found in the general laws of the land.
- The top Court appointed former SC judge Justice Indu Malhotra as the Sole Arbitrator to adjudicate upon the disputes in the case

ARBITRATION AND CONCILIATION ACT, 1996

ARBITRATION AND CONCILIATION ACT, 1996

- It improved the previous laws regarding arbitration in India, namely the Arbitration Act, 1940, the Arbitration Act, 1937, and The Foreign Awards Act, 1961.
- The legislation encompasses international commercial arbitration, domestic arbitration, and the enforcement of foreign arbitral awards. It draws inspiration from the model law of the United Nations and aligns with the legal framework adopted by the United Nations Commission on International Trade Law (UNCITRAL).

THE ARBITRATION AND CONCILIATION (AMENDMENT) ACT, 2019

This amendment seeks to establish an independent body called the Arbitration Council of India (ACI) for the promotion of arbitration, mediation, conciliation and other alternative dispute redressal mechanisms.

ARBITRATION COUNCIL OF INDIA (ACI)

- The Constitution of India, Article 51 (In Directive Principles of State Policy), India is obliged to endeavour to Encourage settlement of international disputes by arbitration. ACI is a step-in realisation of this constitutional obligation.
- ACI will be headed by a chairperson, who has been a Judge of the Supreme Court or a Chief Justice or Judge of a High Court or an eminent person to be appointed by the Central Government in consultation with the Chief Justice of India.
- Besides, it will also have two Full-time Members from amongst eminent arbitration practitioners and academicians.

Difference Between Arbitration & Conciliation

Conciliation	Arbitration
Conciliation is a <u>non-adversarial process</u> aimed at facilitating dialogue and promoting a mutually acceptable resolution between the parties.	Arbitration is an <u>adversarial process</u> where the parties present their cases before one or more arbitrators who make a binding decision called an arbitral award. The adversarial system advocates a <u>non-interventionist role</u> by the judge who is supposed to oversee the prosecution prove their case.
A neutral third party, known as a conciliator, <u>assists the parties in identifying issues, exploring options, and reaching a settlement.</u> The conciliator does not have the authority to impose a decision on the parties.	The arbitrator acts as a private judge and has the authority to hear evidence, consider arguments, and render a decision that is enforceable.
The outcome of conciliation is a settlement agreement reached by the parties. The agreement is a contract and requires the parties' voluntary compliance. If either party fails to fulfill its obligations under the agreement, the other party may seek remedies through court proceedings based on the contract.	The arbitral award is a legally binding decision that can be enforced in courts. It has the same effect as a court judgment, and the losing party must comply with the terms of the award.



Law On Adverse Possession

The **22nd Law Commission** in its **280th report** has stated that the law related to adverse possession requires no change.

- The Law Commission, headed by former Chief Justice of Karnataka High Court Ritu Raj Awasthi and comprising retired Kerala High Court judge KT Sankaran, said that there is no reason for increasing the period of limitation.
- However, two of its ex officio members filed a dissent note stating that the law does not stand judicial scrutiny and “promotes false claims under the colour of adverse possession”.

About Adverse Possession

What?	<p>When a person unlawfully occupies a land belonging to another person and if the hostile possession of property is “continuous, uninterrupted (for at least 12 years) and peaceful”, then he may claim legal ownership of that land. This concept is called adverse possession.</p> <ul style="list-style-type: none"> ➤ Actual Possession:-The person claiming adverse possession must have actual physical possession of the property. Mere legal or paper ownership is not sufficient. ➤ Hostile Possession: The possession must be hostile to the rights of the true owner. It means that the person in possession must assert their own right to the property, without the permission or consent of the true owner. <p>This concept is based on the legal maxim ‘<i>vigilantibus non-dormientibus subvenit lex</i>’ which means that the law favours only the active citizens and not the dormant ones.</p>
Objective	To not waste land and use it judiciously.
Origin	<ul style="list-style-type: none"> • Although its origin dates to 2000 BC, finding its roots in the Hammurabi Code, development of the ‘<i>statutes of limitation on actions for recovery of land</i>’ in England introduced this concept to modern world. First such statute was the Statute of Westminster, 1275. • Property Limitation Act, 1874 set the period of limitation at twelve years allowing adverse possession from when the cause of action first arose. It laid the groundwork for the limitations model inherited by colonial India. • <i>Act XIV of 1859 regulated the limitation of civil suits in British India</i>. • After the introduction of the Limitation Act in 1963, the law on adverse possession underwent significant changes. • Currently, the law of Adverse Possession in India is governed by the principle of The Limitation Law of 1963.

Limitation Act, 1963

- It prescribes a time within which a right can be enforced in a Court of Law.
- Its objective is to prevent litigation from being dragged for a long time in the court and quick disposal of cases.
- The act states that any person who has occupied any private land for over 12 years or government land for over 30 years can become its owner.
- Articles 64, 65, 111, or 112 in Schedule I of this Act lay down the onus on the tenant to prove the dispossession of the property for the period of 12 years in case of private land and 30 years in case of government land.
 - ✓ Article 64 governs suits for possession based on previous possession and not on title.
 - ✓ Article 65 states that a person in adverse possession of immovable property acquires title to that property if the possession is open, continuous, and “in defiance of the title of the real owner for twelve years.”
 - ✓ Article 111 sets the limitation period of 30 years for State from the date of dispossession for land belonging to a private person if no suit has been moved for its possession by or on behalf of any local authority.
 - ✓ Article 112 mandates possession for 30 years of a government property for granting a title by adverse

position.

- This act fortified the position of the land owner, as he was only required to prove his ownership while the burden of proof of adverse possession shifted to the person claiming it.

Conditions for Validating Adverse Possession

According to the ruling of Apex Court in *Karnataka Board of Wakf vs Government of India case (2004)*, the court laid down few conditions (Test for 'Adverse Possession') and mandated the possessor to submit following details for claiming his ownership rights. They are-

1. On what date the person occupied the property?
2. What was the nature of his possession?
3. Whether the factum of possession was known to the other party?
4. How long the possession has continued?
5. If the possession was open and undisturbed?
 - a. *Open* doesn't mean it needs to be brought to the specific knowledge of the owner. But this condition may be insisted on where an ouster of title is pleaded. For the possession to be *undisturbed* requires a consistent course of conduct.

Supreme Court's Criticism

The Supreme Court in the cases of *Hemaji Waghaji v. Bhikhabhai Khengarbhai* and *State of Haryana v. Mukesh Kumar* deprecated the law and urged the Centre to make suitable changes to this law as it-

1. **Benefits Intentional Trespassers**- The law is irrational and illogical as it ousts the real owner because of his inaction and grants possession to a dishonest person who has illegally and intentionally occupied the property, thus benefitting the trespassers.
2. **Encourages Illegal Possessions**- As the law grants ownership to the illegal occupant after the limitation period, it encourages people to get indulged in such acts.
3. **Deprivation of Ownership**- The law deprives the real owner of the land from the ownership just because he could not act on the right time and claim his ownership.
4. **Violation of Right to Property**- It violates owner's right to property as the owner is deprived of his ownership to the land just because another person has occupied it illegally for a certain time.

Law Commission's Report

- The Ministry of Law and Justice made a reference to the Law Commission on the 2008 ruling and asked it to submit a report on it.
- Therefore, a "Consultation Paper-cum-questionnaire" was prepared by the 19th Law Commission and based on the responses, it was concluded that the current provisions do not require any changes as they afford sufficient protection to the land's actual owner. No final report was submitted by the Commission on this matter.
- This pending matter was taken up by the present law commission. But it opined that the current law on adverse possession should stay the same but two of its ex officio members filed a dissent note stating that the law should be struck down because-
 - ✓ True owners were being subjected to expensive litigation by unscrupulous persons, acquainted with fraud.
 - ✓ Saddled the already overburdened courts with avoidable work.
 - ✓ Hinder's a person's rights and promotes false claims.

LAW COMMISSION

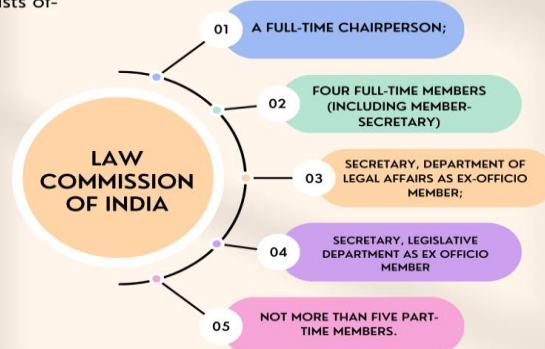
Objective

- To reform laws for maximizing justice in society and promoting good governance under the rule of law.
- To carry out research in the field of law.

Functions

- Review/peel of obsolete laws.
- To examine the laws which affect the poor and carry out post-audit for socio-economic legislations
- To keep under review the system of judicial administration to ensure that it is responsive to the reasonable demands of the times.
- To examine the existing laws in the light of directive principles of state policy and to suggest ways of improvement and reform and to suggest such legislations as might be necessary to implement the directive principles and to attain the objectives set out in the preamble to the constitution
- Examine the existing laws with a view for promoting gender equality and suggesting amendments
- To revise the central acts of general importance to simplify them and to remove anomalies, ambiguities and inequities
- To examine the impact of globalization on food security, unemployment and recommend measures for the protection of the interests of the marginalized.

It is a non-statutory body constituted by the Indian Government from time to time. It works as an advisory body to the Ministry of Law and Justice and consists of-



The current Law Commission i.e., the 22nd Law Commission was approved in 2020 for a period of three years which was extended up to August 2024.

Historical Background

- It was first established during the British Raj era in 1834 by the Charter Act of 1833 and was chaired by Lord Macaulay.
- First independent Law Commission was created in 1955 for a period of three years and was headed by M. C. Setalvad (also the first attorney-general of India).

Achievements

The reports submitted by the law commissions until today has resulted in the enactment of-

1. Code of Criminal Procedure 1973.
2. The Right of Children to Free and Compulsory Education Act, 2009.
3. National Green Tribunal Act, 2010.
4. Arbitration and Conciliation (Amendment) Bill 2015.

Important Points to Consider

- Its recommendations are not binding on the Government.
- It is constituted for a fixed tenure.
- The Reports of the Law Commission are laid in Parliament from time to time by the Department of Legal Affairs, Ministry of Law and Justice and forwarded to the concerned administrative Departments/Ministries for implementation. They are acted upon by concerned Departments/ Ministries depending on the Government's decision. Invariably, the Reports are cited in Courts, Parliamentary Standing Committees, in academic and public discourses.
- It has submitted 280 reports so far on various topics ranging from civil law, criminal law, constitutional law,

family law, personal law, environmental law, human rights law, etc.

Important Recommendations from 22nd Law Commission

The Law Commission recommended to retain the sedition law with procedural safeguards and enhanced jail term of up to seven years.

Sedition Law (Section 124A of IPC)

- Sedition refers to any act or attempt of bringing hatred or contempt towards the government established by law in India, or to incite disaffection or resistance against it. Thus, Sedition Law penalizes crime against the state.
- It is a non-bailable offence and a person charged under this law cannot apply for government job and has to live without their passport.
- A convicted person can get either life-imprisonment and a fine, or imprisonment for up to **three years** and a fine, or just a fine.



General Consent To CBI

The Tamil Nadu government recently withdrew the general consent given to the Central Bureau of Investigation (CBI) to investigate the cases in the state without prior permission from it.

Central Bureau of Investigation (CBI)

About

- It is the premier investigative agency of India established in 1963 on the recommendations of the Santhanam Committee on Prevention of Corruption.
- It is a **non-statutory** body as it derives its powers from the **Delhi Special Police Establishment Act 1946**.
- It provides assistance to the **Central Vigilance Commission (CVC) and Lokpal**.
- It is also the nodal police agency in India which coordinates investigations on behalf of Interpol Member countries at international level.

Control- It operates under the jurisdiction of the **Ministry of Personnel, Public Grievances and Pensions** but for investigating offences under the Prevention of Corruption Act, it vests superintendence to the CVC.

Functions- Initially, it was set up to investigate corruption in government departments and public sector undertakings. However, over the years, its jurisdiction has expanded to cover a wide range of cases, including economic offences, cybercrimes, organized crimes, and special crimes.

Cases Handled-

- Anti-Corruption Cases-** Cases under the Prevention of Corruption Act against Public officials and the employees of Central Government, Public Sector Undertakings, Corporations or Bodies owned or controlled by the Government of India.
- Economic Crimes** - Cases involving major financial scams and serious economic frauds like Fake Indian Currency Notes, Bank Frauds and Cyber Crime, large-scale smuggling of narcotics, antiques etc.
- Special Crimes** - Cases of serious and organized crime under IPC and other laws on the requests of State Governments or on the orders of the Supreme Court and High Courts.
- Suo Moto Cases** - Investigation of offences in the Union Territories.

Director- He is responsible for the administration of CBI and is appointed by the Centre on the recommendation of a three-member Appointment Committee comprising of the Prime Minister as the chairperson, the Leader of Opposition (LoP) in the Lok Sabha and the Chief Justice of India, or a Supreme Court

judge nominated by him. If there is no recognized LoP, then the leader of the single largest party is included.

- ✓ The Supreme Court in 2019 mandated that no officer with less than six months' tenure remaining can be considered for the post of CBI chief and that the director will remain in office for not less than 2 years and can be transferred only with the consent of the appointing committee.

About the General Consent

- CBI is governed by The Delhi Special Police Establishment (DSPE) Act, 1946.
- **Section 6** of this act makes it mandatory for the CBI to take prior approval from the concerned state government before proceeding with any investigation in that state.
- This consent can be either “**case-specific**” or “**general**” and is given by the states to help the CBI conduct seamless investigation of corruption cases.
 - When a state gives a general consent to the CBI for probing a case, the agency is not required to seek fresh permission every time it enters that state in connection with investigation or for every case.
 - In contrast, if the CBI does not have the general consent of a state government, it is required to apply for **consent on a case-by-case basis** and cannot act before the consent is given.
 - If specific consent is not granted, the CBI officials will not have the power of police personnel when they enter that state.

What Happens When The Consent Is Withdrawn

Once the consent is withdrawn by a state, the CBI cannot register any case in that state, carry out raids, or probe central government employees in that state.

Implications of Consent Withdrawal

- Law and order are state’s responsibility and by withdrawing the consent, the states will provide protection to the offenders as the CBI won’t be able to take any action against these offenders. This will hamper the whole investigation process.

Which States have withdrawn the Consent and Why?

- Initially CBI had general consent from almost all the states. But post 2015 the culture of withdrawing consent started.
- Since then, Tamil Nadu, West Bengal, Rajasthan, Kerala, Mizoram, Punjab, Telangana, Jharkhand, Chhattisgarh, and Meghalaya have withdrawn the general consent accorded to CBI. Mizoram was the first one to take this initiative. All these states are being ruled by anti-BJP governments except Mizoram and Meghalaya.
- Mizoram was being ruled by Congress when the consent was first withdrawn in 2015 and it was not restored even when the Mizo National Front (MNF) which is an NDA ally came to power in 2018.
- All these states have accused the central government of using the CBI and other agencies for pursuing its own political interests and to unfairly target the opposition.

Related Judgements

- **Chhattisgarh Corruption Case, 2018-** The Delhi High Court ruled that the agency could probe anyone in a state that has withdrawn general consent, if the case was not registered in that state.
- **Illegal Coal Mining Case, 2021-** The CBI was investigating in West Bengal under the order of Central Vigilance Commission (CVC) under the public trust doctrine. This was challenged by the state government as the CBI did not seek its permission before starting the investigation process. But the Calcutta High Court ruled in the favour of CBI and held that the central agency cannot be stopped from probing a central government employee in another state. This order was later challenged in the Supreme Court.
- **Vinay Mishra vs the CBI, 2021-** The petitioner had challenged the validity of FIRs registered by the CBI after the withdrawal of consent. The Calcutta HC in this case ordered to treat all corruption cases equally across the country, and not to distinguish a central government employee based on the location of his office in the state that had withdrawn general consent. It also held that withdrawal of consent would apply in cases where exclusively state government employees were involved.

Has the Consent Withdrawal Process started post 2014 Power Shuffle?

- No, this has been going from many years with states like Sikkim, Nagaland, Chhattisgarh and Karnataka withdrawing consent from time to time.
- The Janata Dal government in 1998, withdrew general consent to the CBI in Karnataka. It was not revoked by the Congress government which took over in 1999. This went-on for eight years.

Options Available With CBI In The Case Of Consent Withdrawal

The withdrawal decision can limit CBI's powers but cannot keep it completely on bay as-

1. Consent withdrawal applies only to future cases and not to the ones registered earlier. Thus, CBI can continue its ongoing investigations by getting a warrant from a local court in the state.
2. If the Supreme Court or the High Court orders the CBI to conduct an investigation in any case, then the state's consent is not required. CBI can continue its investigation without any interruption from the state government.
3. The withdrawal of consent applies only to CBI. Other investigating agencies like the National Investigation Agency (NIA) and Enforcement directorate (ED) can still conduct enquiries as they are governed by different rules.
 - ✓ NIA is governed by NIA Act, 2008.
 - ✓ ED enforces key Acts of the Government of India namely, 1) the Foreign Exchange Management Act, 1999 (FEMA) and 2) the Prevention of Money Laundering Act, 2002 (PMLA), and 3) The Fugitive Economic Offenders Act, 2018 (FEOA).
4. CBI can carry out its investigation in cases registered anywhere else in the country and if the involved individuals are residing in the states who have withdrawn consent.
5. CBI can use Section 166 of the Criminal Procedure Code (CrPC) if case requires surprise search.
 - ✓ Section 166 of CrPC allows a police officer of one jurisdiction to ask an officer of another jurisdiction to carry out a search on his behalf. If the requesting officer feels that the search being carried out by the latter may lead to loss of evidence, then he can conduct the search himself after giving notice to the latter.
6. The consent is not required in cases where someone has been caught red-handed taking a bribe.

Centre's Control Over CBI

- In 2018, the Government amended the Prevention of Corruption Act, 1988 and introduced **Section 17A** which made it mandatory for the CBI to seek Centre's permission before registering a case of corruption against any government servant.
- Earlier, such permission was required only for officials of the level of joint secretary and higher. But the Supreme Court struck down this order and the new amendment was introduced.
- This amendment restricted the agency's powers as it could only investigate the officers that the government of the day allowed. This resulted in drop of over 40 percent corruption cases registered between 2017 and 2019.

Way Forward

Increasing number of cyber fraud cases and economic offences require intricate investigations spanning across states. For this purpose, the CBI should be empowered to investigate without any restrictions in larger public interest keeping all political motivations aside.

Extra Mile: Prevention of Corruption Act, 1988

This act was aimed at making anti-corruption laws more effective by widening their coverage and strengthening the provisions to make the overall statute more effective.

Features

- It is an amalgamation of the Prevention of Corruption Act (PCA), 1947, the Criminal Law Amendment Act, 1952, and Sec. 161 to 165-A of the Indian Penal Code with certain tweaks in the original provisions.
- It has shifted the burden of proof from the prosecution as mentioned in the CrPC to the accused who is charged with the offense.
- It mandated the investigation to be made by an officer, not below the rank of Deputy Superintendent of

Police.

- It covers acts as bribe, misappropriation, obtaining a pecuniary advantage, possessing assets disproportionate to income and the like.

The 2018 Amendment

- The Act was amended in 2018 to bring the PCA in line with United Nations Convention against Corruption 2005, which was ratified by India in 2011.
- **Key Amendments–**
 - Undue Advantage** – It defined ‘undue advantage’ as any *gratification other than legal remuneration* that a public servant is permitted to receive and made it a punishable offence. There was no such separate provision in the previous act.
 - Giving a Bribe:** It introduces the offence of giving a bribe as a direct offence. But if a person is compelled to give a bribe and he reports this matter to law enforcement authorities within seven days then he will not be charged with the offence.
 - Offering of Bribes by Commercial Organizations** – If a commercial organization commits any of the offences listed out in the PCA to obtain or retain business/advantage in the conduct of its business, then such commercial organization shall be punishable.
 - Criminal Misconduct:** It redefines the provisions related to criminal misconduct and covers two types of offences: (i) fraudulent misappropriation of property; and (ii) illicit enrichment (such as amassing of assets disproportionate to one’s known sources of income).
 - Prior Sanction for Investigation and Prosecution** – The PCA required prior sanction of the appropriate government for prosecution of serving public officials. It extended this protection of requirement of prior approval to investigation prior to prosecution.
 - Attachment of Property** – It provided for application of the Prevention of Money Laundering Act 2002 and Criminal Law Amendment Ordinance 1944 for attachment and administration of property procured by means of an offence under the PCA.
 - Time period for Trial:** A trial by special judge should be completed within two years (extendable for up to six months at a time, for recorded reasons). However, the total period for completion of trial may not exceed four years.
 - Enhancement of Punishment** – It has been increased from a minimum imprisonment term of 6 months to 3 years, and from a maximum of 5 years to 7 years.



Official Visit of Prime Minister of Nepal to India

Pushpa Kamal Dahal ‘Prachanda’, PM of Nepal, was on an official visit to India from 31 May 2023 to 03 June 2023. This is the first bilateral visit abroad by the PM of Nepal after assuming office in December 2022.

Key Highlights Of The Visit Of PM Of Nepal To India

- **Projects Launched**
 - Handing over of Kurtha-Bijalpura section of railway line.
 - Inaugural run of an Indian railway cargo train from Bathnaha (India) to Nepal Customs Yard which is the newly constructed rail link under Indian grant.
 - Inauguration of Integrated Checkposts (ICPs) at Nepalgunj (Nepal) and Rupaidiha (India).

- Ground breaking ceremony of ICPs at Bhairahawa (Nepal) and Sonauli (India).
- Ground breaking ceremony of phase-II facilities under Motihari-Amlekhgunj Petroleum Pipeline.
- Ground breaking ceremony of Indian portion of Gorakhpur-Bhutwal Transmission Line.
- **MoUs/Agreement Exchanged**
 - Treaty of Transit
 - MoU for cooperation in the field of Petroleum Infrastructure;
 - MoU for the development of infrastructure at Dodhara Chandani check post along India-Nepal Border;
 - MoU between NPCIL & NCHL, Nepal for cross border payments;
 - Project Development Agreement of Lower Arun Hydroelectric Project;
 - MoU for the development of Phukot- Karnali Hydroelectric Project.

Key Highlights Of PM Modi's Speech

- **Transformation of relationship from HIT to Super HIT**
 - In 2014, during his first visit to Nepal, PM Modi had given a '**HIT**' formula for India-Nepal relations - Highways, I-ways, and Trans-ways.
 - He said that today's agreements would help that relationship become a '**super HIT**'.
 - He also said that we will continue to strive to take India-Nepal ties to Himalayan heights.
- **Highlighted various accomplishments in the bilateral relationship in past 9 years**
 - Nepal's first ICP was made in Birganj.
 - The first Cross-Border Petroleum Pipeline of our region was built between India and Nepal.
 - The first Broad-Gauge rail line has been established between us.
- **Gave glimpse of agreements signed during the current visit**
 - **Transit Agreement** has been concluded.
 - In this, along with new *rail routes* for the people of Nepal, provision has also been made for the facility of India's inland waterways.
 - To boost connectivity to the far western region of Nepal, two more bridges will be built at Shirsha and Jhulaghat.
 - Economic connectivity will be strengthened by the **construction of three "ICPs"**.
 - Taking this forward, a **long-term Power Trade Agreement** has been signed between India and Nepal.
 - Under this Agreement, India has set a target of importing 10,000 MW of electricity from Nepal in the coming ten years.
 - **Cooperation in the power sector** has been further strengthened by agreements on the Phukot-Karnali and Lower Arun Hydro-Electric Projects.
 - In view of the positive impact of Motihari-Amlekhganj petroleum pipeline, it has been decided to take this pipeline up to Chitwan.
 - Besides this, another new pipeline will also be constructed from Siliguri to Jhapa in eastern Nepal.
 - Simultaneously, new storage terminals will also be set up at Chitwan and Jhapa.
 - Both sides have also agreed on mutual cooperation to set up a **fertilizer plant in Nepal**.

Bilateral Relations Between India And Nepal: In Brief

Economic Cooperation Between India and Nepal

- India is the largest trading partner of Nepal. Nepal is also India's 11th largest export destination, up from

28th position in 2014.

- Total bilateral trade in 2021-22 reached US\$ 11,005.10 million.
 - In 2021-22, while Nepal's exports to India stood at US\$ 1,371.04 mn, India's exports to Nepal were US\$ 9,634.06 mn.

Indian Investment In Nepal

- India is the largest source of investment into Nepal, accounting for more than 32% of the total FDI stock of Nepal, which is worth nearly USD 520 million, as per NRB data until mid-2020.

Connectivity and Development Partnership Between India and Nepal

- India's development assistance to Nepal is a broad-based programme focusing on creation of infrastructure at the grass-roots level.
- Various projects have been implemented in the areas of infrastructure, health, water resources, education and rural & community development.
- The **total economic assistance earmarked under 'Aid to Nepal' budget in FY 2022-23 was Rs 6.8 billion.**

Cooperation In Power & Energy Sector Between India and Nepal

- Nepal exports more than 450 MW of electricity to India.
- India has built several hydroelectric projects, like Pokhara (1 MW), Trisuli (21 MW), Western Gandak (15 MW), and Devighat (14.1 MW) etc.
- The first high-capacity 400 kV Muzaffarpur (India) - Dhalkebar (Nepal) cross-border power transmission line was completed in 2016 with Indian funding.
- **South Asia's first cross-border petroleum products pipeline**, constructed and funded by Indian Oil Corporation Ltd., **connecting Motihari in India to Amlekhgunj** in Nepal was inaugurated in September 2019.



Official Visit of PM Modi to Egypt

- PM Modi began his **maiden state visit to Egypt** by holding discussions with the "India Unit" in the Egyptian Cabinet.
 - This India Unit was set up in January 2023 following the State Visit of President of Egypt, Abdel Fattah El-Sisi, to India as Chief Guest for Republic Day 2023.
 - The India Unit is headed by the Prime Minister of Egypt Mustafa Madbouly, and comprises a number of Ministers and senior officials.
- This was the **first bilateral visit by an Indian Prime Minister to the country in 26 years.**

Key Highlights Of The Visit

- **Order of the Nile award to PM Modi**
 - Egyptian President Abdel Fattah El-Sisi conferred Modi with '**Order of the Nile**' award, the country's highest state honour.
- **MoUs/Agreements signed**
 - An agreement to elevate the bilateral relationship to a "**Strategic Partnership**" was signed by the two leaders.
 - 3 MoUs in the fields of Agriculture, Archaeology & Antiquities and Competition Law were also signed.

- **PM Modi extended an invitation to the (Egypt) President for the G20 Summit** which is upcoming in September 2023.
- **PM Modi visited the historic 11th-century Al-Hakim Mosque in Cairo** which was restored with the help of **India's Dawoodi Bohra community**.
 - The Dawoodi Bohra Muslims are a sect of followers of Islam who adhere to the Fatimi Ismaili Tayyibi school of thought.
 - They are known to have originated from Egypt and later shifted to Yemen, before establishing a presence in India in the 11th century.
 - They renovated the mosque from 1970 onwards and have been maintaining it since then.
- **PM visits Heliopolis War Cemetery in Cairo** to pay respects to Indian soldiers who laid down their lives during World War I.

India – Egypt Bilateral Relation: in brief

- India and Egypt enjoy warm and friendly relations marked by civilizational, cultural and economic linkages and deep-rooted people-to-people ties.
- In 2023, India and Egypt are celebrating 75 years of establishment of diplomatic relations this year.
- President of Egypt, Abdel Fattah El-Sisi, was the **Chief Guest at India's Republic Day on 26 January 2023**.
 - This was for the **first time** that President of the Arab Republic of Egypt has been invited as Chief Guest on our Republic Day.
 - During this visit, **both sides decided to elevate the relationship to Strategic Partnership** covering political, security, defence, energy and economic areas.

Trade relation

- Bilateral trade between India and Egypt achieved a record high of USD 7.26 billion in FY 2021-22.
 - The trade was fairly balanced, with USD 3.74 billion Indian exports to Egypt and USD 3.52 billion imports from Egypt to India.
- During this period (FY21-22), India was the 6th largest export destination and 6th most significant source of imports as well.

Defence cooperation

- **Desert Warrior** exercise was conducted as the first-ever joint tactical exercise by the air force of the two countries.
- The more recent exercise between the special forces is another indication of the growing willingness to work together.
- The Egyptians have also shown some interest in India's Tejas fighter jets and Dhruv light attack helicopters.
- A military contingent from the Egyptian Army participated in this year's Republic Day parade.

Cooperation during Covid-19 & Russia – Ukraine war

- When India was hit hard by the second wave of COVID-19, Egypt responded by dispatching three plane loads of medical supplies and providing 300,000 doses of Remdesivir in May 2021.
- India reciprocated a year later when Egypt, the world's largest importer of wheat, was facing a dire situation following the abrupt halt in wheat shipments from Ukraine following the war.
 - In May last year, India — which had put a ban on sale of wheat — allowed export of 61,000 tonnes to Egypt.

Development cooperation

- **The grants-in-aid projects include:**
 - Pan Africa Tele-medicine and Tele-education project in Alexandria University, Solar electrification project in Agaween village and Vocational Training Centre for textile technology in Shoubra, Cairo, which have been completed.
- **Technical cooperation and assistance**
 - Since 2000, over 1300 Egyptian officials have benefited from ITEC (Indian Technical and Economic Cooperation) and other programs like ICCR (Indian Council for Cultural Relations) and IAFS (India Africa Forum Summit) scholarships.

Cultural relation

- The Maulana Azad Centre for Indian Culture (MACIC) has been promoting cultural cooperation between the two countries.
- The iconic Cairo Tower (which is the tallest tower in North Africa) was illuminated with Indian National Flag in the evening of 15th August 2021.

Why Have India And Egypt Rekindled Their Ties With Each Other?

A. Imperative for India

- **Indian government is pushing hard to engage the Global South.**
- **Rekindling of the principles of non-alignment**
 - India also wants to rekindle the principles of non-alignment that have come back to the fore during Russia – Ukraine war.
- **Strategic weight of Egypt**
 - With a population of ~110 million, Egypt is situated at a location that straddles Africa and Asia.
 - It has a standing army that is the largest in the region, a capital that hosts the League of Arab States and a diplomatic presence that punches above its weight in global affairs.
 - India is keen on further expanding its ties with Egypt, **a key player in the politics of both the Arab world as well as Africa.**
- **Economic importance of Egypt**
 - Egypt has boosted its attractiveness through a series of free trade agreements that span Africa (ACFTA; AGADIR; COMESA), Europe (EFTA), Latin America (MERCOSUR) and the Arab world (GAFTA).
 - It is also seen as a major gateway to markets in Africa and Europe.
- **Egypt's plans to develop the Suez Canal Economic Zone (SCZONE) into a global manufacturing hub**
 - SCZONE sits astride both banks of the Suez Canal, a strategic waterway that connects the Mediterranean with the Red Sea to provide the shortest link between European and Asian markets.
 - China, as usual, has been the first to take advantage of the opportunities presented by SCZONE.
- **Resetting India's ties with Muslim-majority countries**
 - India's ties with Muslim-majority countries were tested following controversial remarks made by then spokesperson of ruling party in June 2022.
 - That Egypt was one of the few countries from the Arab world which did not react officially to the controversial remarks.

- **Other factors**

- India wants to draw huge amounts of capital from Gulf nations, curtail religious extremism by supporting moderate countries in the region and participate in the security politics of the area.
- And in order to do all this, India has realised that Egypt is a key player.
 - The country has remained fairly moderate over the years.
 - It shares strong ties with the UAE and Saudi Arabia.
 - It is located at a crucial geo-strategic location — 12 % of global trade passes through the Suez Canal.

B. Imperative for Egypt

- Cairo wants India's help to tackle its battered economy.
- The outbreak of the COVID-19 pandemic coupled with the implications of the Russia and Ukraine war has worsened its financial woes.
- Inflation in the country is at a five-year high of over 30 per cent and it has approached the International Monetary Fund (IMF) for the fourth time in six years for a bailout.



PM Modi's State Visit to USA

- PM Modi was on an Official State Visit to USA. This was his **first state visit to the country**.
 - Before PM Modi, the only two state visits under President Joe Biden have been by France's President Emmanuel Macron and South Korea's President Yoon Suk Yeol.
- During this visit, PM Modi met President Biden to continue their high-level dialogue, and **addressed a Joint Sitting of the U.S. Congress**.

- In an almost one-hour speech to the US Congress, PM Modi touched upon a variety of themes.

What is a State visit?

- State visits are the **highest-ranked category** of foreign visits to the US, where the head of a state visits the US on the formal invitation of the US President.
- Invitation for a state visit signifies that the US considers the guest nation an important friend and ally.
- A state dinner is a crucial part of such a visit.
 - The state dinner is held at the White House, the residence of the US President.
- The other key events that mark a state visit include:
 - a 21-gun salute White House arrival ceremony and
 - an invitation to stay at the Blair House (the US President's guesthouse across Pennsylvania Avenue).

Key Outcomes Of The Bilateral Talks Between Indian PM And President Of USA

- **Jet Engine Tech Transfer**
 - There was an announcement of a mega deal between the General Electric Aerospace and the Hindustan Aeronautics Limited for the **manufacture under licence in India of GE's F414 engine**.
 - This engine will be manufactured for the indigenous Light Combat Aircraft (LCA) Tejas Mk2.
 - This deal assumes significance as GE's F414 military aircraft engine powers fighters like the Boeing Super Hornet and Saab Gripen.
 - The deal is expected to lead to **transfer of at least 11 critical technologies to India**.
 - This is the most crucial part as it marks the **beginning of the end of the technology denial regime**.
 - Over the years, India was deprived of critical technologies and it became acute in the 1960s through the 1990s.
- **Inaugural session of an innovation platform called India-United States Defence Acceleration Ecosystem (INDUS-X)**

- The Defence Ministries of the two countries also launched the inaugural session of an innovation platform, 'INDUS-X', in Washington DC.
- Under the INDUS-X, Indian and American startups will now be able to co-develop and co-produce advanced technologies, including in areas of space artificial intelligence.
- **Cooperation in Semiconductor Manufacturing**
 - U.S. semiconductor technology and chip maker Micron Technology, Inc said it would invest up to \$825 million in a new chip assembly and test facility in Gujarat.
 - This investment would be bolstered by investment from the Indian government and Gujarat State government totalling \$2.75 billion in all.
 - US firm Applied Materials will establish a new semiconductor centre for innovation.
- **Other Outcomes Of The Visit**
 - A mega deal on the purchase of General Atomics MQ-9 “Reaper” armed drones by India;
 - A joint mission by the NASA and ISRO to the International Space Station in 2024;
 - Announcement regarding New Delhi joining the **Artemis Accords**.
- **Addressing Issues Related To Visa Delay**
 - The U.S. has announced a pilot program to renew visas domestically (i.e., applicants do not have to travel outside to get their renewal stamp), for certain petition-based temporary workers.
 - This program could expand to cover H1b and L skilled visas by 2024 and to other categories eventually.
 - It will also open two new consulates in Bengaluru and Ahmedabad. India will reopen its consulate in Seattle, and announce new consulates elsewhere.

India-US Bilateral Relations

Trade & Economic Relations

- The **U.S. has emerged as India's biggest trading partner in 2022-23** on account of increasing economic ties between the two countries.
 - In 2022-23, the bilateral trade between India and the USA stood at a record US\$ 191 billion as against US\$ 119.42 billion in 2021-22.
 - In 2022-23, **India had a trade surplus of US\$ ~30 billion with the US**.
- In FY 2020-21, India received the highest ever FDI amounting to US\$ 81.72 billion.
 - USA became India's second largest source of FDI during 2020-21 with inflows of US\$ 13.82 billion.
 - US is one of the top 5 investment destinations for Indian FDI.

Defence Cooperation

- India-US defence cooperation is based on “**New Framework for India-US Defence Cooperation**”, which was renewed for a period of ten years in 2015.
- In 2016, the defence relationship was designated as a **Major Defence Partnership (MDP)** to build a comprehensive, enduring and mutually beneficial defence partnership.
- In July 2018, India was moved into the **Tier-1 of the US Department of Commerce's Strategic Trade Authorization license exception**.
- In August 2022, a U.S. Navy Ship (USNS) Charles Drew visited in Chennai for repairs and allied services. **This was the first ever repair of a U.S. Navy ship in India**.
- Several defence agreements have been signed:

- Logistics Exchange Memorandum of Association (2016);
- Communications Compatibility and Security Agreement (2018);
- Industrial Security Agreement (2019);
- Basic Exchange and Cooperation Agreement (2020).
- Bilateral exercises include: Yudh Abhyas (Army); Vajra Prahar (Special Forces), a tri-services exercise– Tiger Triumph (inaugurated in 2019).
- In November 2022, **Australian Navy joined the U.S.-India-Japan MALABAR** annual Naval Exercise. U.S. participated in **India’s multilateral Exercise Milan 2022**.

S&T and Space Cooperation

- **Space Cooperation**
 - ISRO and NASA are working together to realize a joint microwave remote sensing satellite for Earth observation, named **NASA-ISRO Synthetic Aperture Radar (NISAR)**.
 - ISRO availed NASA/JPL’s Deep Space Network Antenna support for its Chandrayaan-1, Mars Orbiter Mission (MOM) and Chandrayaan-2 mission.
 - Both sides are currently exploring the possibility of availing similar support for Chandrayaan-3 satellite.
 - On commercial front, ISRO has launched more than 200 satellites from US, on-board Polar Satellite Launch Vehicle (PSLV), as co passengers.
- **Initiative on Critical and Emerging Technology (iCET)**
 - NSA Doval and his US counterpart launched a new US-India initiative on Critical and Emerging Technologies in January 2023.
 - These emerging technologies include **artificial intelligence, quantum computing, semiconductors and wireless telecommunication**.

Challenges in India – US Relation

- **Ukraine war and Indian stand**
 - The United States worries about the India-Russia relationship, especially that India’s reliance on Russian military imports will continue.
 - Recently, India’s oil imports from Russia have displaced Iraq as its top supplier.
- **Challenges in trade and technology relationships**
 - The US still has significant export controls on India (instituted after the 1998 nuclear test), which inhibits the free transfer of technology.
 - In 2019, USA terminated India's designations as a beneficiary developing country under the **Generalized System of Preferences (GSP) programme**.
 - GSP is the largest and oldest US trade preference programme.
 - It is designed to promote economic development by allowing duty-free entry for thousands of products from designated beneficiary countries.
 - The United States is concerned about India’s turn towards protectionism.
 - India makes up only two percent of the United States’ merchandise trade due to policies that protect domestic industry from foreign competition.
- **United States is concerned about the state of Indian democracy**
 - Many members of Congress and officials in the Biden administration are following reports on civil liberties and minority rights in India.

- Furthermore, questions are being raised surrounding **data protection in India** and what the implications are vis-à-vis surveillance and censorship.
- **Protracted delays in the processing of visas for the United States**
 - Since the Covid-19 pandemic, protracted delays in the processing of visas for the United States have been a persistent irritant in bilateral relationship.
 - Data published by the US embassy in India shows that the wait for B1 and B2 work visas still stretches beyond 400 days in many instances.

Conclusion

- The relationship between India and US has moved beyond hesitations of history. The recent visit of PM Modi to USA sent a clear message – **the beginning of the end of the technology denial regime**.
- The future of the India-US bilateral relationship appears promising, marked by deeper cooperation, strengthened trade ties, and strategic partnerships, fostering mutual growth and stability for both nations.



India Set to Join Artemis Accords

As per White House announcement, **India has decided to join the Artemis Accords**, which brings like-minded countries together on **civil space exploration**.

Artemis Accords

- **About**
 - These are a set of guidelines and principles for international cooperation in space exploration to the Moon and Mars.
 - They were established in 2020 by US in coordination with other nations and international partners.
 - The Accords aim to create a framework for peaceful and transparent space exploration, with a specific focus on lunar activities related to NASA's Artemis program.
 - Artemis program is NASA's initiative to return humans to the Moon.
 - In this program, NASA aims to land the *first woman and the first person of colour on the Earth's natural satellite*.
 - The Artemis Accords are rooted in the **Outer Space Treaty of 1967 (OST)**.
- **Legal Nature**
 - The Artemis Accords are **not a legally binding treaty**. They serve as a framework for cooperative efforts among nations involved in lunar exploration.
- **Signatories Of The Accords:** As of May 2023, the number of signatories to the Artemis Accords stands at 25. They include:
 - United States, United Kingdom, Japan, Italy, Canada, Brazil, Australia, Bahrain, Colombia, Czech Republic,
 - France, Israel, Luxembourg, Mexico, New Zealand, Spain, Nigeria, Poland, Republic of Korea, Romania,
 - Rwanda, Saudi Arabia, Singapore, Ukraine, and United Arab Emirates (UAE).

What Are The Principles of Artemis Accords

- **Peaceful purposes:** All participating countries commit to conducting space activities exclusively for peaceful purposes, adhering to relevant international laws.

- **Transparency:** Signatories are expected to be transparent about their national space policies and exploration plans.
- **Interoperability:** The development of *common exploration infrastructure* and standards is emphasized.
 - This includes areas such as fuel storage, landing structures, communications systems, and power systems.
- **Emergency assistance:** Countries agree to provide assistance to astronauts and personnel in distress in outer space.
- **Registration of Space Objects:** The Accords recognize the importance of registering relevant space objects according to the Registration Convention, allowing for better coordination and information sharing.
- **Preserving Heritage:** Nations are encouraged to preserve historically significant landing sites, artifacts, etc.
- **Space Resources:** The Accords affirm the extraction and utilization of space resources, such as those from the Moon, Mars, comets, or asteroids, in accordance with the Outer Space Treaty.
 - Ownership claims over extracted objects are not allowed.
- **Deconfliction of Activities:** Countries conducting Moon exploration are urged to establish safety zones to prevent harmful interference with the activities of other nations.
- **Orbital Debris:** Signatories commit to the safe and timely disposal of spacecraft at the end of their missions, as well as reducing the generation of long-lived or harmful debris.

Significance Of India Joining The Artemis Accords

- **Chandrayaan-3 Mission**
 - This is significant as it comes on the heels of the Indian space agency planning to launch the Chandrayaan-3 mission to the Moon.
 - The two countries have already been cooperating on lunar missions; however, it has largely remained limited to sharing knowledge.
 - The new accord will ensure **resource sharing** as well.
- **International Space Station**
 - While India and the US have agreed on sending Indian astronauts to the International Space Station (ISS), it will still take some time.
 - However, the more immediate benefit will be sharing information on human spaceflight.
- **For the Gaganyaan Mission**
 - India is in the midst of training its first batch of astronauts for the Gaganyaan mission.
 - This new cooperation could further help in strengthening the curriculum, facilities, and training designs.
- **India as a major recipient of information from Artemis-II**
 - Nasa is planning to launch the first crew of four astronauts into lunar orbit with Artemis-II next year and land humans on the lunar surface by 2025.
 - The signing of the agreement will establish India as a major recipient of information from the mission.
- **Counter to China**
 - Space is the next big domain of power play, and the Artemis Accords will open up new doors for India, especially at a time when China has been emerging as the next big player in space.
 - Beijing has already established and commenced scientific research on its space station, **Tiangong**, and announced plans to land Chinese nationals on the Moon before 2030.

Other Scientific Cooperation Agreements Signed Between India and USA during the PM Modi's visit to USA

- **Human spaceflight cooperation**
 - NASA & ISRO are developing a strategic framework for human spaceflight cooperation this year.
- **On critical minerals and mineral security**
 - United States will announce its support for India becoming a member of the **Mineral Security Partnership (MSP)**.
 - MSP is led by the US State Department and strengthens critical minerals supply chain.
- **On advanced computing, artificial intelligence and quantum information science**
 - India and the United States have first established a joint **Indo-US quantum coordination mechanism**.
 - This will facilitate more collaboration between our industries, academia, and government.
 - Both the countries have also signed a new implementation arrangement on artificial intelligence advanced wireless and quantum technologies.
- **On advanced telecommunications**
 - The two countries are working together on 5G and 6G technologies and including Open **Radio Access Network (RAN) systems**.
 - India's 5G and 6G and US Next G alliance will be leading a new public-private Cooperation forum as well.
 - The US will also be welcoming Indian participation in the US *rip and replace programme* that removes telecommunications equipment made by untrusted vendors.



UN Adopts High Seas Treaty

- The United Nations has **adopted** the **first-ever international treaty** to govern the high seas and protect remote ecosystems vital to humanity.
- The pact that will establish a legal framework to extend environmental protections to international waters, known as the **high seas**.
- It will be opened for signatures on **September 20**, during the annual meeting of world leaders at the UN General Assembly.
 - The treaty will take effect once it is ratified by 60 countries.

What Are High Seas?

- The high seas are the parts of the ocean that are not included in the exclusive economic zones (EEZ), territorial sea or internal waters of a State.
 - Water beyond **200 nautical miles** from the coast of a country is known as high sea.
- High seas are the areas of the ocean for which no one nation has sole responsibility for management.

Need For UN High Seas Treaty

- **Ocean and Biodiversity**
 - The high seas comprise 64% of the ocean surface, and about 43% of the Earth.
 - These areas are home to about 2.2 million marine species and up to a trillion different kinds of microorganisms.

- **Ocean and Global Climate**
 - Oceans are an integral part of the global climate cycle, and perform a range of ecological services including absorption of carbon dioxide and excess heat.
 - Hence, this treaty is being considered as a landmark in the efforts to keep the planet habitable.
- **Unregulated Human Activities**
 - Climate change is already influencing, and is being influenced by, ocean systems, and is exacerbating the pressures on marine biodiversity from unregulated human activities.
 - It is these specific challenges — a combination of climate change, biodiversity, and pollution — that the High Seas Treaty seeks to address.
- **UNCLOS and concerns regarding the biodiversity**
 - Though UNCLOS asks countries to protect the ocean ecology and conserve its resources, it does not provide the specific mechanisms or processes to do so.
 - **UN Convention on the Law of the Sea (UNCLOS)** is an international treaty that establishes a framework for the use and management of the world's oceans and their resources. It was adopted by the UN in 1982 and came into force in 1994.
 - Hence, it is believed that the High Seas Treaty will work as an implementation agreement under the UNCLOS.
 - This is similar to the Paris Agreement working under the UN Framework Convention on Climate Change (UNFCCC).

UN High Seas Treaty

- Agreed under the UNCLOS, this treaty is commonly known as the ***agreement on biodiversity beyond national jurisdictions (BBNJ)***.
- This treaty is the first international law to offer some protection to the nearly two-thirds of the ocean that is beyond national control.
- **This treaty will be legally binding in nature.**

Key Provisions Of The UN High Seas Treaty

- **Demarcation of Marine Protected Areas (MPAs)**
 - MPAs are where ocean systems, including biodiversity, are under stress, either due to human activities or climate change.
 - These can be called the national parks or wildlife reserves of the oceans.
 - Activities in these areas will be highly regulated, and conservation efforts similar to what happens in forest or wildlife zones, will be undertaken.
 - Only about 1.44% of high seas are currently protected, according to the International Union for Conservation of Nature (IUCN).
 - In December 2022, at the meeting of the Convention on Biodiversity (CBD) in Montreal, Canada, countries had agreed to **put at least 30% of degraded coastal and marine ecosystems under effective restoration by 2030**.
 - MPAs will be helpful in achieving this objective.
- **Sustainable use of marine genetic resources and equitable sharing of benefits arising from them**
 - Genetic information from marine organisms is already being extracted, and their benefits are being investigated.
 - The treaty seeks to ensure that any benefits arising out of such efforts, including monetary gains, are free from strong intellectual property rights controls, and are equitably shared amongst all.

- The knowledge generated from such expeditions are also supposed to remain openly accessible to all.
- **Initiation of the practice of environmental impact assessments for all major activities in the oceans**
 - Under the new treaty, commercial or other activities that can have significant impact on the marine ecosystem would require an environmental impact assessment to be done.
 - The results of this exercise have to be shared with the international community.
- **Capacity building and technology transfer**
 - This will help small island states and landlocked nations, who do not have the resources or the expertise, to meaningfully participate in the conservation efforts.
- **Creation of New body**
 - The treaty will create a new body to manage conservation of ocean life and establish marine protected areas in the high seas.

Challenges for UN High Seas Treaty

- **Many issues remain unaddressed**
 - Many issues remain unaddressed, including the *mechanisms for policing the protected areas, the fate of the projects that are assessed to be heavily polluting, and the resolution of disputes.*
- **Ratification is not expected to be easy**
 - The process of ratification is not expected to be easy.
 - It took UNCLOS 12 years to become international law because the necessary number of ratifications was not reached.
- **Provisions of this treaty do not overrule regulations laid down by the authorities that oversee existing high seas activities**
 - Authorities overseeing high seas activities include:
 - International Maritime Organization, which is responsible for shipping;
 - International Seabed Authority, which oversees deep-sea mining;
 - 17 regional fisheries management organizations tasked with regulating fisheries in various parts of the ocean, including Antarctica.
 - Military activities and existing fishing and commercial shipping are, in fact, exempt from the treaty.

Hence, the treaty cannot create protected areas in places already covered by fishing agreements, even if that fishing is unsustainable and depleting stocks.



NCB Busts Major Darknet-Based LSD Smuggling Syndicate

- The Narcotics Control Bureau (NCB) busted a pan-India drugs trafficking network operating on the dark web with the largest ever seizure of 15,000 LSD blots in one operation.
 - LSD or **lysergic acid diethylamide** is a synthetic chemical based-drug and is categorised as a hallucinogen.
 - Possession of 0.1 gram of LSD, which is the commercial quantity for the hallucinogenic drug, invites strict legal action under the **Narcotic Drugs and Psychotropic Substances (NDPS) Act.**

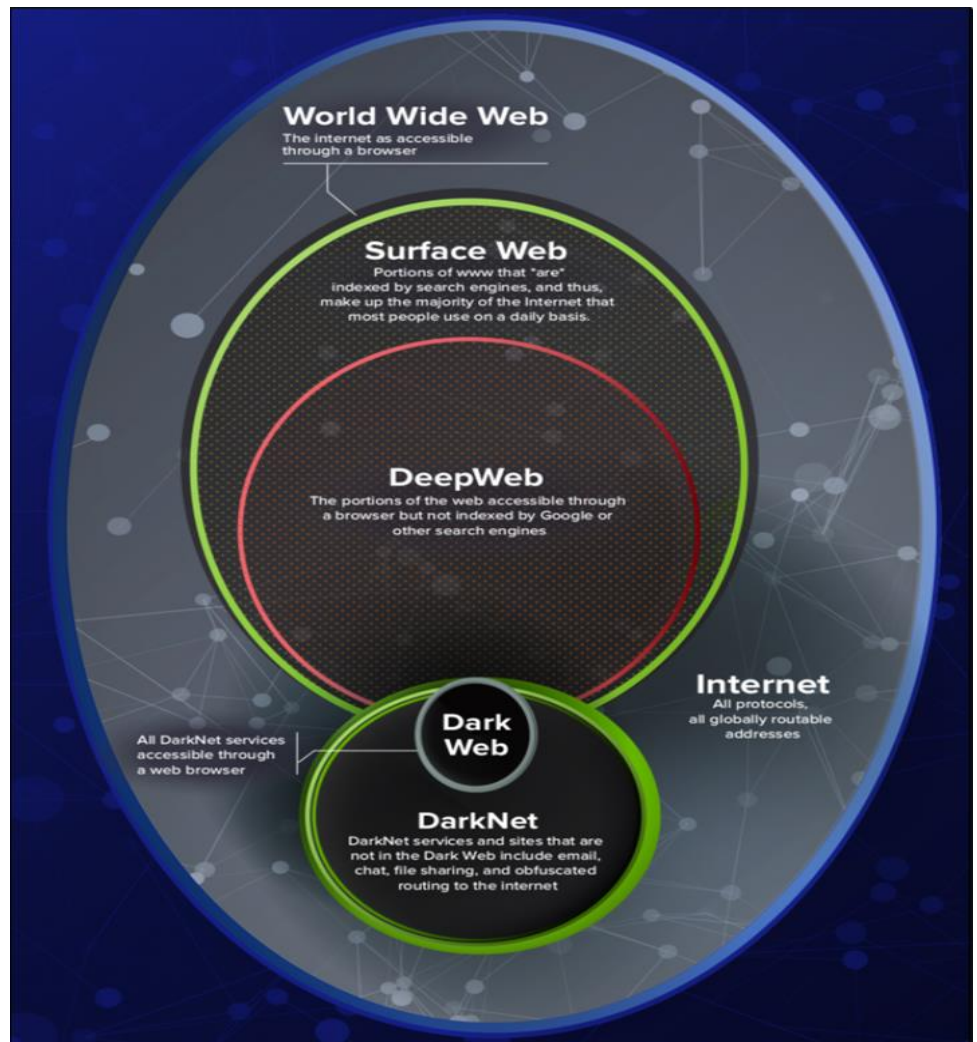
- The network, which operated in the darknet and used cryptocurrencies for payments, was spread across Poland, the Netherlands, the US and various states in India.

Dark Net

- Dark Net, also referred to as dark web is a maze of secret websites which can be accessed only through encrypted channels.
 - In other words, it is the hidden collective of internet sites only accessible by a specialized web browser.
- It is used for keeping internet activity anonymous and private, which can be helpful in both legal and illegal applications.

How It Operates?

- The dark web operates in secrecy using **The Onion Router (ToR)**.
 - ToR is free and open-source software for enabling anonymous communication.
 - It is an Internet based system to prevent eavesdropping and traffic analysis attacks.
- Experts say darknet is very tough to penetrate owing to its end-to-end encryption.
 - The access to darknet is possible only through specialized browsers like ToR, Freenet, I2P and Tails to surf the darknet anonymously.
- The privacy-centric browser like Tor routes the web page requests through **proxy servers** thus making your IP address untraceable.



Dark Web vs. Deep Web

- Both the dark and deep web share one thing in common: Neither can be found in search engine results.
- The difference between them primarily lies in how their content is accessed.
 - Deep web pages can be accessed by anyone with a standard web browser who knows the URL.
 - Dark web pages, in contrast, require special software with the **correct decryption key**, as well as access rights and knowledge of where to find the content.

Uses of Dark Net

- Nowadays, darknet has become a hidden platform meant for the sale and purchase of much of the contraband items like drugs, arms, pornographic content and other illegal activities.

- Due to its ability to provide an anonymous cover, the platform has become a safe haven for criminals dealing in every kind of illegal activity.
- The matter gets complicated with the evolution of cryptocurrencies like bitcoin.
- **It is also used by people who require privacy for entirely legal reasons.**
 - E.g., the exchange of proprietary business information or communication by political activists.
 - Darknet helps to protect the right to freedom of information and online privacy of individuals and is therefore often used by journalists and other activists.
- One ethical use for the dark web is for law enforcement and threat intelligence agencies.
- These types of professionals may search the dark web for signs of cybersecurity or data breaches, illegal activity, scams or other emerging threats.

Is Accessing The Dark Web Legal In India

- **Accessing the dark web is legal in India.** The Indian government does not recognize it as an illegal activity.
- However, this doesn't mean one is free to do whatever he/she wants.
- Various activities like child pornography, buying guns, pistols, rifles, drugs, etc. are considered to be illegal.
- Hence, the dark web is not illegal. It is the activity or the intent of a person that is taken into account while using the dark web.

Regulatory Challenges

- The biggest challenge with respect to regulation of the dark web is its encryption technique and anonymity.
- Apart from the strong encryption techniques, most financial transactions on the dark web are performed in cryptocurrencies which provide further anonymity.
- The trans-border nature of the dark web further complicates the matter.
- Ensuring **right to freedom of information and online privacy** while eliminating the illegal activities thriving on dark web is a challenge.

Steps Taken By India

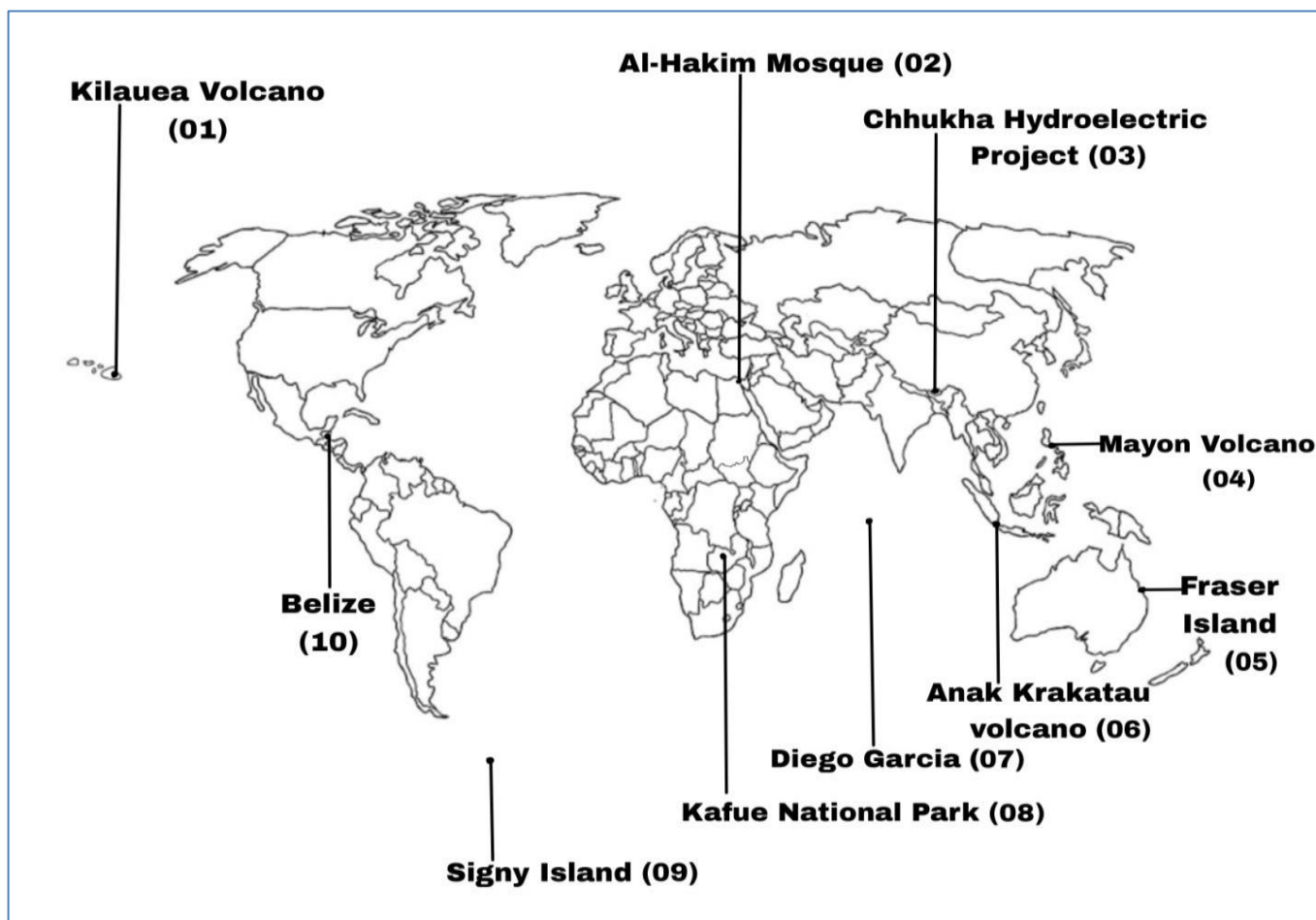
- In August 2021, at the BRICS meeting, India discussed the misuse of the darknet for drug trafficking during a webinar conference. The group of nations will soon be coming up with a solution.
- A comprehensive legislative policy to deal with this domain is being discussed. It was deliberated upon in 56th All-India DGP-IGP Conference being held at UP Police headquarters, Lucknow.

Way Forward

- **Implement such a system where freely available VPNs are banned.**
 - For this, the government should create an authority under the Information Technology Act, 2000. The government may create a mandatory charge for VPN registration.
- **Develop close cooperation between public and private organisations**
 - It will help in dealing with the new and emerging technological challenges of the dark web, by providing solutions such as new encrypting tools, etc.
- **Foster international cooperation in the form of multilateral exchanges**
 - It will help in dealing with the challenges of the trans-border nature of the dark web.
- **Adopt China Model**
 - Many security experts argue that it is high time that India adopt the 'China model', wherein the great firewall of China, blocks ToR traffic.
 - On similar lines, *The Incredible Firewall* of India will affect a body-blow to flourishing darknet crime.

MAPS: PLACES IN NEWS

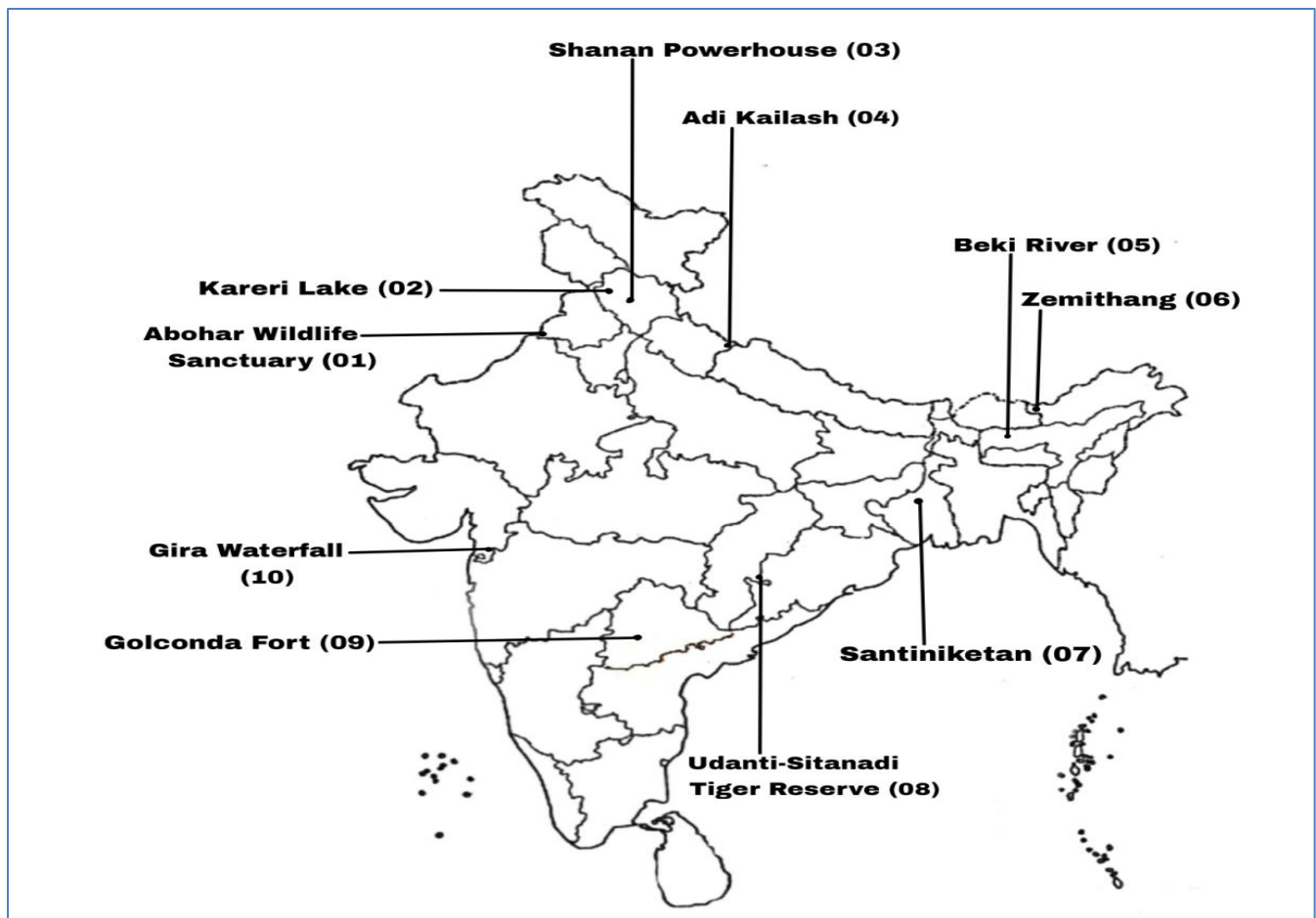
International Places In News



01	Kilauea Volcano	The Kilauea volcano erupted recently. It is the youngest and most active shield volcano, located on the southern part of the Island of Hawai'i, known as Big Island. It has a large summit caldera with a central crater.
02	Al-Hakim mosque	Indian Prime Minister visited the 11th Century Al-Hakim mosque. It is located in Cairo, Egypt. It is named after Al-Hakim bi-Amr Allah, the Fatimid caliph. The mosque was inscribed as a UNESCO World Heritage Site in 1979. It was restored with the help of the Dawoodi Bohra community.
03	Chhukha hydroelectric project	India agreed to an upward revision of tariff of the Chhukha hydroelectric project. It is a run-of-the-river project, located in the south-western part of Bhutan. It was built by the Government of India. The GoI fully funded this project with a 60% grant and a 40% loan.
04	Mayon volcano	Mayon volcano has erupted recently. It is an active volcano in southeastern Luzon, Philippines. It is called the world's most perfect volcanic cone because of the symmetry of its shape. It lies in the Pacific Ring of Fire region.
05	Fraser island -	The government of the Australian has changed the name of Fraser Island to its traditional name K'gari. It is located on the southeast coast of Queensland, Australia, separated from the mainland and the port of Maryborough by Hervey Bay and Great Sandy Strait. It is the largest sandy island in the world. The island belongs to Butchulla people, who are also the guardians of the land.

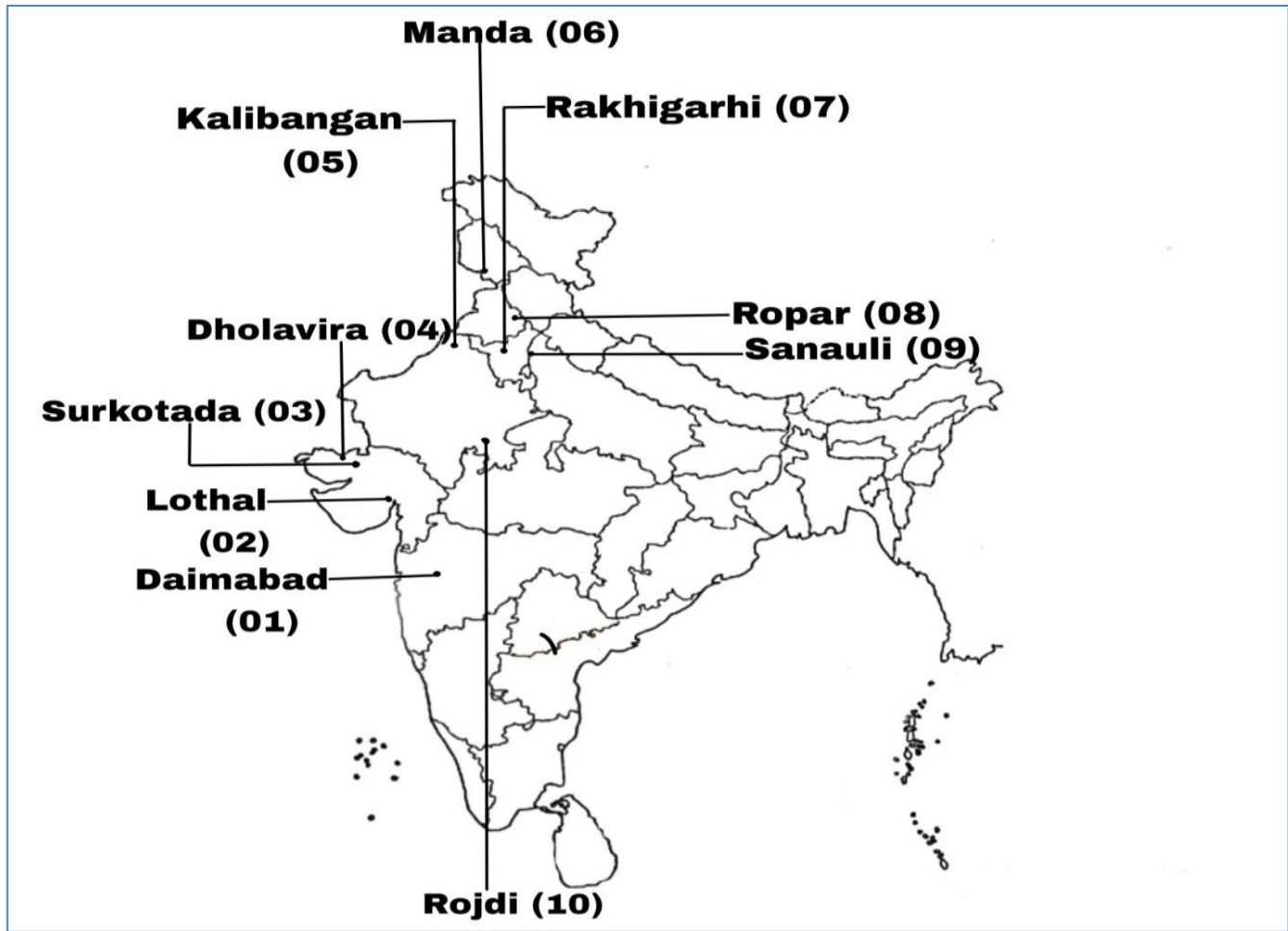
06	Anak Krakatau volcano	Anak Krakatau volcano has erupted recently. It is located in Indonesia's Sunda Strait between the main Java and Sumatra islands. It is the offspring of the famous Krakatau, whose monumental eruption in 1883 triggered a period of global cooling.
07	Diego Garcia Island	Dozens of migrants have been stranded for months on Diego Garcia Island. It is a coral atoll, the largest and southernmost member of the Chagos Archipelago, in the central Indian Ocean. It is a part of the British Indian Ocean Territory. This island was discovered by the Portuguese in the early 16th century.
08	Kafue National Park	Kafue National Park is witnessing a remarkable resurgence in its lion and leopard populations. It is the largest national park in Zambia. It is named for the Kafue River. A huge fraction of the national park still remains uncharted thereby giving more access to the continuous development of the rich wildlife.
09	Signy Island	Eretmopteramura (tiny insect) has been altering the soil composition on Signy Island. It is a small subantarctic island in the Antarctica. On Signy Island, the British Antarctic Survey (BAS) maintains the Signy Research Station. The flora of the island is cryptogams i.e. plants reproduce via spores rather than seeds. And the island has only two flowering plant Antarctic hairgrass and Antarctic pearlwort.
10	Belize	The World Health Organization (WHO) has certified Belize as a malaria-free country. It is located on the northeast coast of Central America and south of the Yucatan Peninsula. It is bounded by Mexico, Guatemala and the Caribbean Sea. Along the coast of this country, there is Belize Barrier Reef which is the 2nd-largest barrier reef in the world after the Great Barrier Reef.

National Places In News



01	Abohar wildlife sanctuary	A blackbuck census by the Wildlife Institute of India stated that the blackbucks 'are on the verge of extinction in Punjab. It is located in the state of Punjab. The entire area of Sanctuary is private or community-owned land of 13 Bishnoi villages.
02	Kareri Lake	Police rescues 39 tourists stranded near Kareri Lake. It is a high altitude, shallow, fresh water lake in Himachal Pradesh. It remains frozen from early December to March–April. Snow melting from the Dhauladhar range serves as the source of the lake and a stream, Nyund is the outflow.
03	Shanan Powerhouse	Himachal Pradesh Chief Minister handed over legal documents regarding Shanan Powerhouse to the Union Power Ministry. It is located in the Mandi district, Himachal Pradesh. It is a 110 MW project commissioned in 1932. It was constructed against the backdrop of dense deodar forests.
04	Adi Kailash	Over 180 pilgrims, returning from Adi Kailash, were recently rescued by a joint team of the state disaster response force (SDRF).It is considered to be one of the five Kailash mountains and is believed to be the abode of Lord Shiva. It is located in the Pithoragarh, Uttarakhand. It is situated among the Kumaon Himalayan mountain range. It lies in close proximity to the Indo-Tibetan border near Sin La Pass.
05	Beki River	The water level of the Beki River is flowing above the danger level mark at several places across Assam. It originates in Bhutan, and is known as Kurissu River in Bhutan . It is one of the right bank tributaries of the Brahmaputra River. A large portion of the Beki river flows in the state of Assam and ultimately mixes with Bay of Bengal. It flows through the Manas National Park.
06	Zemithang	A major Buddhist Conference was hosted in Zemithang, Arunachal Pradesh. The village of Zemithang, is located in the Tawang district and is home to the Pangchenpa people, who are known as "people who gave up sin". It is bordering Bhutan and Tibet. It is located on the bank of the Nyamjang Chu river, which originates in Tibet. It was first stop of the 14th Dalai Lama during his flight from China-occupied Tibet in 1959
07	Santiniketan	The UNESCO World Heritage Centre has recommended Santiniketan for inclusion in the UNESCO World Heritage List. It is a cultural site in West Bengal known for its historical and cultural importance. It was originally an ashram built by Debendranath Tagore, and later developed into a university by Rabindranath Tagore.
08	Udanti Sitanadi Tiger Reserve	A team of forest personnel were attacked and injured when they arrived to clear encroachments inside the Udanti Sitanadi tiger reserve. It is located in Chhattisgarh. It was declared a tiger reserve in the year 2008-09. The Udanti and Sitanadi Rivers flow through the Reserve. There is few perennial springs including the famous Deodhara and Godene falls. Asiatic Wild Buffalo is the key endangered species found in the Core Area.
09	Golconda Fort	The Ministry of Culture celebrated the Telangana Formation Day at Golconda Fort. It is located in the Hyderabad, Telangana. It was originally known as Mankal. It was originally a mud fort under the reign of Rajah of Warangal. Later it was fortified between 14th and 17th centuries by the Bahmani Sultans and then the ruling Qutub Shahi dynasty. Golconda was the principal capital of the Qutub Shahi kings.
10	Gira Waterfall	Around 19 people were recently injured after being stung by honeybees near Gira Waterfall. It is a seasonal waterfall located in Gujarat. It is a 75 ft fall that emerges from the Kapri Tributary and drops into the Ambika River.

List of Indus Valley Civilization (IVC) Sites In India



01	Daimabad	It is a Chalcolithic or copper age site. It is located on the left bank of the Pravara River, a tributary of the Godavari River in Ahmednagar, Maharashtra. Discoveries at Daimabad suggest that Late Harappan culture extended into the Deccan Plateau in India. In Daimabad, several bronze items were discovered.
02	Lothal	It is one of the southernmost sites of the IVC located in Gujarat. It was a port city along the Bhogava river, a tributary of Sabarmati, in the Gulf of Khambat. It was the only site of IVC with an artificial brick dockyard. It was a major trading center of the IVC. It was nominated as a UNESCO World Heritage Site in April 2014 but its application is pending on the tentative list of UNESCO. The meaning of Lothal is “the mound of the dead”.
03	Surkotada	It is located in Kutch, Gujarat. It is a tiny village surrounded by a stone fortification wall. Many academics believe the area was strategically important in controlling the Harappans' eastward march from Sind. Horse bones dating from 2000 BCE were discovered at the Surkotada site, which is considered an important discovery.
04	Dholavira	It is located in Kachchh, Gujarat. Its location is on the Tropic of Cancer. It is the first site of the IVC in India to get the UNESCO World Heritage tag. The site includes a large cemetery with cenotaphs of six types testifying to the Harappan's unique view of death. Dholavira has one of the world's earliest water conservation systems ever excavated
05	Kalibangan	It is located in Rajasthan. It was located on the bank of River Saraswati which dried up by 2000 BC. It has given the evidence of both Pre-harappan culture in the lower layer and harappan civilization in the upper layer. The most important discovery of

		Kalibangan is a ploughed field. The discovery of fire altars at Kalibangan reveals that the locals were ritualistic and believed in fire worship. It also provided proof of the world's first documented "Earthquake."
06	Manda	It is situated on the right bank of Chenab river in the foothills of Pir Panjal range, in Jammu. It is considered the northernmost limit of the Harappan civilisation. It is considered the north-most site (excluding Shortugai) of IVC.
07	Rakhigarhi	It is located in Hisar, Haryana, in the Ghaggar-Hakra river plain. It is the largest Harappan site in the Indian subcontinent. It is among the five iconic sites announced by Union Finance Minister. It is a mature Harappan phase and is represented by a planned township having mud-brick as well as burnt-brick houses with a proper drainage system.
08	Ropar	It is located in Punjab, on the banks of the Sutlej River. Archaeologists estimate that Harappans lived at Ropar until around 2,000 BC. It was the first Indus Valley Civilisation site excavated in independent India. Here a steatite seal in Indus script has been found which is used for authentication of trade goods. There is an indication of burying the dog beneath the human grave. A copper axe was discovered.
09	Sanauli	It is located in Baghpat, Uttar Pradesh, at the Ganga-Yamuna Doab. The archaeologists found antiques such as chariots, a torch, an antenna sword, highly decorated coffins, and helmets. The well-preserved remains are similar to those found in the late Harappan phase. The site was the largest necropolis of the late Harappan period of the early 2nd millennium BCE.
10	Rojdi	It is located on the northern bank of the Bhadar River in Rajkot, Gujarat. Here houses were built on stone foundation, probably by mud walls as no remains of bricks found, even lacked traces of drainage system. Much of the pottery found here is a hard, red-on-buff ware made from well-prepared clay.

India's Remittance Inflows Growth Could Slow to Just 0.2% in 2023

- According to the **World Bank's** latest **Migration and Development Brief**, India is expected to post a **growth** of just 0.2% in remittance inflows in 2023.
 - It provides updates and analysis on global trends in migration and remittances.
 - It also focuses on increasing the volume of remittances as a percentage of GDP, reducing remittance costs, and reducing recruitment costs.
- Slower growth in OECD and GCC economies, high base effect are few reasons behind this slowdown.

Remittances

Definition 01

RBI defines remittances as the transfer of money by an individual who is a resident of one country to an individual or entity in another country.

Regulation 03

Authorized dealers, such as banks and other financial institutions, facilitate these remittance transactions in compliance with the RBI's regulations.

Contribution in GDP 05

02 **Involves**

Remittances generally involve migrant workers who send money back to their home countries to support their families or for other purposes.

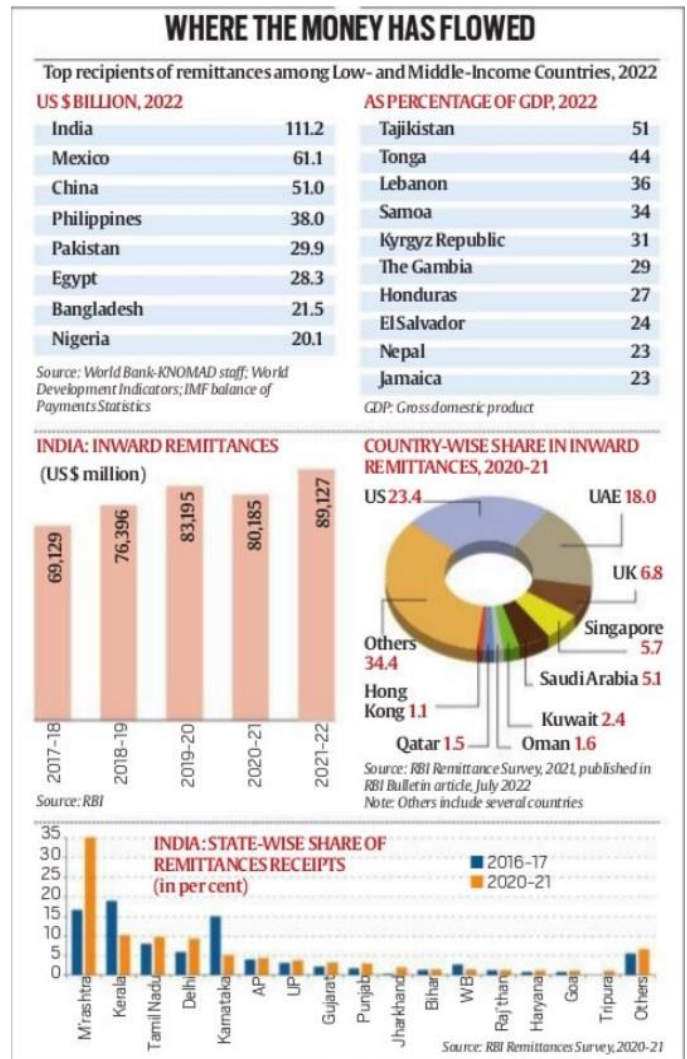
04 **Includes**

RBI regulates remittance transactions and has put in place guidelines and regulations to govern the process.

In India, remittances represented only 3.3% of GDP in 2022.

Why Are Remittances Expected To Grow At A Slower Pace In 2023?

- **Slower growth in OECD economies** especially in the high-tech sector in the United States has affected the demand for information technology (IT) workers.
 - OECD is an intergovernmental organisation with 38 member countries.
 - It was established in 1961 to stimulate economic progress and world trade.
 - The majority of OECD Members are ranked as very high in the Human Development Index, and are **regarded as developed countries**.
 - It could lead to a diversion of formal remittances toward informal money transfer channels.
- **Lower demand for migrants in the Gulf Cooperation Council (GCC) countries**
 - GCC is a grouping of six Arab nations located around the Arabian Gulf, where declining oil prices have dented growth.
 - 6 countries are – Bahrain; Kuwait; Oman; Qatar; Saudi Arabia; UAE.
- **High Base effect**
 - In 2022, India registered a growth of more than 24% to reach a record-high \$111 billion



in remittances in 2022.

- The high base in 2022 will significantly affect the growth rate of remittances for India in 2023.

Top Sources Of Remittances For India

- Almost **36% of India's remittances** are from the *high-skilled and largely high-tech* Indian migrants in three high-income destinations — **US, United Kingdom, and Singapore**.
 - The post-pandemic recovery led to a tight labour market in these regions, and wage hikes boosted remittances.
- Remittance inflows from the GCC countries account for about 28% of India's total remittance inflows.
 - High energy prices favoured employment and incomes of the less-skilled Indian migrants in the GCC countries.
 - At the same time, the GCC governments' special measures to curb food price inflation shielded migrants' remitting potential.

Trend For Remittances In 2022

- In 2022, India posted more than 24% growth in its inward remittances to reach \$111 billion, higher than the World Bank's earlier estimate of \$100 billion.
 - India represented **63% of South Asia's remittance flows**.
- Remittances were supported by:
 - oil surge in member countries of the GCC, which increased migrants' incomes;
 - large money transfers from the Russian Federation to countries in Central Asia; and
 - the strong labour market in the US and the OECD countries.

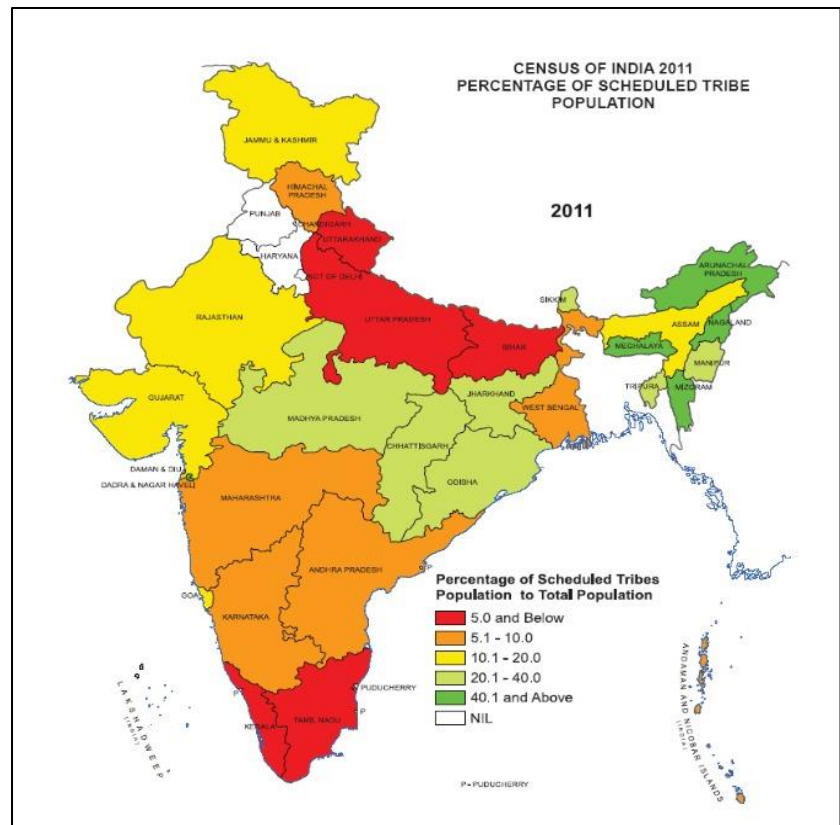
Centre Looking To Design Human Development Index for PVTGs

The Union government is now looking to design a survey that can gauge the **Human Development Index (HDI)** specifically for about 28 lakh people of the **Particularly Vulnerable Tribal Groups (PVTGs)**.

- Union Minister for Tribal Affairs addressed media persons on 9-year achievements and Transformational initiatives of the Ministry.
- He said that development of PVTGs in mission mode has been taken up as focus area for the first time ever.
- The Ministry is now looking to design a survey that can gauge the HDI specifically for about 28 lakh people of the PVTGs.
- A fund of **Rs 15,000 crore** has been allocated for the socio-economic development of the group for the next 3 years.
 - The programme envisions **connecting all 22,544 PVTG villages to basic government services like communications, electricity, public education, healthcare, water supply, and connectivity.**
- Giving details of the strides made in the education of tribal people, the minister said that the Government is setting up **740 Eklavya Residential Model Schools (EMRS)** which will serve 3.5 lakh tribal students with quality education.
 - Over the next three years, **38,800 teachers and support staff will be recruited** centrally for the 740 EMRSs.
 - These schools will also lay emphasis on local languages to ensure that the students are not detached from their roots.
- In 2023-24, a budget of **Rs 12,460 Crores** has been allocated to the Ministry.

Scheduled Tribes In India

- According to the 2011 Census, the Scheduled Tribes account for 104 million representing **8.6% of the country's population**.
- The essential characteristics of these communities are:
 - Primitive Traits
 - Geographical isolation
 - Distinct culture
 - Shy of contact with community at large
 - Economically backwards
- **Government of India set up Ministry of Tribal Affairs in 1999** after the bifurcation of Ministry of Social Justice and Empowerment.
- As in the case of the Scheduled Castes, the Plan objective of empowering the tribals is being achieved through a three-pronged strategy of:



Social empowerment

Economic empowerment

Social justice

What is a Particularly Vulnerable Tribal Group (PVTG)?

- PVTGs are **more vulnerable among the tribal groups**.
 - Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development.
- In this context, in 1975, the Government of India declared 52 tribal groups as PVTGs on the recommendation of **Dhebar commission**.
 - Currently, there are **75 PVTGs out of 705 Scheduled Tribes**.
- The PVTGs are spread over 18 states and one UT, in the





Eklavya Model Residential School (EMRS):

EMRS started in 1997-98 with the aim of imparting quality education to children belonging to Scheduled Tribes (ST) in remote areas.

The EMRS aims to enable students to avail of opportunities in high and professional educational courses and get employment in various sectors.

Schools focus not only on academic education but on the all-round development of students. Each school has a capacity of 480 students, catering to **students from Class VI to XII**.

These are being set up by grants provided under **Article 275(1) of the Constitution**.

Eklavya Model Day Boarding Schools (EMDBS) –

- Wherever density of ST population is higher in identified Sub-Districts (90% or more), it is proposed to set up Eklavya Model Day Boarding School (EMDBS) on an experimental basis.
- This is aimed at providing additional scope for ST Students seeking to avail school education without residential facility.

country (2011 census).

- **Odisha has the highest number (more than 2.5 lakh) of PVTGs.**

● **Characteristics of PVTGs:**

- Population – stagnant/declining
- Technology – pre-agricultural
- Literacy Level – extremely low
- Economy – Subsistence level

Government Scheme for PVTGs:

- Ministry of Tribal Affairs implements a scheme in the name of '**Development of Particularly Vulnerable Tribal Groups (PVTGs)**'.
- It is a **Centrally Sponsored Scheme** having a provision of 100% Central assistance to 18 states and UT of Andaman & Nicobar Islands.
- The scheme of Development of PVTGs aims at socio-economic development of PVTGs in a comprehensive manner, while retaining their culture and heritage.
- As a part of the scheme, State Governments undertakes projects that are tailored to cater to sectors like education, health and livelihood schemes for the PVTGs.

Universal Basic Income (UBI)

- According to the Chief Economic Adviser (CEA), the Indian economy is now on “auto-pilot” mode and will grow steadily in the range of 6.5% to 7% till 2030, even without further reforms.
- He also said that the concept of **Universal Basic Income (UBI) is not necessary for India** since natural economic growth would take care of the country’s many aspirations.

How UBI Works?

- **The five broad features of such schemes are:**
 - Payments at periodic regular intervals (not one-off grants), **without requirement of work or willingness to work,**
 - Payments in cash (not food vouchers or service coupons),

Idea of UBI and its Appeal

India has made considerable progress in bringing down poverty from about 70% of the population at the time of independence to about 22% in 2011-12 (Tendulkar Committee estimates).

UBI envisages a social safety net that seeks to assure a dignified life for everyone. The Economic Survey 2017 devoted an entire chapter to its merits.

However, the effectiveness of the targeted schemes run by central and state governments have always been in question.

- Targeting is seen as being both inefficient and inequitable, a licence for corruption.
- For example, the poor and deserving crowded out of BPL card ownership and the rich reaping undeserved benefits.



- Typically, it would require subsumption of other subsidies and allowances in order to free up resources so that a particular amount can be directed to people on a periodic basis.
 - There are about **950 central sector and centrally sponsored sub-schemes** in the country, which accounted for about **5% of GDP by Budget allocation.**

- The top 11 schemes (PDS, Urea subsidy, MGNREGS, etc) accounted for about 50% of the budgetary allocation.
- If the states were included, the number of schemes would be even larger.
- In 2019, **Sikkim** has indicated that **it will do away with most subsidies** before launching its UBI scheme.

Global Precedents

- **Finland** concluded a two-year experiment on its effects on unemployed citizens, which commenced in 2017.
- **The government of Ontario, Canada**, had announced a plan to test a kind of unconditional income guarantee for up to three years.
- **Some cities in the Netherlands** have launched municipal-level trials.
- **Barcelona in Spain** has tested several potential changes to its anti-poverty programmes, including unconditional cash payments.

Criticisms

- **Will further lead to inequalities:** None of the places where UBI has been tried have levels of income disparity that exist in India.
- **Cash transfers could be counterproductive:** This is due to -
 - Unproductive spending, reduction in labour force, rise in inflation, **moral hazard** (Gandhiji - free money will make people lazy), etc.
 - **Conditional social assistance** pinpoints those who are the most vulnerable.
- **Perverse incentives:** Such schemes dissuade people from seeking income-generating opportunities.

Possible Alternative and Way Ahead

- **Nyuntam Aay Yojana (NYAY):** Ahead of the 2019 Lok Sabha elections, the Congress promised a minimum income support programme, under which Rs 72,000 will be transferred **to the poorest 20%/5 crore families** in the country.
- **Way ahead:** Until a consensus on such schemes is established, support should be confined to those who may not be able to participate in economic activities and bring them to a point where they can meaningfully engage in the economy.

UGC Committee Proposes New University Degree Names

- The University Grants Commission (UGC) plans to introduce new college degree names that align with global norms and the National Education Policy (NEP) 2020.
- The UGC is poised to introduce a new range of college degree names, including a **Bachelor of Science degree in disciplines like arts, humanities, management and commerce.**
- Currently, the UGC permits universities to offer a Bachelor of Arts (BA) degree in arts, humanities and social sciences.
 - Bachelor of Science (more commonly abbreviated in India as BSc) degree is typically given for science subjects.
- However, with the NEP 2020 advocating a restructuring of undergraduate and postgraduate degrees, a committee was set up by the UGC to review degree nomenclatures.
- The committee has recommended that the **new four-year undergraduate honours (or honours with research) degree programme, irrespective of the discipline, can also be offered as a Bachelor of Science (BS) degree.**
- Similarly, universities can adopt the **Master of Science (MS)** nomenclature for both the one and two-year postgraduate programmes, even for disciplines such as arts, humanities, management, and commerce.

- The use of BA and BS for undergraduate programmes across disciplines is a prevalent practice abroad, where universities often offer, say, BA and BS degrees in Psychology or Economics.
 - In such a case, the programme curriculum sets the BA degree apart from the BS.
 - While a BS degree gives a student a more specialised education in the subject, a BA degree (in the same subject) provides more flexibility.
 - For instance, **Harvard University offers both a BA and BS degree in engineering sciences.**

Other Recommendations Made By The Committee To UGC

- The four-year undergraduate honours degree programme will include BA (Hons), BCom (Hons), or BS (Hons).
- The committee recommends **discontinuing the nomenclature of the 'MPhil' degree**, as per the NEP 2020's recommendation to scrap the MPhil programme.
- If a student has earned all the required credits for a programme, she can be considered for the award of a qualification (such as a certificate, diploma or degree) even before the completion of the programme's duration.
- The **UGC will soon share the committee's recommendations in the public domain for feedback**, following which the Commission will notify the fresh set of degree nomenclatures.

Kerala Fibre Optical Network (KFON)

- The Kerala government has officially launched the Kerala Fibre Optical Network (KFON).
- Through KFON, Kerala aims to reduce the digital divide by ensuring high speed broadband internet access to all houses and government offices.
 - Kerala was the first state to declare the right to internet as a basic right.

Kerala Fibre Optical Network (KFON)

- **About**
 - KFON will act as an infrastructure provider.
 - KFON is an optical fibre cable network of 30,000 kms, with 375 Points-of-Presence across Kerala.
 - The KFON infrastructure will be shared with all service providers, including cable operators.
 - While KFON will do the cable work for government offices, individual beneficiaries will have to depend on private, local internet service providers.
 - KFON promises an internet speed from 10 mbps to 10 Gbps. The quality of mobile phone calls is also expected to improve.
 - Once KFON is connected to mobile towers in Kerala, it will speed up transition to 4G and 5G.
- **Aim**
 - The project is aimed at ensuring **universal Internet access** and narrowing the digital divide, which has become especially acute after the COVID-19 outbreak.
 - For this it will create a core network infrastructure (information highway) with non-discriminatory access to all service providers.
- **Stakeholders**
 - KFON project is a joint venture of *Kerala State Electricity Board (KSEB) and Kerala State IIT Infrastructure Limited.*
 - **Implementation-** by a consortium led by Central PSU Bharat Electronics Limited
 - **Consultant** –Price Waterhouse Coopers
 - **Operations and maintenance** by Kerala State Information Technology Infrastructure Ltd (KSITIL)

- **Funding** -The project is fully funded by Kerala Infrastructure Investment Fund Board (KIIFB), the state government agency for funding infrastructure projects.
- **Beneficiaries**
 - Through KFON Internet connections would be provided free of cost to 20 lakh below-poverty-line (BPL) families.
 - In the first stage of KFON, the government wants to provide connectivity to 30,000 government offices and 14,000 BPL families in the state.

What Was The Need For KFON?

- **Existing TELCOS have only limited infrastructure in the rural areas**
- **Limited reach of Kerala State Wide Area Network (KSWAN)**
 - KSWAN, the existing state Information Infrastructure connecting government offices, is limited to 3,800 premises.

National Institutional Ranking Framework (NIRF)

- The National Institutional Ranking Framework (NIRF) announced the **India Rankings 2023** (8th consecutive edition) of higher education institutions in New Delhi.
- In all, 5,543 institutions offered themselves for ranking under ‘overall’, category-specific and/or domain-specific rankings for India Rankings 2023.

National Institute Ranking Framework (NIRF):

● About

- The NIRF was launched by the Ministry of Human Resource Development (MHRD now **Ministry of Education**) in **2015** (first edition came in 2016).
- This framework, which is the **first-ever effort** by the Government of India, **outlines a methodology** to rank HEIs across the country.
- While participation in the NIRF was initially voluntary, **it became mandatory** in 2018 for all government-run educational institutions.



● Categories

- Initially, NIRF ranked best institutions across 11 categories - overall national ranking, universities, engineering, college, medical, management, pharmacy, law, architecture, dental and research.
- With the addition of 2 new categories “Innovation -Agriculture & Allied Sectors” and expansion of “Architecture” to “Architecture and Planning” the existing portfolio of India Rankings has **increased to 13 categories**.

● Significance

- The NIRF process gives **detailed feedback regarding a HEI’s strengths and weaknesses**.
- The NIRF assisted institutions in gaining a better understanding of their **annual performance as well as their competitors** and peer performers.
- This provides other benefits, such as **attracting industry for better placement** and serving as a **credible resource for parents** and students to learn about the HEIs.

- The NIRF indirectly assists top-performing institutions in **building their brand and gaining widespread recognition** without incurring additional marketing and branding costs.

Why Does India Require its Own Ranking Framework

- **Subjective global rankings:** The government-run HEIs were **dissatisfied with their rankings** in the QS World University Rankings and the Times Higher Education World University Rankings.
 - Their ranking methods rely on the opinions of a small group of people.
- **Case of China:** When China faced the same dilemma around, they responded by creating their own university ranking system, called the Shanghai Rankings.
 - Therefore, India has also launched its own rankings, **with parameters tailored to the Indian scenario.**
- **To make it international in character:** Though the Shanghai Rankings were designed to be worldwide from the start, the NIRF solely ranks Indian HEIs.
 - However, the long-term plan is to give it an international character (especially for developing countries).



Highlights Of NIRF 2023:

- **Overall rankings:** The IIT-Madras remained the best educational institution in overall rankings for the **fifth consecutive term**.
 - It has also been ranked the **best engineering college for the eighth consecutive year** (from 2016 to 2023).

MIRANDA NO. 1 COLLEGE; JNU, JAMIA NO. 2 & NO. 3 UNIVS				
Rank	Overall Category	Universities	Colleges	Medical Institutes
1	IIT, Madras	Indian Institute of Science, Bengaluru	Miranda House, Delhi	AIIMS, New Delhi
2	IISc, Bengaluru	Jawaharlal Nehru University, New Delhi	Hindu College, Delhi	PGIMER, Chandigarh
3	IIT, Delhi	Jamia Millia Islamia, New Delhi	Presidency College, Chennai	Christian Medical College, Vellore
4	IIT, Bombay	Jadavpur University, Kolkata	PSGR Krishnammal College for Women, Coimbatore	National Institute of Mental Health & Neuro Sciences, Bengaluru
5	IIT, Kanpur	Banaras Hindu University, Varanasi	St Xavier's College, Kolkata	Jawaharlal Institute of Post Graduate Medical Education & Research, Puducherry

- **Best university:** The Indian Institute of Science (IISc), Bengaluru ranked as the best university in the country for **eight years in a row**.
 - It stood first in **'Research Institutions'** category too, for the third consecutive year
- **Best college:** Miranda House, Delhi is ranked the best college for the seventh consecutive year.
- **Top management institute:** Indian Institute of Management (IIM), Ahmedabad is the top management institute for the fourth consecutive year.
- **Top in pharmaceutical studies:** National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad is ranked number one (first time) for pharmaceutical studies.
- **Best medical and dental college:** The AIIMS, Delhi is ranked the best medical college (for the sixth consecutive year), and Saveetha Institute of Medical and Technical Sciences, Chennai is the top dental college.
- **Best law college:** National Law School of India University, Bengaluru is ranked the best law college in the country for the sixth consecutive year.
- **First in Architecture subject:** IIT-Roorkee stood at first position in Architecture subject.
- **Agriculture sector:** Indian Agricultural Research Institute, New Delhi took the top slot in 'Agriculture and Allied Sectors'.

- **Topper in innovation category:** IIT-Kanpur topped the 'Innovation' category.

India Rethinking Its Anaemia Policy

- Questions related to anaemia are slated to be dropped from the National Family Health Survey (NFHS-6) scheduled to begin on July 6.
- The omission comes after health experts questioned the efficacy of the method being used to estimate haemoglobin levels.

Anaemia

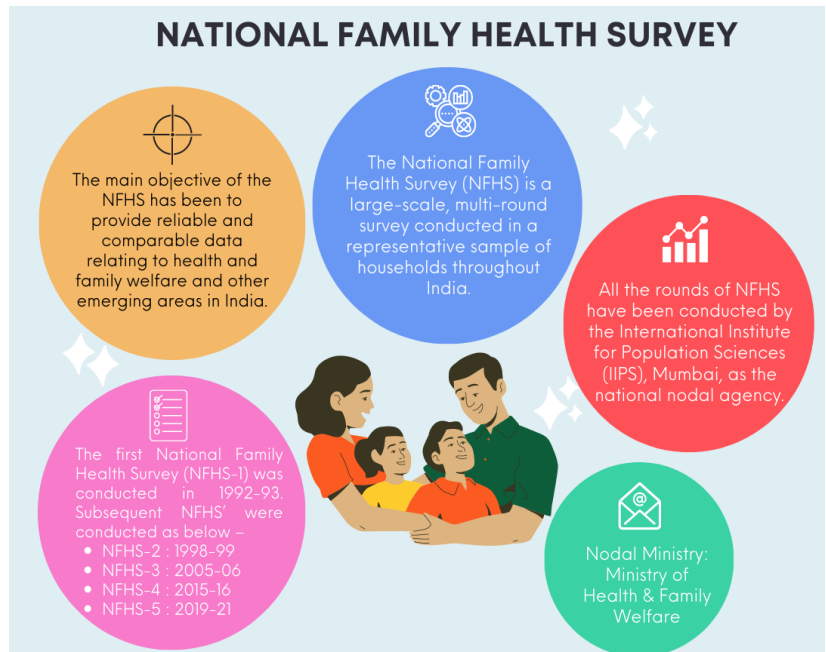
- According to the WHO, anaemia is a condition in which the number of red blood cells or the haemoglobin concentration within them is lower than normal.
 - Haemoglobin is needed to carry oxygen.
 - If there are too few red blood cells, or not enough haemoglobin, there will be a decreased capacity of the blood to carry oxygen to the body's tissues.
 - This results in symptoms such as fatigue, weakness, dizziness and shortness of breath among others.
- **Factors**
 - The most common nutritional cause of anaemia is iron deficiency although deficiencies in folate, vitamins B12 and A are also important causes.
 - Certain chronic diseases, such as kidney disease, liver disease, cancer, or autoimmune disorders, can interfere with the production of red blood cells.
 - Inherited conditions, such as sickle cell anemia or thalassemia, affect the structure or function of red blood cells, leading to chronic anemia.

India's Anaemia Burden

- India's anaemia burden has grown alarmingly with NFHS-5 (2019-21) finding that:
 - 57% of women in the age group 15-49 and
 - 67% children between 6 months -59 months are anaemic (from the corresponding 53% and 58.6% respectively in NFHS-4 (2015-16)).
- The Health Ministry has noted that **anaemia is a public health challenge.**

What Prompted The Change?

- WHO cut-offs for haemoglobin may not be suited to India
 - The WHO defines:
 - anaemia in children **aged under five years** and **pregnant women** as a haemoglobin concentration <110 g/L at sea level, and
 - anaemia in non-pregnant women as a haemoglobin concentration <120 g/L and and <130 g/L in men.



- Experts had cautioned that there is a danger of anaemia being over-diagnosed in India as it follows WHO cut-offs for haemoglobin.
- This may not be suited to India, because the cut-off point depends on the age, gender, physiological status, altitude and other factors.
- **Differences in the way blood is drawn for sampling in NFHS**
 - The NFHS survey measured haemoglobin in a drop of capillary blood that oozes from a finger prick.
 - This, as per the report, can dilute the blood and give a falsely lower value.
 - The recommended method of venous blood sampling, as per the report, gives a more accurate value.

Shift In Assessment Of Anaemia In India

- Though anaemia is being dropped from the NFHS, assessment of anaemia in India is being shifted to the new **Diet and Biomarkers Survey in India (DABS-I)**.
 - ✓ DABS-I was launched in December 2022 to map diet, nutrition and health status and provide the correct estimate of anaemia among the rural and urban population.
- The survey will define food and nutrient adequacy by collecting individual dietary intake data of different age groups of people.
- The study will also provide nutrient composition data on cooked and uncooked foods from various regions of the country for the first time.

Why The Focus Is On Anaemia?

Data on anaemia remains an important indicator of public health due to following reasons:

- **Impact on morbidity and morality:** Anaemia is related to morbidity and mortality in the population groups usually considered to be the most vulnerable — pregnant women and children under five.
- **Effect on reproductive health**
- **Impact on economy:** Also, iron-deficiency anaemia reduces the work capacity of individuals and entire populations, with serious consequences for the economy and national development.

Govt. Bans 14 Combination Drugs Used to Treat Common Ailments

The Union Health Ministry has published a gazette notification banning 14 **Fixed Dose Combination (FDC)** drugs citing lack of therapeutic justification and an expert committee's recommendation for their prohibition. The banned combinations include medicines used for cough, fever & infections, and are sold over the counter.

Challenges/Demerits of FDC

Drugs:

- There are increased chances of adverse drug effects and drug interactions compared with both drugs given individually.

About Fixed Dose Combination (FDC) Drugs

01

Combination products, also known as fixed dose drug combinations (FDCs), are combinations of two or more active drugs in a single dosage form.

02

The Food and Drug Administration, USA defines a combination product as 'a product composed of any combination of a drug and a device or a biological product and a device or a drug and a biological product or a drug, device, and a biological product'.

03

It is widely accepted that most drugs should be formulated as single compounds.

04

Fixed ratio combination products are acceptable only when –

- The dosage of each ingredient meets the requirement of a defined population group and
- The combination has a proven advantage over single compounds administered separately in therapeutic effect, safety or compliance.

05

Advantages of FDC Drugs –

- FDC formulations have unique advantages such as complementary mechanism of action, synergistic effects, better tolerability, elongated product life-cycle management, and cost savings.

- Unfortunately, many FDCs being introduced in India are usually irrational.
 - The most pressing concern with irrational FDCs is that **they expose patients to unnecessary risk of adverse drug reactions.**
- Irrational FDCs also impose unnecessary **financial burden on consumers.**
 - Medical practitioners who patronize such combinations could be the centre of controversy when subjected to litigation in consumer forums.
 - This is due to the fact that these combinations do not find mention in standard text or reference books and reputed medical journals.

New Guidelines For Granting Deemed University Status

Union Education Minister has released the UGC (Institutions Deemed to be Universities) Regulations, 2023, which will replace the 2019 guidelines. The revised guidelines have simplified the eligibility criteria in order to establish more quality-focused deemed universities.

University Grants Commission (UGC)

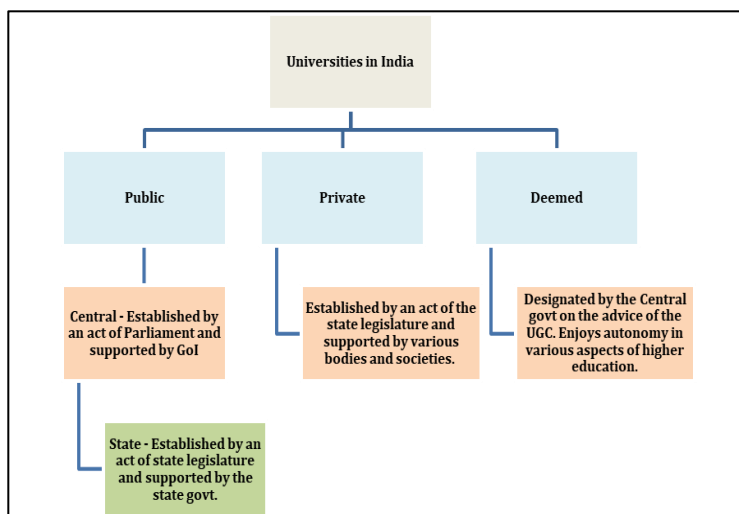
- UGC was established as a statutory body by the UGC Act 1956.
- It is set up by the Ministry of Education's Department of Higher Education.
- A proposal to replace it with another new regulatory body called the Higher Education Commission of India (HECI) is under consideration by the Government of India.

Mandate

- The UGC has the unique distinction of being the only grant-giving agency in the country which has been vested with two responsibilities of:
 - Providing funds
 - Coordination, determination and maintenance of standards in institutions of higher education.
- **The UGC's mandate includes:**
 - Promoting and coordinating university education.
 - Determining and maintaining standards of teaching, examination and research in universities.
 - Advising the Central and State governments on the measures necessary for improvement of university education, etc.

Deemed Universities

- The term deemed university refers to institutions of higher education that have been granted the status of a university by the Department of Higher Education, Ministry of Education.
- Deemed universities are autonomous institutions that have the authority to award degrees and diplomas in their own name.
 - There are around 170 deemed institutions in the country currently.
- They enjoy certain privileges and have the freedom to design their own curriculum, conduct admissions, and set their own academic standards.
- The status of a deemed university is granted to an institution based on its overall academic excellence, research contributions, and infrastructure.



- Typically, these institutions focus on specific areas of study such as engineering, medicine, management, arts, and sciences.
- These universities are subject to periodic reviews by UGC to ensure compliance with regulations.

New Guidelines

- **Framed on the principle of a "light but tight" regulatory framework** envisioned in the National Education Policy 2020.
- **Changed criteria**
 - Under the 2019 guidelines, the higher education institutions having existence for not less than 20 years were eligible for applying for the status.
 - In the revised guidelines, it has been replaced with:
 - multi-disciplinarity,
 - NAAC grading,
 - NIRF ranking and
 - NBA (National Board of Accreditation) grading.
 - It means any multi-disciplinary institution will be able to apply for the deemed status if they have:
 - valid accreditation by NAAC with at least 3.01 cumulative grade point average (CGPA) for three consecutive cycles,
 - NBA accreditation for 2/3rd of eligible programmes for 3 consecutive cycles or
 - in the top 50 of any specific categories of NIRF for the last 3 years continuously.
 - Hence, higher education institutions which are less than 20 years old will now be eligible to apply for deemed university status, provided they fulfil the above criteria.
 - A cluster of institutions managed by more than one sponsoring body or a society can also apply for deemed to be university status.
- **Deemed status under the Distinct Institution category**
 - The new regulation also introduces the "Distinct Institution" category.
 - However, to get recognition under this category, the applicants must establish (to the satisfaction of the Expert Committee of Commission) that the institution is engaged in:
 - teaching and research in unique disciplines and/or
 - addressing the strategic needs of the country or
 - preservation of Indian cultural heritage or preservation of the environment or
 - skill development or dedicated to sports or languages or any other discipline.
- **Criteria to set up off-campus centres**
 - Deemed universities with minimum 'A' grade and above or ranked from 1 to 100 in the universities category of NIRF rankings of the relevant year are eligible to set up off-campus centres.
 - Institutions declared as deemed to be university under a distinct category can apply for off-campus after 5 years of their declaration if they are accredited with an A grade or figured in the top 100 in the 'universities' category of NIRF.
- **Other criteria** that have been changed are
 - faculty strength has been increased from 100 to 150,
 - corpus fund for private institutions has been increased from Rs 10 crore to Rs 25 crore, a
 - creation of an executive councils like central universities in these universities as well.

- Deemed universities must register on Academic Bank of Credits (ABC).
 - ABC is a virtual/digital storehouse that contains the information of the credits earned by individual students throughout their learning journey.

City Investments to Innovate, Integrate and Sustain (CITIIS) 2.0

Union Cabinet has approved the **City Investments to Innovate, Integrate and Sustain (CITIIS) 2.0**. This has been approved to promote **circular economy** in 18 Smart Cities to be selected through a competition.

Circular Economy

• About

- It is an alternative to the traditional linear economy, which follows a "take-make-dispose" pattern.
 - In this pattern, resources are extracted, processed into products, used, and then discarded as waste.
- In contrast, the circular economy aims to close the loop by keeping materials, products, and resources in continuous use, maximizing their value and minimizing waste and pollution.

• Main Principles

- **Designing out waste and pollution:** In a circular economy, products are designed to be long-lasting, easily repairable, and recyclable.
- **Keeping products and materials in use:** The circular economy promotes the *reuse, refurbishment, and recycling* of products and materials.
 - It emphasizes extending product lifetimes, creating secondary markets for used goods, and promoting efficient recycling processes.
- **Regenerating natural systems:** The circular economy aims to restore and regenerate natural resources and ecosystems.
 - It encourages the use of renewable energy sources, sustainable agricultural practices, and the preservation of biodiversity.

• Steps Taken By India To Promote Circular Economy

- In Union budget 2022-23, FM announced that the Government would introduce a **policy for battery swapping**.
- The **action plans for ten sectors** such as electronic waste, end-of-life vehicles, used-oil waste, and toxic and hazardous industrial waste are in pipeline.
- In Union Budget 2023-24, govt emphasised on circular economic model.
 - 500 waste to wealth plants would be established under **GOBARDhan scheme** to promote circular economy.
 - **PM PRANAM** is also being launched to incentivise States / UTS to promote usage of alternative fertilizers.
 - Banks and other financial institutions would also be encouraged to launch a Green Credit Programme, which would be notified under the Environment (Protection) Act.
 - The National Green Hydrogen Mission is planned with a target to reach an annual production of 5 MMT by 2030.
- Expanding the idea of **Lifestyle for Environment (LIFE)**, India is moving forward firmly for the 'Panchamrit' (five nector elements for India's climate action) and net-zero carbon emission.

City Investments to Innovate, Integrate and Sustain (CITIIS)

• About

- CITIIS is a sub-component of the Government of India's Smart Cities Mission.
- It aims to support **sustainable urban development** in India by promoting innovative solutions and integrating various urban systems.
- **Institutions/agencies involved**
 - It is a joint program of the Ministry of Housing and Urban Affairs; Agence Francaise de Development (AFD); the European Union (EU), and the National Institute of Urban Affairs (NIUA).
- **Objective**
 - The primary objective of CITIIS is to provide **financial/ technical support** and **capacity building** to “*selected cities*” in India for the implementation of projects that address their specific urban challenges.
 - CITIIS is a competitive program, and cities are selected through a rigorous process based on the strength of their proposals.
 - These challenges may include improving urban mobility, enhancing water supply and sanitation systems, promoting sustainable energy solutions, etc.
- **Key Pillars:** CITIIS focuses on three key pillars:
 - **Innovation:** It encourages cities to propose innovative solutions to address their urban challenges.
 - **Integration:** CITIIS promotes the integration of various urban systems and sectors. It aims to break silos and encourage collaboration between different stakeholders.
 - **Sustainability:** It emphasizes the importance of sustainability in urban development.

Different Phases of CITIIS

- **First phase:** CITIIS 1.0 was launched jointly in 2018 with a total outlay of ₹933 crore (EUR 106 million).
 - CITIIS 1.0 consisted of three components.
- **Second phase**
 - CITIIS 2.0 has been approved recently by the Union Cabinet.
 - The program will run for a period of four years, i.e., from 2023 till 2027.
 - The program envisages to support competitively selected projects **promoting circular economy** with focus on:
 - integrated waste management at the city level,
 - climate-oriented reform actions at the State level, and
 - institutional strengthening and knowledge dissemination at the National level.
 - **Funding for CITIIS 2.0** would include:
 - a loan of Rs.1760 crore (EUR 200 million) from AFD and KfW (EUR 100 million each) and
 - a technical assistance grant of Rs.106 cr. (EUR 12 million) from the EU.
 - **CITIIS 2.0 has three major components:**
 - **Component 1** - financial and technical support for **18 cities** to develop projects on climate resilience, with a focus on integrated waste management.
 - **Component 2** -All States and UTs will be eligible for support on demand basis.
All eligible states/UTs will receive support for setting up climate centres, creating state and city level climate data observatories and capacity-building for municipal staff.
 - **Component 3:** Interventions at all three levels; Centre, State and City to further climate governance in urban India.

PM SVANidhi Scheme

- Over 46.54 lakh small working capital loans have been disbursed to street vendors under the Prime Minister Street Vendor's AtmaNirbharNidhi (PM-SVANidhi) in the three years since it was launched in June, 2020.
- Out of the loans disbursed, about 40% (18,50,987) have been repaid so far.
- Most of the loans disbursed and repaid so far are first-term loans – 36,26,653 disbursed and 17,67,241 repaid.
- A total of 9,68,209 second-term loans and 59,440 third-term loans have also been disbursed till now.
- While no third-term loans have been repaid so far, 83,746 second-term loans have been paid back.

Evaluation Of The Scheme On 3-Year Completion

- In **10 states and UTs**, almost all in the Southern and North-East region, **women are the majority of the beneficiaries**.
 - Kerala is an exception**, but this state has been a pioneer in fostering women's empowerment through its own programmes like the **Kudumbashree**.
- The **social fabric of the regions** has a part to play in women outnumbering men in the number of beneficiaries.
 - For example**, in the matrilineal societies of **Meghalaya** where the youngest daughter inherits property and women operate most enterprises.
- In some states, **the local authorities targeted women's self-help groups (SHGs) as beneficiaries**.
 - For example**, Andhra Pradesh's MEPMA [Mission for Elimination of Poverty in Municipal Areas] was already working with SHGs.

Various Challenges in Implementing the Scheme:

- Uneven implementation of the Street Vendors Act across the states:** The Act necessitates a *survey of the vendors* to issue a certificate of vending. However, many states and cities have not conducted the survey yet.
- Some municipalities are also slow in issuing LORs:** In the absence of the survey, the urban local bodies (ULBs) can provide a Letter of Recommendation (LOR), if the vendor is a member of a vendor association.

Scheme Details

Launched in 2020, PM SVANidhi is a Central Sector Scheme fully funded by the Ministry of Housing and Urban Affairs. The scheme facilitates affordable collateral-free loans to street vendors.

Street vendors are eligible for a first-term loan up to Rs.10,000. A timely repayment ensures that the vendor gets a credit score and is eligible for a higher loan.

For instance, if the vendors repay the first loan, they are then eligible for a second-term loan of up to Rs.20,000 and subsequently, a third-term loan of up to Rs.50,000.

To incentivize adoption of digital transactions, a cashback of up to Rs 100 per month is given to street vendors.

Lending Agencies: Microfinance Institutions, Non-Banking Financial Company(NBFC), SHGs. On timely/early repayment of the loan, an interest subsidy of 7% per annum will be credited to the bank accounts of beneficiaries through direct benefit transfer (DBT) on a 6 monthly basis.

Eligibility

- The scheme is available for beneficiaries (engaged in vending in urban areas) belonging to only those States/UTs which have notified Rules and Scheme under Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.
- Beneficiaries from Meghalaya, which has its own State Street Vendors Act may, however, participate.

THE SOUTH-NORTH DIVIDE

State	% Women	36,33,916 Total beneficiaries	
Andhra Pradesh	70%	Men: 21,31,100 (58.64%)	Women: 15,02,597 (41.34%)
Telangana	66%		
Tamil Nadu	64%		
Karnataka	50%		
Uttar Pradesh	32%		
Madhya Pradesh	32%		
Bihar	27%		
Rajasthan	23%		
		Others: 219	

Source: PM-SVANidhi data, Ministry of Housing and Urban Affairs on June 5

Street Vendors in India

- Any person selling goods or services, who does not have a permanent shop is considered a street vendor.
- There are an estimated 50-60 lakh street vendors in India, with the largest concentrations in the cities of Delhi, Mumbai, Kolkata, and Ahmedabad. Most of the street vendors across the country are migrants.

Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014

- It was enacted to regulate street vendors in public areas and protect the livelihood rights of street vendors.
- As per the Act, vending and non-vending zones have to be demarcated and all street vendors have to be accommodated in the vending zones.
- As reported by the States/UTs, a total of 13,403 vending zones have been identified so far.
- The Act provides for a survey of all existing hawkers and certificates of vending are to be issued to all existing hawkers identified in the survey.
- Further, no hawker can be removed from his/her spot unless and until the survey has been done and certificates of vending issued.
- In order to prevent harassment of street vendors, the Act states that no street vendor shall be harassed under any other law in force. Moreover, the Street Vendors Act will override any other law related to street vendors.

Town Vending Committees

- The Act provides for the formation of Town Vending Committees (TVC) in various districts.
- The TVC is **headed by the municipal commissioner**. Since the street vendors are the biggest stakeholders, members representing them should not be less than 40 per cent of the TVC.
- The TVC has to organise the survey, decide on vending/non-vending zones, issue vending certificates, decide on vending fees that the hawkers should pay the municipality, publish the street vendor's charter etc.

Direct Seeding of Rice

- Farmers in several leading rice-growing States are shifting to **direct-seeding method** with rains getting delayed and the availability of labour becoming a challenge.
- This method, which is quite popular in small pockets across the country, allows the farmers to go ahead with sowing seeds without having to wait for rainfall.

Normal Transplantation Technique

- In transplanting, farmers prepare nurseries where the paddy seeds are first sown and raised into young plants. These seedlings are then uprooted and replanted 25-35 days later in the main field.
- For the first three weeks or so after transplanting, the plants have to be irrigated almost daily (if there are no rains) to maintain a water depth of 4-5 cm.

BACKGROUND

- Rice is the major kharif crop of India and is grown in all the major agrarian states such as Punjab, Haryana, Uttar Pradesh and Bihar.
- Since groundwater is the main source of irrigation in these states, **rice cultivation by transplanting** has depleted the water table.
- In Punjab, for instance, the groundwater declined in about 85 per cent of the state between 1984 and 2016, according to Central Ground Water Board data.
- There are only two ways to save groundwater. Either diversify from paddy to other crops or adopt water-saving techniques to grow paddy.
- According to a study, in such a scenario, DSR can help to reduce water consumption by as much as 35%.
- DSR has been slowly gaining popularity. It picked up more during 2020 when Punjab and Haryana faced a labour shortage caused by migration of workers during the COVID-19 lockdown and farmers shifted to DSR, which is not labour-intensive.



- This is done because paddy growth is compromised by weeds that compete for nutrition, sunlight and water.
- Water prevents growth of weeds by denying them oxygen in the submerged stage. Water thus acts as herbicide for paddy.

Direct Seeding of Rice

- DSR is also called the '**broadcasting seed technique**', under which pre-germinated seeds are directly drilled into the field by a tractor-powered machine.
- In DSR, water is replaced by real chemical herbicides. There is no nursery preparation or transplantation involved in this method.
- Farmers only have to level their land and give one pre-sowing irrigation (rauni), and paddy (non-basmati) is seeded immediately.

Advantages of DSR	Drawbacks of DSR
<ul style="list-style-type: none"> • The biggest advantage in DSR is of water saving, as the first irrigation (apart from the pre-sowing) under DSR is necessary only 21 days after sowing. • The second savings, is that of labour. • Reduce methane emissions due to a shorter flooding period & less soil disturbance. 	<ul style="list-style-type: none"> • The main issue is <u>availability of the herbicides</u>. Even the seed requirement for DSR is also higher, at 8-10 kg/acre, compared to 4-5 kg in transplanting. • Further, <u>laser land levelling</u>, which costs Rs 1,000/acre, is compulsory in DSR, which is not the case in transplanting. • The <u>time of sowing</u> is also important and the seeds have to be sown by the first fortnight of June, as the plants have to come out properly before the monsoon rains arrive. There is no such problem in transplanting, where the saplings have already been raised in the nursery.

100 Days 100 Pays Campaign

- RBI has launched a '100 Days 100 Pays' campaign to **trace and settle** the top 100 unclaimed deposits of every bank in every district within 100 days.
- The RBI terms *balances in current / savings accounts which are not operated for 10 years, or term deposits not claimed within 10 years from the date of maturity* as **unclaimed deposits**.
- Banks transfer these amounts to the **Depositor Education and Awareness (DEA) Fund** maintained by the RBI.
- The depositors are, however, still entitled to claim the deposits at a later date from the banks where such deposits were held along with interest.
- The total amount of unclaimed deposits transferred to the RBI by public sector banks (PSBs) was Rs 35,012 crore till February 2023.
- Currently, the State Bank of India (SBI) tops the chart of unclaimed deposits worth Rs 8,086 crore followed by Punjab National Bank Rs 5,340 crore, Canara Bank Rs 4,558 crore and Bank of Baroda Rs 3,904 crore.

Deposit Claiming

- Every bank is required to show the details of unclaimed accounts on its website with some identifiable details.
- RBI has also announced the setting up of a **centralised web portal** for the public to search unclaimed deposits across multiple banks.
- The search results will be enhanced with the use of artificial intelligence (AI) tools to improve the access of depositors or beneficiaries to such data.

- At present, bank customers have to go through the websites of multiple banks to claim these deposits. This new web portal will help bank customers to find their unclaimed deposits at a single point.
- It will also create awareness amongst bank account holders to keep track of their money and understand the importance of nomination and KYC updation.

India's First International Cruise

- The Ministry of Ports, Shipping & Waterways flagged off the maiden International Cruise Vessel - **MV Empress**, India's first international cruise vessel - from Chennai to Sri Lanka.
- This marks the beginning of the international cruise tourism terminal at Chennai.
- The cruise service is the result of an MoU signed during the first Incredible India International Cruise Conference in 2022 between Chennai Port and M/S Waterways Leisure Tourism Pvt Ltd to start **domestic and international cruise service.**
- Built at a cost of ₹17.21 crores, the cruise service will sail to **three Sri Lankan ports viz. Hambantota, Trincomalee, and Kankesanturei.**

Prospects Of Cruise Tourism

- With an overwhelming response by 85,000 passengers availing the cruise service through 37 vessels for the **domestic circuit**, it is expected that the opening up of **international circuit** will further amplify the business of cruise tourism in the region.
- Plans are afoot to develop **new cruise tourism terminal** in Andamans, Puducherry and Lakshadweep circuits.
- In addition, feasibility studies are being conducted to develop ferry circuits across India, Sri Lanka, Thailand and Myanmar.
- Three new international cruise terminals are likely to be completed and become operational by 2024.
- It is expected that the volume of cruise ships will increase from 208 in 2023 to 500 in 2030 and up to 1100 by 2047.
- Consequently, the number of passengers availing cruise services is also likely to increase from 9.5 lakhs in 2030 to 45 lakhs in 2047.

Stock Limits on Tur and Urad Dal

- The Centre has imposed stock limits on tur and urad dal by invoking the **Essential Commodities Act, 1955**, in order to prevent hoarding and speculation, and also to improve affordability.
- The country's tur production is expected to be lower at **3.43 million tonnes** in the 2022-23 crop year (July-June) against **4.22 million tonnes** in the previous year.
- And urad output is estimated to be down at **2.61 million tonnes** from **2.77 million tonnes.**
- These stock limits on pulses are applicable to wholesalers, retailers,

ESSENTIAL COMMODITIES ACT, 1955

- The Essential Commodities Act (ECA), 1955 was enacted at a time when **India was facing food scarcity due to low levels of food grains production.**
- The country was dependent on imports and assistance (such as wheat imports from the US under PL 480) to feed the population.
- Thus, the Essential Commodities Act was enacted, **to stop hoarding and black marketing of food and gives consumers protection** against irrational spikes in prices of essential commodities.



- **Implementing Agency:** Ministry of Consumer Affairs, Food and Public Distribution.

Essential Commodity

- There is **no specific definition of essential commodities** in ECA, 1955. It states that an "essential commodity" means a commodity specified in the **Schedule of the Act.**
- The Act gives powers to the **central government** to add or remove a commodity in the Schedule.
- By declaring a commodity as essential, the **government can control the production, supply, and distribution of that commodity, and impose a stock limit.**

big chain retailers, millers and importers and will be applicable till October 31, 2023.

- Stock limits applicable to each pulse individually will be 200 MT for wholesalers; 5 MT for retailers; 5 MT at each retail outlet and 200 MT at the depot for big chain retailers.
- In the case of millers, the stock limit will be the last three months of production or 25 per cent of annual installed capacity, whichever is higher. Whereas importers are not allowed to hold stock beyond 30 days from the date of customs clearance.

Issues With ECA

- The Act has created **market distortions** that have prevented the efficient development of agricultural markets.
- As almost all crops are seasonal, ensuring round-the-clock supply requires adequate build-up of stocks during the season. So, it may not always be possible to differentiate between genuine stock build-up and speculative hoarding.
- Also, there can be genuine shortages due to **weather-related disruptions** in which case prices will move up. So, if prices are always monitored, farmers may have no incentive to farm.
- Further, the Act does not distinguish between hoarders and firms that genuinely need to hold on to these stocks due to the nature of their operations.
- For example, **food processing industries** need to maintain large stocks to run their operations smoothly. Stock limits curtail their operations.
- In such a situation, large scale private investments are unlikely to flow into food processing and cold storage facilities.
- The Act has also reduced the effectiveness of **free trade and flow of commodities** from areas with surplus stock to markets with higher demand.
- Despite, several raids conducted under the ECA, the conviction rate has been very low. This shows that the ECA only seems to **enable rent-seeking and harassment.**
 - ✓ Rent-seeking is a practice of manipulating public policy or economic conditions as a strategy for increasing profits.



Shanan Power Project

- Punjab and Himachal Pradesh are set for a face-off as the 99-year lease on the British-era 110 MW Shanan hydropower project will expire in March 2024.
- Situated at Jogindernagar in Mandi district of Himachal Pradesh, the project is presently under the control of the Punjab Government.
- The project harnesses the power of the **Uhl River, a tributary of Beas River.**
- Himachal Pradesh wants the project handed over to it on expiry of the lease period. The Punjab government, on the other hand, is in no mood to part with its prized project, and is prepared to take legal recourse to retain it.

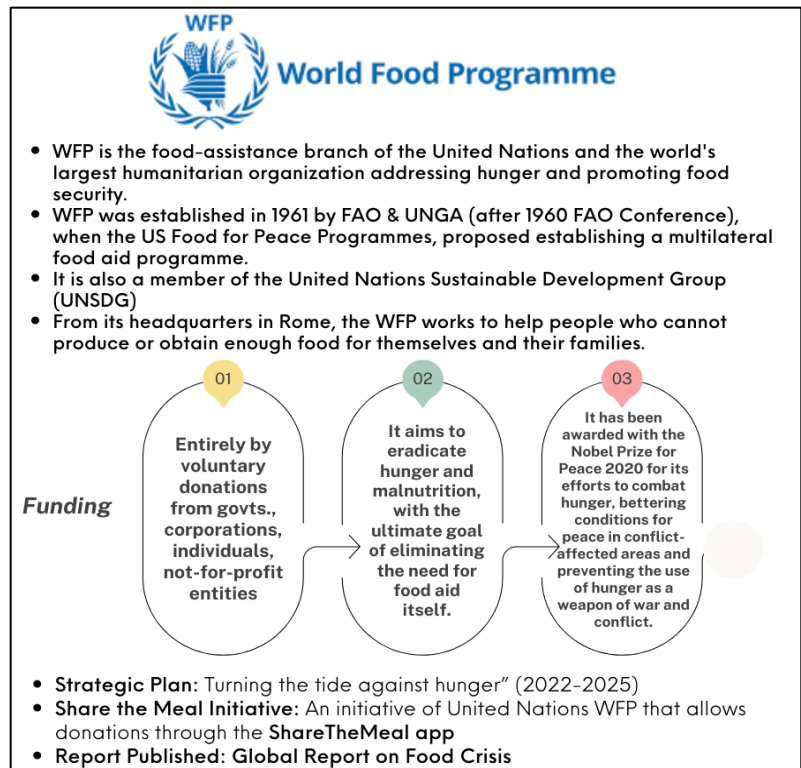
- The Shanan power project was constructed under a 99-year lease deed executed between Joginder Sen, ruler of Mandi state and Col B C Battye, then chief engineer of the Government of Punjab.
- The first stage (48 MW) of the project was commissioned in 1932. The project was constructed following the execution of the lease agreement in 1925.
- After the reorganisation of states in 1966, the Shanan powerhouse was given to Punjab by the Centre as the lease agreement was yet to expire.

World Food Programme

The **United Nations World Food Programme** has temporarily suspended food aid to Ethiopia because its supplies are being diverted.

WFP and India

- WFP has been working in India since **1963**, with work transitioning from food distribution to technical assistance since the country achieved self-sufficiency in cereal production.
- WFP mainly assists India in the following areas:
 - Transforming the *targeted public distribution system, fortification of government distributed food, mapping and monitoring of food insecurity.*
- WFP is also supporting the government's Poverty and Human Development Monitoring Agency in establishing a State-level Food Security Analysis Unit, working towards the goal of achieving Zero Hunger.
- It also aims to enable people with a high risk of malnutrition, especially women, children and adolescent girls, to have improved nutrition by 2025.



Lightweight Payment System

- **RBI** has conceptualised a **lightweight payment and settlements system**, which it is calling a **"bunker"** equivalent of digital payments,
- It can be operated from anywhere by a bare **minimum staff** in emergencies such as natural calamities or war.
- The infrastructure for this system will be **independent of the technologies** that underlie the existing systems of payments such as UPI, NEFT, and RTGS.
- The central bank has yet not offered a timeline for the launch of this payments system.

Need For The System

- In its Annual Report for 2022-23, RBI said that the lightweight and portable payment system is expected to operate on **minimalistic hardware and software**, and would be made active only on a need basis.
- Such a lightweight and portable payment system could ensure near zero downtime of the payment and settlement system in the country.

- In this way, it can keep the **liquidity pipeline** of the economy alive and intact by facilitating uninterrupted functioning of essential payment services like bulk payments, interbank payments and provision of cash to participant institutions.
- The system is expected to process transactions that are critical to ensure the stability of the economy, including government and market related transactions.
- *It will also maintain transaction records for reconciliation and audit purposes.*
- Having such a resilient system is also likely to act as a bunker equivalent in payment systems and thereby enhance public confidence in digital payments and financial market infrastructure even during extreme conditions.

Difference from UPI

- According to the RBI, existing conventional payments systems such as RTGS, NEFT, and UPI are designed to handle large volumes of transactions while ensuring sustained availability.
- As a result, they are dependent on **complex wired networks** backed by **advanced IT infrastructure**.
- However, catastrophic events like natural calamities and war have the potential to make these payment systems temporarily unavailable by disrupting the underlying information and communication infrastructure.
- Therefore, it is advisable to be prepared to face such extreme and volatile situations.

Sovereign Gold Bond

- The Union Government, in consultation with RBI, has decided to issue Sovereign Gold Bonds (SGBs) this year.
- SGB scheme was launched by the Ministry of Finance in 2015 to provide people an alternative to physical gold investment and reduce the physical demand of gold and discourage high imports. The bonds are issued by the RBI on behalf of the Government.
- SGBs are **sold through** Scheduled Commercial banks (except Small Finance Banks and Payment Banks), Stock Holding Corporation of India Limited (SHCIL), Clearing Corporation of India Limited (CCIL), designated post offices, and recognised stock exchanges like the Bombay Stock Exchange.
- **Eligibility:** Eligible investors include resident individuals, Hindu Undivided Family (HUF), trusts, universities and charitable institutions.

Features of SGB

- The bonds are secured against physical gold holdings of the government and therefore are denominated in grams of gold.
- Minimum investment in the bond is one gram with an annual maximum limit of subscription of 4 kg for individuals, 4 kg for HUFs and 20 kg for trusts and similar entities per fiscal year.
- Though the tenor of the bond is 8 years, early encashment/redemption of the bond is allowed after fifth year from the date of issue.
- The bond is tradable on exchanges, if held in demat form. It can also be transferred to any other eligible investor.
- Bonds also give fixed interest (2.5%) per annum on the amount of initial investment.
- Interest on the Bonds is taxable. However, the capital gains tax (CGT) arising on redemption has been exempted.
 - ✓ CGT is a kind of tax that individuals have to pay on benefit or gain arising from the sale of capital assets such as investments in the stock market and real estate.

- Bonds can also be used as collateral for loans from banks, financial Institutions and Non-Banking Financial Companies (NBFC).

Benefits

- Investors are assured of the market value of gold at the time of maturity and periodical interest.
- SGB is free from issues like making charges and purity in the case of gold in jewellery form.
- SGB is paper gold and is free from these risks and storage issues. The bonds are held in books of the RBI or in demat form, thus always keeping it safe.

Kari Ishad Mango

- The Kari Ishad mango prominently grown in Ankola taluk of Uttara Kannada was recently given the Geographical Indication (GI) tag.
- In addition to Ankola, the mango is grown in Karwar and to a certain extent in Kumta of Uttara Kannada.
- The Kari Ishad is accepted as one of the finest quality mangoes due to its unique aroma, luscious taste, high amount of pulp, shape, and size.
- The fruit has a short shelf life of about five days and its trading is limited to Ankola, Karwar and Hubballi markets.
- The Ishad mango has two variants — **Kari Ishad**, which has thin skin, more pulp and is sweeter, and **Bili Ishad**, which has thick skin and has less pulp and sweetness.

GEOGRAPHICAL INDICATION

- 01

The World Intellectual Property Organisation defines a GI as a sign that can be used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- 02

GIs are typically used for agricultural products, foodstuffs, handicrafts, industrial products, wines and spirit drinks. Some examples of GI are, Darjeeling tea, Kullu shawl, Mysore agarbathi, Swiss watches etc.
- 03

Internationally, GIs are covered as an element of intellectual property rights under the Paris Convention for the Protection of Industrial Property. They are also covered under the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement.
- 04

Getting a GI tag can provide a better market for the products and also helps to prevent misuse of the product names.
- 05

A GI registration is given to an area, not a trader, but once a product gets the registration, traders dealing in the product can apply for selling it with the GI logo. Authorised traders are given a unique GI number.

Jeera Price Rise

Over the past eight months, the prices of cumin (commonly known as jeera) has gone up significantly.

Supply Demand imbalance

- As per market functionaries the main reason is the supply-demand imbalance. Arrivals this year (the marketing season for jeera begins from mid-February and peaks in May) have been half of the demand.
- India's jeera production, according to government estimates, has fallen from 9.12 lakh tonnes (lt) in 2019-20 to 7.95 lt in 2020-21 and 7.25 lt in 2021-22.
- As per the traders, the size of the 2022-23 crop (sown in October-November and harvested in February-March) is marginally lower, mainly due to unseasonal rains during the second half of March this time.
- Demand has gone up this year as hotels and restaurants are reopening after long-drawn Covid-19 restrictions.

Low Opening Stocks

- Another reason is the very low carry-forward or opening stocks. This time's carry-forward from the 2021-22 crop has been just 3-4 lakh bags.



- The low inventory with traders, coupled with a dip in production, has resulted in prices being pushed up.

Export Markets

- India's jeera production is meant for both its domestic market as well as for export. During 2022-23 (April-March), exports of cumin seeds amounted to 1.87 lt as against 2.17 lt in the previous fiscal.
- The top export destinations include China, Bangladesh, US, UAE, Pakistan, Saudi Arabia and Turkey.
- China has been importing Indian cumin aggressively. Over the past three months alone, China has imported 25,000-30,000 tonnes of cumin from India, as crop there is not sufficient to meet the demand.
- There is demand from Bangladesh & Pakistan also, because of Bakrid festival towards end of this month.

Jeera Production

- Jeera is an extremely weather-sensitive crop. It requires a moderately cool and dry climate without any humidity, which is conducive for fungal infestation during crop's flowering and seed development stages.
- This naturally limits the area of cultivation to Saurashtra, Kutch and the northern parts of Gujarat and adjoining districts of western Rajasthan such as Jalore, Barmer, Jodhpur, Jaisalmer, Pali and Nagaur.
- Jeera is grown on about 8 lakh hectares area in India. Out of the total 7.25 lt production in 2021-22, two states – Gujarat (4.20 lt) and Rajasthan (3.03 lt) – had a combined 99.7% share.
- India accounts for some 70% of the world's production of jeera. Other countries such as Syria, Turkey, UAE and Iran make up the balance 30%.
- Many of them, unlike India, have been facing production disruptions from civil war and natural disasters.

Future Outlook

- Jeera isn't an essential food, but a premium seed spice that imparts aroma to everything from curries to rice to soft drinks.
- The overall quantities for such applications is generally very low. Unlike in the case of onions and potatoes, which have a bearing on the consumer price index, the government may not be inclined to intervene much in the market to control its prices.

Face Authentication for PM Kisan

- In a first for any central welfare scheme, the government has rolled out a **face authentication feature** in the Pradhan Mantri Kisan Samman Nidhi (PM Kisan) app.
- This will enable beneficiary farmers to complete their e-KYC process by just scanning their face on mobile.
- Until now, e-KYC of the PM-Kisan beneficiaries used to be done through either biometrics at a designated centre or one-time passwords sent to mobile phone numbers linked with Aadhaar.
- However, during the e-KYC exercise, officials found many instances when farmers' mobile numbers were not linked to Aadhaar due to which the process could not be completed.
- In the case of biometrics, several elderly farmers faced problems going to the nearby centre. Also, many faced the issue of non-matching of fingerprints.
- Therefore, to ease the e-KYC process, the ministry decided to introduce the face authentication feature in the PM-Kisan mobile app.
- The face authentication feature uses iris data of a person having an Aadhaar number. The Aadhaar iris data was available with the Unique Identification Authority of India.

Integration with Bhashini

- In another move, the PM-Kisan scheme is also integrating with Bhashini to **provide farmers information in their native language**.

- Bhashini is the government's **National Public Digital Platform** for languages to develop services and products for citizens by utilising the power of artificial intelligence and other emerging technologies.

PM Kisan

- PM Kisan is a **central sector scheme**, with 100 per cent funding from the Union Government. The scheme was started to increase the income of the farmers by providing income support to eligible landholding farmers' families across the country.
- It aims to supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health, appropriate yields as well as to meet **domestic needs**.
- Under the scheme, which became effective from 2018, the Centre provides **Rs 6,000 per year** to eligible farmers in three equal instalments of Rs 2,000.
- The state governments and Union Territory administration identify the farmers who are eligible for the scheme and share the list with the Centre.
- The central government then directly transfers the fund to the bank accounts of the beneficiaries.
- According to the Agriculture Ministry, **more than 11 crore farmers** have availed the scheme and an **amount of Rs 2.42 lakh crore** has been transferred to their accounts.

Eligible Farmers

- The Scheme initially provided income support to all Small and Marginal Farmers' families across the country, holding cultivable land upto 2 hectares.
- In June, 2019, the scheme was **extended to cover all farmer families** in the country irrespective of the size of their land holdings.

Exclusion Criteria

However, the following categories of people holding cultivable land have been excluded from the scheme:

- ✓ Institutional landholders.
- ✓ Present or retired officers and employees of state/central government as well as PSUs and government autonomous bodies.
- ✓ Income Tax payers in last assessment year.
- ✓ Farmer families holding constitutional posts.
- ✓ Professionals like doctors, engineers and lawyers.
- ✓ Retired pensioners with a monthly pension of over Rs 10,000.

Issues

- As per **Rangarajan Committee**, India's poverty line is ₹32 per person/day in rural areas and ₹47 in urban areas.
- PM-KISAN support of ₹17 a day for a household is largely **insufficient** for even bare minimum sustenance. Due to volatility of markets and price fluctuations in different regions, it is important to **index the cash transfers to local inflation**.
- The scheme also does not provide a clear framework for effective **grievance redressal**.

NHAI's Knowledge Sharing Platform

- To promote inclusive development of national highways, the National Highways Authority of India (NHAI) has launched a knowledge sharing platform.

- The platform, hosted on the NHA website, aims to facilitate the sharing of knowledge and innovative best practices among experts and citizens in the field of road design, construction, road safety, environment sustainability and related fields.
- With the help of innovation and modern technology, NHA is developing National Highway infrastructure at a rapid pace.
- Apart from innovative use of recycled materials such as fly-ash and plastic waste, NHA is also encouraging use of **Recycled Asphalt (RAP)** and **Recycled Aggregates (RA)** in the National Highway construction to promote sustainable and eco-friendly practices.
- With the construction of state-of-the-art tunnels, modern bridges, wildlife corridors, and expressways, it is crucial to have wider participation in the development of national highway infrastructure.
- The platform will encourage sharing of best practices from around the world and will contribute towards holistic development of the National Highway infrastructure in the country.
- It will serve as a hub for experts and individuals who wish to share their expertise, experiences, and ideas.
- NHA officials will review the uploaded information and evaluate its potential for implementation.

National Bank for Financing Infrastructure & Development

- National Bank for Financing Infrastructure & Development (NaBFID) aims to **disburse** about ₹60,000 crore by the end of this fiscal, having lent ₹8,000 crore already in the first quarter.
- It is also looking to **sanction** ₹1 lakh crore loans this fiscal to both greenfield as well as brownfield assets in the key infrastructure space.

NaBFID

- NaBFID was set up in 2021, by an Act of the Parliament (The National Bank for Financing Infrastructure and Development Act, 2021).
- It is a specialized **Development Finance Institution** aimed at supporting the country's infrastructure sector.
- Its **objectives** are addressing the gaps in long-term finance for infrastructure development, strengthening the development of bonds and derivatives markets in India, and sustainably boosting the country's economy.
- It is **regulated and supervised by RBI** as an All India Financial Institution (AIFI). Apart from NaBFID there are **four more AIFIs** in the country:
 - Export - Import Bank of India (Exim Bank)
 - National Bank for Agriculture and Rural Development (NABARD)
 - Small Industries Development Bank of India (SIDBI)
 - National Housing Bank (NHB)

Development Finance Institution (DFI)

- DFIs are organizations **owned by the government or public institutions** to provide funds for infrastructure and large-scale projects, where it often becomes unviable for large banks to lend.
- They provide **two types of funds- Medium (1-5 years) and Large (< 5 years)**.
- DFIs do not accept deposits from people but they raise funds by borrowing from governments, insurance companies, pension funds, and sovereign funds.
- It also provides a guarantee to banks on behalf of companies and subscriptions to shares, debentures etc.
- They also provide technical assistance like project report, viability study and consultancy services.

DICGC For PPIS

- Prepaid Payment Instrument (PPI) holders may soon get protection for their money against any fraud or unauthorised payment transactions.

- A committee set up to review the Customer Service Standards in RBI Regulated Entities has recommended the extension of Deposit Insurance and Credit Guarantee Corporation (DICGC) cover to PPIs. At present, it is available only to bank deposits.

Prepaid Payment Instrument (PPI)

- PPIs are instruments that facilitate the purchase of goods and services, conduct of financial services and enable remittance facilities, among others, against the money stored in them.
- PPIs can be issued as cards or wallets. PPIs include online wallets (like Paytm Wallet, Amazon Pay Wallet, PhonePe Wallet, etc.) and preloaded gift cards.
- There are two types of PPIs – **small PPIs and full-KYC (know your customer) PPIs.**
 - ✓ Further, small PPIs are categorized as – PPIs up to Rs 10,000 (with cash loading facility) and PPIs up to Rs 10,000 (with no cash loading facility).
- PPIs can be loaded/reloaded by cash, debit to a bank account, or credit and debit cards. The cash loading of PPIs is limited to Rs 50,000 per month subject to the overall limit of the PPI.
- As per the recent RBI data, the total number of PPIs stood at 16,185.26 lakh as on March 31, 2023. Of this, the number of wallets was nearly 1,3384.68 lakh and the number of cards was 2800.58 lakh.
- In FY2023, the total volume transacted through PPIs was 74,667.44 lakh.

Issuance of PPI Instruments

- PPIs can be issued by banks and non-banks after obtaining approval from the RBI.
- As of November, 2022, over 58 banks including Airtel Payments Bank, Axis Bank, Bank of Baroda, Jio Payments Bank, Kotak Mahindra Bank, Standard Chartered Bank, UCO Bank and Union Bank have been permitted to issue and operate prepaid payment instruments.
- There are 33 non-bank PPI issuers as of May, 2023. Some of the non-bank PPI issuers are Amazon Pay (India), Bajaj Finance, Delhi Metro Rail Corporation Ltd, Manappuram Finance Ltd, Ola Financial Services, Razorpay Technologies and Sodexo SVC India Pvt.

Recommendations of RBI Committee

- The committee said the RBI has authorised a number of *banks and non-banks entities* to issue PPIs in the country.
- The money kept in wallets is in the nature of deposits. However, currently, the DICGC cover extends only to bank deposits.
- Being deposits with the PPI issuers who are also regulated by the RBI, extending deposit insurance to the PPI segment needs examination.

Deposit Insurance

- Deposit insurance offers protection to the deposits of bank customers in case a bank becomes insolvent. A bank becomes insolvent when its total liabilities exceed its total assets, usually as a result of poor investing or lending decisions.
- So, an insolvent bank may not be able to repay all the money that it owes its depositors. In such cases, the government steps in to compensate depositors, usually up to a certain threshold amount.
- Each depositor in a bank is insured up to a maximum of Rs 5 lakh for both principal and interest amount held by them as on the date of liquidation or failure of a bank.
- Deposits in public and private sector banks, local area banks, small finance banks, regional rural banks, cooperative banks, *Indian branches of foreign banks* and payments banks are all insured by the DICGC. However, primary cooperative societies are not insured by the DICGC. DICGC is a wholly owned subsidiary of the RBI.

- The number of registered insured banks as of March, 2023, stood at 2,027, comprising 140 commercial banks and 1,887 co-operative banks.
- The DICGC insures all deposits such as savings, fixed, current, recurring, etc. except the following:
 - Deposits of foreign Governments;
 - Deposits of Central/State Governments;
 - Inter-bank deposits;
 - Deposits of State Land Development Banks with the State co-operative bank;
 - Any amount due on account of and deposit received outside India;
 - Any amount, specifically exempted by the corporation with the previous approval of RBI.

Benefits and Issues

- It can help to boost the confidence depositors have in the banking system. The increased confidence, in turn, can help reduce the risk of a bank run.
 - ✓ A **bank run** is a situation in which a large number of worried depositors demand their money from a bank at the same time.
- However, critics of deposit insurance, claim that it leads to **moral hazard**. When depositors know that their deposits will be protected by the government, they do not conduct due diligence on the banks in which they deposit their money.
- In fact, bank failures have increased since countries began adopting deposit insurance.
- Studies show that banks in countries with the highest deposit insurance coverage were five times more fragile than countries offering the lowest coverage.

Goldilocks Scenario For An Economy

- In its latest policy review the Monetary Policy Committee (MPC) of the RBI decided to maintain the status quo.
- In other words, it changed nothing. That is, the MPC neither changed the repo rate nor its policy stance. These are typical the two things it can change during a policy review.
- The repo rate is nothing but the interest rate that RBI levies when it lends money to banks. The policy stance tells everyone what the MPC is trying to achieve by its actions.
- It tells whether the MPC is trying to contain inflation or boost growth while containing inflation or simply being neutral.
- There are two more things that observers watch out for in MPC statements: the outlooks on GDP growth and inflation. Here, too, barely anything changed.
- At 6.5%, the GDP growth forecast for the current financial year (2023-24 or FY24) stayed the same as it was in the April policy. To be sure, the MPC sits once every two months.
- Further, at 5.1%, the inflation forecast for FY24 too stayed pretty similar to what it was in April.

Goldilocks Economy

- The reference to Goldilocks moment comes from the children's tale about a girl named Goldilocks who went inside the house of a family of three bears and chose the bowl of porridge which was just the perfect temperature — neither too hot, nor too cold.
- A Goldilocks scenario for an economy refers to a point where it is running just perfectly — neither too hot (implying high inflation) nor too cold (referring to faltering GDP growth).

SCORES Platform

- A total of 2,457 complaints against companies and market intermediaries have been disposed of through SEBI's SCORES platform in May.
- At the beginning of May, as many as 2,984 complaints were pending, and 2,626 fresh complaints were received.
- These complaints were related to investment advisers, research analysts, corporate governance/ listing conditions, minimum public shareholding, venture capital funds and takeover/ restructuring. The average resolution time for a complaint was 31 days.
- SCORES is a grievance redressal system that was launched in June 2011. It is designed to help investors to lodge their complaints online with SEBI, pertaining to the securities market, against companies, intermediaries and market infrastructure institutions.

Rupay Prepaid Forex Card

- RBI has decided to permit banks to issue RuPay Prepaid forex cards to customers, as a part of its strategy of internationalising issuance and acceptance of Rupay cards.
- Further, RuPay cards will be enabled for issuance in foreign jurisdictions.
- RuPay Debit and Credit cards issued by banks in India are gaining increased acceptance abroad. These measures will further expand the reach and acceptance of RuPay cards globally.
- The acceptance of RuPay cards by Bhutan, Singapore, Nepal, and the UAE strengthened the push for more cross-border payment partnerships and expanded the global reach of UPI and RuPay.
- The widespread adoption of RuPay cards abroad supports India's vision of a digital economy, promoting digital payments, financial inclusion, and overall economic growth.
- It will act as a significant advancement in facilitating smooth cross-border transactions.

Open Market Sale Scheme

- Recently, the Centre decided to restrict the quantity that a single bidder can purchase in a single bid under the OMSS (Open Market Sale Scheme).
- While the maximum quantity allowed earlier was 3,000 metric tonnes (MT) per bid for a buyer, it will now range from 10-100 metric tonnes (MT).

OMSS

- Firstly, the procurement of food grains like wheat and paddy for the central pool happens in Rabi and Kharif marketing seasons by the FCI and State corporations
- According to procurement estimates finalised by the Union Government before the seasons, these purchases happen as per the Minimum Support Price (MSP).
- From the central pool, the government has to set aside wheat and rice for the 80 crore beneficiaries of free foodgrains under the National Food Security Act (NFSA), maintain a buffer stock, and have a marketable surplus.
- Under the OMSS, the FCI sells surplus food grains from the central pool especially wheat and rice in the open market to traders, bulk consumers, retail chains etc at pre-determined prices.
- FCI does this through e-auctions where open market bidders can buy specified quantities at the prices set at the start of a cycle and revised routinely.
- Usually, states are also allowed to procure food grains through the OMSS without participating in the auctions, for their needs beyond what they get from the central pool to distribute to NFSA beneficiaries.

- The idea is to activate the OMSS during the lean season, the time between harvests, to improve and regulate domestic supply and availability of the two grains and bring down their prices in the open market. Essentially this makes the scheme a measure to curb food grain inflation.

Revisions in OMSS

- As per the FCI, the quantities have been reduced this time to accommodate more small and marginal buyers and to ensure wider reach of the scheme. It is expected that this move will allow the supplies to the general public immediately.
- Another objective is to curb retail prices as allowing smaller bids should ideally break monopolies of bulk buyers, allowing more competitive bids by small buyers.
- Another reason is to meet the FCI's food security obligations. In recent years, production of agriculture crops was affected due to untimely rains, rise in temperature in the month of March.
- This makes it necessary for the FCI to release its stocks in a judicious manner under OMSS, so that the overall stock position is maintained at a comfortable level.

POLITY AND GOVERNANCE

Commission of Railway Safety (CRS)

Commission of Railway Safety (CRS) is investigating the recent tragic train accident in Odisha. The CRS is a **statutory body**.

About CRS

What?	<ul style="list-style-type: none"> Working under the Ministry of Civil Aviation (MoCA) of Government of India, CRS acts as a railway safety authority. CRS was kept under the supervision of MoCA and not under Ministry of Railways to keep it insulated from the influence of the railways and prevent conflicts of interest.
Headquarters	Lucknow, Uttar Pradesh.
History & Evolution of CRS	<p>Origin during the British Era & Appointment of Consulting Engineers:</p> <p>When railways were first introduced in India, the British administration appointed '<i>consulting engineers</i>' to ensure its efficiency, economy, and safety.</p> <p>Evolution of Railway Inspectorate:</p> <p>These engineers were redesignated as <i>government inspectors</i> when British government started the construction of railways and their department came to be known as Railways Inspectorate in 1883.</p> <p>The Railway Inspectorate was placed under the <u>Railway Board</u> in <u>1905</u> established under the Indian Railway Board Act. This Railway Board was entrusted with powers and functions of the government and was authorized to make rules for railway operations in India. Thus, it became the safety controlling authority for railways in India.</p> <p>Separation from the Railway Board:</p> <p>The Government of India Act, 1935 recommended giving the responsibility of railways safety to an authority independent of Railway board but the idea could not materialise.</p> <p>Later in 1939, after the tragic Bihta derailment in Bihar in 1939, a panel headed by then chief inspecting officer of the British Railways, A.H.L. Mount, recommended separation of the Railway Inspectorate from the Railway Board. This idea was also endorsed by the central legislature.</p> <p>Finally in May 1941, the Railway Inspectorate was separated from the Railway Board and put under the administrative control of Department of Posts and Air and since then it has been under the control of civil aviation in India.</p> <p>Post-Independence</p> <p>Railway Inspectorate was re-designated as CRS in 1961.</p>
Functions	<ul style="list-style-type: none"> It deals with matters pertaining to rail travel safety and train operations. Investigating serious train accidents. Inspections and Approvals: The fitness of new railways for public use is evaluated by safety commissioners who perform inspections. Additionally, regular inspections of existing railways and rolling stock are carried out by these commissioners. Performing statutory functions of inspectorial, investigatory & advisory nature according to the Railway Act (1989). The Railway Act (1989) provides the legislative provisions for railway zones, construction

	and maintenance of works, passenger and employee services.
Composition	<ul style="list-style-type: none"> • It comprises of one Chief Commissioner located at Lucknow, who serves as the Principal Technical Advisor to the Central Government on railway safety. • Nine Commissioners located across different railway zones in the country. They cover the 17 Zonal Railways, as well as Metro Railway (Kolkata), DMRC (Delhi), MRTS (Chennai), and Konkan Railway. • The Commissioners are assisted by Deputy Commissioners. The headquarters in Lucknow has five deputy commissioners, while Mumbai and Kolkata each have one, assisting the CRS in matters related to signaling and telecommunication disciplines.

Issues in Functioning

A Parliamentary Standing Committee headed by **TG Venkatesh** highlighted the issues faced by CRS in 2022. This report was presented in Rajya Sabha. Out of the 15 recommendations only one was accepted (regarding the development and implementation of the Train Collision Avoidance System 'KAVACH'), four were pursued by the Ministry and remaining ten were rejected.

Key Issues Regarding CRS	Government's Response
Dual Control- The involvement of two Ministries in its functioning leads to confusion in the command structure.	It assured that there was no interference in the day to day working of the Commission by the Ministry and sufficient safeguards have been built to ensure the Commission's independent working.
Post of Deputy Commissioners- The Deputy Commissioners are next to the commissioners in hierarchy but their post is filled on deputation basis by the officers from ministry of railways. Due to this, the incumbent may not be able to give suggestions/ recommendations against the Ministry of Railways, to which he originally belongs.	It said that there will be no promotion avenues for Deputy Commissioners if they are selected on a permanent basis therefore, they are appointed on deputation basis.
Power to amend the Railways Act, 1989- Ministry of Railways has full power and authority to amend the provisions of the Railways Act, 1989 and can make changes to the rules without consulting the CRS.	It said that no decision can be taken unilaterally on any issue that concerns CRS.
Action Taken Reports (ATR)- CRS is required to submit an accident report to the Ministry of Railways. The time limit for the preliminary report is 30 days and 180 days for the final report. But there is no prescribed time limit for the railway board to submit its <u>action taken report</u> on the recommendations given by CRS to avoid such accidents in the future.	It said that there should be a fixed time frame for submission of the Action Taken Reports, as delay is not desirable from the point of view of public safety. It suggested submitting a monthly status report to be forwarded by the Ministry of Railways to the Chief Commissioner's office in case of delays in action taken reports.
Proposals by CRS- The Ministry of Railways has absolute power to accept, regulate or modify any condition proposed by the CRS and it's not mandatory for the ministry to consider the views of CRS.	

Way Forward or Suggestions

- CRS should be made an autonomous statutory body on the lines of other independent regulatory bodies.

- Government should review the process of amending the Railways Act, 1989 to avoid its misuse.
- The procedure for submitting Action Taken Reports should be streamlined and a time-frame should be fixed for the same as the delay in submitting these reports makes the whole effort of investigation useless.

NyayaVikas Portal

The Department of Justice has introduced the NyayaVikas **Portal** for monitoring its Centrally Sponsored Scheme (CSS) Nyaya Vikas Program for **Judicial Infrastructure** with technical assistance of NRSC (National Remote Sensing Centre), ISRO.

✓ Nyaya Vikas Program for Development of **Infrastructure Facilities** for Districts and Subordinate Judiciary is being implemented since 1993-94.

Key Features of Nyaya Vikas Portal

- It will help in empowering stakeholders with seamless access to information (enhanced transparency) about funding, documentation, project monitoring and approval.
- It provides a User-friendly login system with four types of log-in options-
 - **Central User Login**- To release funds to states, upload important documents to the home page etc.
 - **State User Login**- It allows to take a picture of the ongoing project, upload it, and submit the Utilization Certificate for the state.
 - **Surveyor User**- It will allow to select a project, submit observations, & access the dashboard.
 - **Approver User**- It will allow to give approval to the observations collected by the surveyor through either the web portal or mobile app, with the icon turning green.
- It will facilitate submission of Utilization Certificates
- It will help monitor fund release & utilization
- It will allow geo-tagging of Infrastructure created under the scheme.
- The portal can be accessed through <https://bhuvan-nyayavikas.nrsc.gov.in>

About Nyaya Vikas Program

- This CSS was initially launched to provide central assistance to the State Government / UT Administrations for constructing court halls and residential units for Judicial Officers / Judges of District and Subordinate Courts.
- The scheme was given further extension in 2021 and some new features like Lawyers Hall, Toilet complexes and Digital computer rooms were added to it.
- The funds sharing pattern under the Scheme for Center and State is-
 - 60:40 for States other than North Eastern and Himalayan States.
 - 90:10 for North Eastern and Himalayan States.
 - 100% for Union Territories.

Extra Mile: Justice Clocks

Electronic signage systems known as Justice Clocks have been setup in different high court complexes across the country.

About Justice Clocks

- It is an initiative to exhibit vital statistics of the justice delivery system at the Court level with details about-
 - ✓ Cases instituted
 - ✓ Cases disposed
 - ✓ Pendency of cases on day/week/month basis
- It can be accessed by the public in any court establishment or on the District Court's website.

Objective

To make functioning of the courts accountable and transparent by sharing the status of case disposals with the public.

Benefits

- It will inform stakeholders about court-related key parameters and bring awareness among public by providing bird eye view of court-related data.

Similar Initiatives

- **JustIS Mobile App 2.0-** An app for judicial officers for effective court and case management by monitoring pendency and disposal of not only their court but also for individual judges working under them. This App can be used by High Court and Supreme Court Judges too, using this they can monitor pendency and disposal of cases of all the States and Districts under their jurisdiction.
- **Digital Court-** It is an initiative to enable the courts go paperless by digitizing all its records.
- **S3WaaS Websites-** It is a cloud service developed for government entities to generate Secure, Scalable & Sugamya (Accessible) websites as a Service for publishing specified information and services related to district judiciary. It is multilingual and citizen and divyang friendly.



Unique Land Parcel Identification Number (ULPIN)

The Rural Development Ministry said that ULPIN has been adopted by 26 states and UTs so far.

- Digital India Land Records Modernization Program (DILRMP) is being implemented by the Department of Land Resources (Under Ministry of Rural development) through State / UT Governments to accelerate digitization of land records (textual and spatial) to facilitate land related information to the citizens.
- Under this programme, Unique Land Parcel Identification Number (ULPIN) or Bhu Aadhaar ("the Aadhaar Number for land") will be assigned to a land parcel.

Digital India Land Records Modernization Program (DILRMP)

- This program was launched in 2008 by combining two Centrally Sponsored Scheme of Department of Land Resources viz.:
 - Computerization of Land Records (CLR)
 - Strengthening of Revenue Administration and Updating of Land Records (SRA&ULR).
- This program (Central sector scheme) has been extended to 2023-24, to complete its original targets as well as expand its ambit with a slew of new schemes.
- The program has introduced various new measures such as the National Generic Document Registration System (NGDRS), ULPIN, Transliteration of Record of Rights, the connection between revenue court and land records, and the integration of consent-based Aadhar numbers with land records.
 - NGDRS: It is aimed at providing one Nation one software for registration of documents & properties to 'empower citizens'.
- DILRMP's next phase will include linkage of land record databases with banks.
- This will improve the provision of services to the citizens of the country and serve as valuable inputs for schemes in other sectors such as Agriculture, Finance, Disaster Management, and more.



Objective of DILRMP

To build upon the commonalities that exist in the arena of land records in various States to develop an appropriate *Integrated Land Information Management System (ILIMS)* across the country

- The ILIMS integrates all the processes and lands records databases with the banks, financial institutions, circle rates, Registration Offices and other sectors.

Three Components

(a) Computerization of land record (b) Survey/re-survey (c) Computerization of Registration.

About Unique Land Parcel Identification Number (ULPIN)

<p>What?</p>	<ul style="list-style-type: none"> Also known as the Bhū Aadhaar, it is a 14-digit (Alpha–Numeric Unique ID) identification number accorded to a land parcel and is a single, authoritative Source of Truth for information on any parcel of land or property to provide Integrated Land Services to the citizens as well as all stakeholders. It would uniquely identify every surveyed parcel of land and prevent land fraud, especially in rural India, where land records are outdated and disputed. 	
<p>Why?</p>	<ul style="list-style-type: none"> Earlier different states used different methods for assigning unique IDs to land parcels for digitizing the land records. This made extraction of important information about the farmer and his land difficult and cumbersome. A lot of times, these IDs were repeated in each village, making it difficult to establish farmer-land relationships. To solve this issue, bring uniformity in the process and for standardizing the data, ULPIN was introduced with the aim of having one registration system across the country. 	
<p>Implemented by</p>	<p>Department of Land Resources (DoLR) along with the Ministry of Electronics and Information Technology (MeitY), Department of Science and Technology (DST) and the National Remote Sensing Centre (NRSC).</p>	
<p>How?</p>	<ul style="list-style-type: none"> The unique IDs are based on the longitude and latitude coordinates of the land parcel and depend on detailed surveys and geo-referenced cadastral maps (geo-referencing is a pre-condition for generation of BhūAadhaar). Various types of data relating to the landed properties, which are currently under the possession of different ministries and departments, too will be linked with the ULPIN. These IDs are of international standard and compliance of the Electronic Commerce Code Management Association (ECCMA) standard and Open Geospatial Consortium (OGC) standards. 	
<p style="text-align: center;">Benefits</p> <ul style="list-style-type: none"> It will allow proper land statistics and land accounting which will help develop land bank and lead towards <i>Integrated Land Information Management System (ILIMS)</i>. It will ensure uniqueness in all transactions and keep the land records always up-to-date. It will link all property transactions. It will enable single window delivery of citizen services of land records. It will allow sharing of land record data across departments, financial institutions and all stakeholders. Standardization at data and application-level will bring in effective integration and interoperability across departments. It will help in tackle corruption and effective handling of land disputes. 	<p style="text-align: center;">Drawbacks</p> <ul style="list-style-type: none"> It could exclude rural and indigenous people who do not hold titles. It could marginalize those with no access to internet. The process can become ineffective if it uses outdated records. It will impact the privacy of an individual as all the records will be available online and could be accessed by anyone. Data recorded without ground survey may lead to eviction of vulnerable. Many plots have been subdivided since the last survey, yet remain as one plot in cadastral maps to avoid transaction costs. This could lead to incomplete information being recorded in the system. Implementing the scheme without addressing legacy issues can seriously undermine citizen trust and may lead to further disputes. 	

Transliteration of Record of Rights

- The Records of Rights in each state and Union territory are maintained in local languages.
- The linguistic barriers within these states pose serious challenge in accessing the information.
- To address this issue, the government with the technical support of the Centre for Development of Advanced Computing, Pune, has undertaken an initiative to transliterate the Records of Rights available in local languages to any of the 22 languages recognized by the Constitution.

National Training Conclave

Prime Minister recently inaugurated the **first-ever National Training Conclave** at the International Exhibition and Convention Centre in New Delhi to strengthen the training infrastructure for civil servants across India.

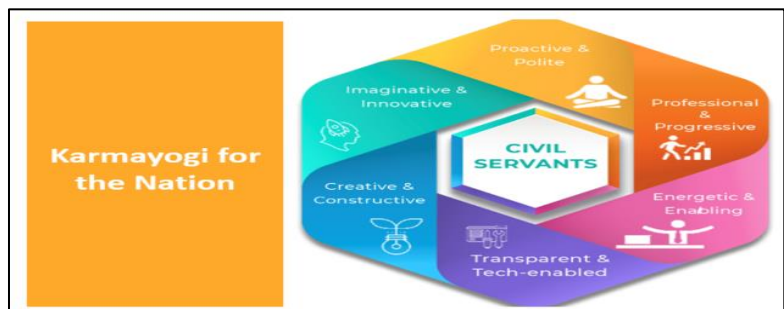
What?	It is a part of the <u>National Programme for Civil Services Capacity Building (NPCSCB)</u> - 'Mission <u>Karmayogi</u> ' aimed at bringing together all Civil Service Training Institutions (CSTIs) in a common setting and identifying strategies to improve together.			
Objective	<ul style="list-style-type: none"> • To foster <u>collaboration among civil services training institutes</u> and bolster the training infrastructure for civil servants across the country. • To provide a platform for networking, knowledge exchange, identifying challenges and key areas of collaboration. 			
Hosted By	Capacity Building Commission			
Participants	<ul style="list-style-type: none"> • More than 1500 representatives from Central Training Institutes, State Administrative Training Institutes, Regional and Zonal Training Institutes, and Research institutes participated in the conclave. • It also included civil servants from central, state and local governments along with experts from private sector. 			
Features	It had eight panel discussions, each focusing			
	Identifying Training Needs and Linking to Course Designs	Promoting Knowledge Sharing	Effective Assessment of Conducted Trainings	Strategic Resource Planning
	Faculty Selection, Onboarding and Development	Transforming to a 'Phygital' (Physical + Digital) World of Capacity Building	Overcoming Governance Challenges	Competencies For Civil Service Officials

About 'Mission Karmayogi'

It is the National Programme for Civil Services Capacity Building (NPCSCP) launched in 2020 to reform Indian Bureaucracy and prepare civil servants for the future through a *Competency Framework for Civil Services* that will be totally indigenous to India and will cover around 4.6 million central employees.

Objective

To build a future-ready civil service with the right attitude, skills and knowledge, aligned to the vision of New Indian by making them more creative, constructive, imaginative, proactive, innovative, progressive, professional, energetic, transparent, and technology-enabled.



Features

The programme encapsulates three transitions-

1. Change in the Mindset- Government officials should consider themselves *karmayogis* instead of considering themselves *karmacharis*.
2. Change in the Workplace- From assigning individual responsibility for performance, to diagnosing the constraints in a civil servant's performance using Means, Motives and Opportunity (MMO) framework
3. Moving the public HR management system- from being rule-based to role-based.

Institutional Framework

1. **Prime Minister's Human Resource Council (PMHRC)**- It is the apex body for driving and providing strategic direction to civil service reforms and capacity building. It is headed by the Prime Minister and consisting of:
 - Union Ministers and Chief Ministers along with Eminent public HR practitioners, Thinkers, Public service functionaries, Global thought leaders
2. **Cabinet Secretary Coordination Unit**: Chaired by the Cabinet Secretary, it has representation from the Central and State bureaucracy (including representation from Departments and training institutes) to monitor the implementation of NPCSCB, align stakeholders and provide mechanism for overseeing capacity building plans.
3. **Capacity Building Commission**: Conceived as an independent body, this three-member commission with full executive powers has been setup for functional supervision of training institutions and facilitating preparation of annual capacity building plans.
4. **Karmyogi Bharat-Special Purpose Vehicle (SPV)**: It is an autonomous company setup under Section 8 of the Companies Act, 2013 to own and operate all the digital assets created for NPCSCB on behalf of the Government of India.
5. **Programme Management Unit (PMU)**: It will provide Program Management and Support services to the Department.

Approach

1. **Defining the Vision**- The first step is to define government's vision for civil service performance as it defines the goal towards which the capacity of the civil service is being built.
2. **FRAC (Framework of Roles, Activities and Competencies)**- Through this framework, the Ministries will be able to clearly and explicitly specify the roles and activities associated with each position across different Ministries, and the competencies required to perform those roles and activities well. This will help in transitioning the capacity building system from being rule-based to role-based.
3. **iGOT**- The Integrated Government Online Training (iGOT) is an online learning platform that owns all the digital learning resources to be used in the capacity building process and consists of six hubs:

Competency Hub- to identify the competencies required for a role.

Learning Hub- to access a marketplace of courses called Competency Building Products (CBPs) as they are laser-focused on building officers' competencies.

Career Hub- to view all the competencies required for other positions in the civil service.

Discussion Hub- to discuss various topics relevant to work

Network Hub- to connect with other government officials and receive mentoring and guidance from more senior officers.

Events Hub- to learn about and participate in various online and offline events

4. **Annual Capacity Building Plan (ACBP)**: To bring comprehensive reform to the existing capacity building framework at both, the individual and organizational level.

Benefits

1. It will improve human resource management practices among civil officers.
2. There will be more focus on role-based management as officers will be allocated roles and jobs based on their competencies.
3. Training programs will be aligned with the roles assigned to the officer. This will help in providing right knowledge, skill and attitude.
4. There will be uniform training programs for all civil servants,
5. There will be more focus on 'on-site learning' in complementing "off-site learning".

DAKSHTA (Development of Attitude, Knowledge, Skill for Holistic Transformation in Administration) For Young Professionals

- It is a collection of 18 courses launched on the **iGOT Karmayogi platform** to build functional, domain and behavioral competencies in the learners by acquainting them with subjects crucial for discharging their duties, and responsibilities effectively.
- The courses include-

Data-Driven Decision Making for Government	Code of Conduct for Govt Employees	Orientation Module on Mission LiFE	Office Procedure	Yoga Break at Workplace	Effective Communication
Basics of Public Policy Research	Advanced PowerPoint	Stress Management	Prevention of Sexual Harassment of Women at Workplace	Noting & Drafting	Introduction to Emerging Technologies
Formulation of Public Policies	Personal & Organizational Values	Reform Initiatives of Govt of India	Public Procurement Framework for Gol	Ways of Enhancing Presentation Skills	Advanced Excel

- These courses can be accessed by Young Professionals, and Consultants engaged in various Ministries, Government Departments, and Organizations to enhance their knowledge, skills, and abilities.

Supreme Audit Institution (SAI)

Supreme Audit Institution (SAI)-20 Summit concluded in Goa under India's G20 Presidency. It focused on *collaborating on sharing of best practices, capacity building and development of appropriate auditing guidelines and actionable tool kits for auditing national priorities.*

Two priority areas discussed at the summit were- 1) **Blue Economy** (focuses on conserving and using oceans, seas, and marine resources for sustainable development) and 2) **Responsible Artificial Intelligence** (enables the detection of fraud, automates redundant auditing, and identifies high-risk transactions).

✓ SAI20 is an Engagement Group of G20 established in 2022 during Indonesia's Presidency of the G20.

About Supreme Audit Institutions (SAIs)

What?	<ul style="list-style-type: none"> • They are independent national-level public oversight bodies which audit government revenues and expenditures. • They provide an assurance that the resources are being used as prescribed by scrutinizing public
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	<p>financial management and submitting a report on the same.</p> <ul style="list-style-type: none"> • They derive their mandate from the constitution or a legislation. • Comptroller and Auditor General of India is India's SAI.
Functions	<ul style="list-style-type: none"> • To undertake financial audits of accounting procedures, financial statements of an organization and compliance audits reviewing the legality of transactions made by the audited body. • Conducting performance audits to scrutinize 3E's (efficiency, effectiveness or economy) of government undertakings.

Types

Westminster Model	Judicial/Napoleonic Model	Board or Collegiate Model
In this type, the National Audit Office is headed by an independent Auditor General or equivalent who submits the audit reports to a committee of Parliament (often the Public Accounts Committee).	In this type, the auditing office called Court of Accounts or Cour des Comptes forms part of the judicial system and gives judgements on the use of public funds by government officials.	It is like the Westminster model except for an audit board or boards which produces audit reports and submits them to Parliament.
It can be found in United Kingdom and most Commonwealth countries including many sub-Saharan African countries, some European countries, and Latin American countries such as Peru and Chile	It is used in France, many Latin countries in Europe, Turkey, francophone countries in Africa and Asia and several Latin American countries including Brazil and Colombia.	It is used by many Asian countries including Indonesia, Japan and the Republic of Korea, and some European countries, including Germany and the Netherlands.

SAI Independence

There are some conditions needed by the Supreme Audit Institution to fulfill its mandate and operate effectively. They are:

- **Principle 1-** recognizes the importance of a constitutional and statutory/legal framework for SAI.
- **Principle 2-** recognizes that the people chosen to lead a SAI recognized by the legal framework must have the freedom to carry out that role without fear of arbitrary dismissal or the risk of being subjected to legal action.
- **Principle 3-** recognizes the powers and functions of SAI.
- **Principle 4-** SAI should get unrestricted access to information.
- **Principle 5 & 6-** SAI should have the freedom to decide the content and timing of audit reports and to publish and disseminate them.
- **Principle 7-** recognizes effective follow-up mechanisms on SAI recommendations.
- **Principle 8-** recognizes financial and managerial/administrative autonomy and the availability of appropriate human, material, and monetary resources.



International Organization of Supreme Audit Institutions (INTOSAI)

- INTOSAI operates as an umbrella organization for the external government audit community. INTOSAI is an autonomous, independent and non-political organization.
- Nearly every SAI from a UN-member country is a member of the INTOSAI.
- INTOSAI has a number of bodies and organs, including committees and working groups which examine specific issues of relevance to SAIs, such as professional standards, environmental audits, and capacity building.

- INTOSAI serves as a forum for SAIs worldwide to exchange experiences and work collectively to improve public sector accountability and transparency.
- The INTOSAI Development Initiative (IDI), is an independent INTOSAI body tasked with enhancing the capacities of SAIs in developing countries.

Tax Devolution

The Union Government released the 14th installment of ₹1,40,318 crore as a part of tax devolution to the states against the normal monthly devolution of ₹70,159 crore to strengthen the hands of States in accelerating their capital and developmental expenditure.

✓ Uttar Pradesh received the highest share of Rs 21,218 crore and Goa the least at Rs 457 crore.

What is meant by Tax Devolution?

It refers to the sharing of taxes between the Centre and States. This decision is taken by the Finance Commission, a constitutionally mandated body that gives recommendations to the President on distribution of taxes.

15th Finance Commission

- Appointed under the Chairmanship of N.K.Singh, its first report consisting of recommendations for the financial year 2020-21, was tabled in Parliament in 2020 and its final report with recommendations for 2021-26 was tabled in Parliament in 2021.
- **Key Recommendations-**
 - Share of States in Central Taxes (Vertical Devolution)**- It was reduced to 41% from 42% share recommended by the 14th Finance Commission for 2015-20 period. This adjustment of 1% was to provide for the union territories of Jammu and Kashmir, and Ladakh from the resources of the Centre.
 - Allocation among States (Horizontal Devolution):**
 - **Income Distance (45%):** It is the distance of a state's income from the state with the highest income and is computed as average per capita GSDP during the three-year period between 2016-17 and 2018-19. The state with lower per capita income is given higher share to maintain equity among states.
 - **Area (15%):** The larger the area, greater is the expenditure requirement for providing comparable services.
 - **Population (15%):** The population of a State reflects the demands for services and the corresponding expenditure required to fulfill those needs.
 - **Demographic Performance (12.5%):** The Commission used 2011 population data to reward efforts made by states in population control. States with a lower fertility ratio will be scored higher on this criterion.
 - **Forest and Ecology (10%):** This criterion was decided by calculating the share of dense forest of each state in the total dense forest of all the states.
 - **Tax and Fiscal Efforts (2.5%):** To reward states with higher tax collection efficiency.

Grants:

- **Revenue Deficit Grants:** 17 states to receive grants worth Rs 2.9 lakh crore to eliminate revenue deficit.
- **Sector-Specific Grants:** Rs 1.3 lakh crore have to be given to states for eight sectors: (i) health, (ii) school education, (iii) higher education, (iv) implementation of agricultural reforms, (v) maintenance of PMGSY roads, (vi) judiciary, (vii) statistics, and (viii) aspirational districts and blocks.
- **State-Specific Grants:** Grants of Rs 49,599 crore have to be given in the areas of: (i) social needs, (ii) administrative governance and infrastructure, (iii) water and sanitation, (iv) preservation of culture and historical monuments, (v) high-cost physical infrastructure, and (vi) tourism.

- **Grants to Local Bodies:** Of Rs 4.36 lakh crore (a portion of grants to be performance-linked) including:
 - i. Rs 2.4 lakh crore for rural local bodies
 - ii. Rs 1.2 lakh crore for urban local bodies
 - iii. Rs 70,051 crore for health grants through local governments.
- It stated that no grants were to be released to local bodies of a state after March 2024 if the state does not constitute State Finance Commission and act upon its recommendations by then.
- Urban local bodies have been categorised into two groups, based on population, and different norms have been used for flow of grants to each, based on their specific needs and aspirations. Basic grants are proposed only for cities/towns having a population of less than a million. For Million-Plus cities, 100 per cent of the grants are performance-linked through the Million-Plus Cities Challenge Fund (MCF).
- **Disaster Risk Management:** It recommended the cost-sharing pattern between Centre and states for disaster management of:
 - i. 90:10 for north-eastern and Himalayan states.
 - ii. 75:25 for all other states.
- State disaster management funds were assigned a corpus of Rs 1.6 lakh crore (Centre's share is Rs 1.2 lakh crore).
- **Fiscal deficit and debt levels:** The Commission suggested the Centre to bring down fiscal deficit to 4% of GDP by 2025-26. For states, it recommended the fiscal deficit limit (as % of GSDP) of:
 - i) 4% in 2021-22 ii) 3.5% in 2022-23 iii) 3% during 2023-26
- **Modernization Fund for Defence and Internal Security (MFDIS)-** It suggested constituting a dedicated non-lapsable fund to primarily bridge the gap between budgetary requirements and allocation for capital outlay in defence and internal security.
- **Health:** It recommended states to increase spending on health to more than 8% of their budget by 2022.

Right to Change Name

The High Courts of Delhi and Allahabad recently ruled that the right to change one's name or surname comes under the ambit of right to life under Article 21.

	Sadanand & Anr. vs CBSE & Ors	Md. Sameer Rao vs. State of U.P.
What was the Case?	A petition filed by two brothers in the Delhi High Court requesting to set aside a letter issued by the CBSE 'refusing to change their father's last name from 'Mochi' to 'Nayak' in their 10th and 12th Board certificates'.	A petition was filed in Allahabad HC against an order passed by the Regional Secretary, Madhyamik Shiksha Parishad, Regional Office, Rai Bareilly in 2020, rejecting Shahnawaz's application to change his name to "Md. Sameer Rao" in his High School and Intermediate certificates.
Reason for Name Change	Their father changed his last name owing to caste atrocities and published it in the newspaper and the Gazette of India as required. His surname was changed across various public documents, such as Aadhaar, PAN, and Voter ID.	The petitioner was seeking name change "for a higher sense of self-worth".
Cause of Refusal	The CBSE refused to update the brothers' certificates with the father's new surname stating that a change in the surname would	The Board refused to update the name on his school certificates stating that name change is not an absolute right and is subject to

	subsequently entail a change in their caste, which could be misused and that changing fathers name beyond school records is not permissible.	restrictions imposed by law.
Court's Verdict	<ul style="list-style-type: none"> • Delhi HC held that CBSE's denial was totally unjustified. • It noted that the petitioners have every right to have an identity which gives them an honorable and respectable identity in the society. • It allowed the name change while holding that <u>the "Right to Identity" is an "intrinsic part of the Right to Life under Article 21".</u> • It held that <u>Right to Life includes within its ambit, the Right to Live with Dignity which includes not to be tied down by any casteism faced by a person due to the caste to which he or she belongs.</u> • Thus, it allowed name change to avoid caste atrocities. 	<ul style="list-style-type: none"> • The Allahabad HC held that by rejecting the request of name change, the authorities have violated the fundamental rights of the petitioner guaranteed under Article 19(1)(a), Article 21, and Article 14 of the Constitution. • It said that congruence in all identity-related documents is essential and separate names in identity documents can lead to confusion in identity and possibility of mischief. • It allowed Shahnawaz to become "Md. Sameer Rao" while observing that <u>the right to keep a name of choice or change the name according to personal preference comes within the ambit of right to life guaranteed under Article 21.</u>
<p>Article 14- Equality before Law</p> <p>Article 19(1)(a)- Right to freedom of speech and expression</p> <p>Article 21- Protection of life and personal liberty</p>		

Similar Judgements

- **Kashish Gupta vs. Central Board of Secondary Education, 2020-** Kerala HC allowed name change which was denied by CBSE and held that 'to have a name and to express the same in the manner a person wishes, is a part of Article 19 (1)(a) as well as Article 21. State or its instrumentalities cannot stand in the way of the use of any name preferred by an individual or for any change of name into one of his choices except to the extent prescribed under Article 19(2) or by a law which is just, fair and reasonable.'
- ✓ Article 19(2) imposes reasonable restrictions on the exercise of the right conferred by Article 19(1) in the interests of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence.
- **Rayaan Chawla vs. University of Delhi, 2020-** In this case, the Delhi HC ruled that name is an intrinsic element of identity and included the right to change name under Article 19(1)(a) along with Article 21 of the Constitution.
- **Jigya Yadav vs. CBSE, 2021-** In this case, the Supreme Court ruled that an individual must be in complete control of her name and law must enable her to retain that name.
- **Coeriel and Aurik v. The Netherlands, 1994-** In this case, the UN Human Rights Committee said that name is an indispensable component of a person's identity and falls within the realm of the right to privacy.

Restrictions on Right to Change Name

- The Allahabad HC clarified that although right to change name is a fundamental right, it is not an absolute right and is subject to reasonable restrictions but these restrictions need to be fair, just and reasonable.
- It highlighted that the principle of proportionality is an essential facet of guarantee against arbitrary state action as it ensures that encroachment of rights is not disproportionate to the purpose of law.

- It also gave importance to the role of human dignity in determining the proportionality of a law putting restrictions on a constitutional right.

Extra Mile: Process to Change Name

The process of changing one's name in India involves the following steps:

- 1. Determining the Reason for Name Change-** Understanding the reason like marriage, religious conversion etc. is important to identify the correct procedure to follow for the same.
- 2. Drafting an Affidavit-** It should include the applicant's current name, the desired new name, the reason for name changes and relevant details.
- 3. Publishing a Notification in the Gazette of India-** the notification should be in the prescribed format and should be published in at least two local newspapers.
- 4. Apply for a Name Change Deed-** is a legal document that confirms the name change and includes the details of old and new names. It should be on a stamp paper of the appropriate value as per the state in which the applicant resides and it should contain signatures of two witnesses.
- 5. Submitting the Name Change Deed to various Authorities-** The name Change Deed should be submitted to authorities like the passport office, bank, and other government agencies along with the copies of gazette notification and affidavit for updating the records.

NCSC Notice to Zomato

The National Commission for Scheduled Castes (NCSC) has now issued a notice to Zomato over an “inhuman” and casteist advertisement.

Background

- Zomato launched an advertisement on World Environment Day (5th June). It featured the Dalit character 'Kachra' from *Lagaan* as a lamp, paper, paperweight, watering can, and different types of jackets, with the text below detailing how much 'Kachra' was recycled to make each of these items.
- It faced a strong backlash from citizens forcing the food delivery giant to withdraw the advertisement.
- Taking Suo Moto cognizance of the matter as it portrayed inhuman depictions and hurt sentiments of Scheduled Caste people, NCSC decided to investigate/inquire into the matter in pursuance of the powers conferred upon it under Article 338 of the Constitution of India and issued a notice to Zomato.
 - ✓ **Article 338-** It provides for a special officer (Commissioner) for the Scheduled Castes (Article 338A for Scheduled Tribes) to be appointed by the President and it shall be his duty to investigate all matters relating to the safeguards provided for the Scheduled Castes and Scheduled Tribes under the Constitution and report to the President upon the working of those safeguards as the President may direct who then lays down the report before each House of Parliament.
- The NCSC also sent copies of the notice to the Commissioner, Delhi Police, and the Grievance Redressal Officer of YouTube India, requesting them to launch their own investigations into the episode and submit action taken reports as soon as possible.
- In the notice, the commission cautioned that if the action taken reports are not presented to it at the earliest as sought, it may go on to invoke its powers as a civil court and issue summons to the persons concerned.

About National Commission for Scheduled Castes (NCSC)

- It is a constitutional body under the jurisdiction of Ministry of Social Justice and Empowerment established to provide safeguards against the exploitation of Scheduled Castes and Anglo-Indian communities to promote and protect their social, educational, economic and cultural interests.
- Article 338 contains provisions for NCSC. (Article 338A for NCST and Article 338B for NCBC)

- By 89th Amendment Act, 2003, Article 338 was amended (introduced Article 338A), and the erstwhile National Commission for SC and ST was replaced by two separate Commissions (NCSC & NCST) from the year 2004.
- By 102nd Constitution Amendment Act, 2018 provides constitutional status (introduced Article 338B) to the National Commission for Backward Classes (NCBC).
- The first Commission for Scheduled Castes and Scheduled Tribes was set up in August 1978.
- It functions from its headquarters in New Delhi and consists of a chairman, vice-chairman and three other members.
- The Central and State Governments are required to consult NCSC on all policy matters affecting the SCs.

Duties and Functions

- To investigate and monitor all matters relating to the safeguards provided for the scheduled castes under the constitution.
- To inquire into specific complaints with respect to the deprivation of rights and safeguards of the scheduled castes.
- To participate and advise in the planning process of socio-economic development of the scheduled castes and to evaluate the progress of their development under the union and any state;
- To present reports to the president, annually and at times as the commission may deem fit.
- To recommend measures that should be taken by the Union or any State for effective implementation of safeguards and other measures for the protection, welfare and socio-economic development of the scheduled castes.
- To discharge other functions related to the protection, welfare and development and advancement of the scheduled castes as the President or any law or rule made by parliament specify.

**The commission is required to discharge similar functions in case of Anglo-Indian Communities.

Powers

- It is vested with the power to regulate its own procedure.
- It has all the powers of a civil court while investigating any matter or enquiring into any complaint and particularly in the following matters:
 - ✓ Summoning and enforcing the attendance of any person from any part of India and examining him on oath.
 - ✓ Requiring the discovery and production of any document.
 - ✓ Receiving evidence on affidavits.
 - ✓ Requisitioning any public record from any court or office.
 - ✓ Issuing summons for the examination of witnesses and documents.
 - ✓ Any other matter as determined by the President.

Extra Mile

Recent Updates Related to NCSC

Online Grievance Management Portal of NCSC

- NCSC launched the Online Grievance Management Portal to enable Scheduled Castes population of the country to file their application and other atrocity and services related grievances online and to get them addressed in a time bound manner.
- NCSC aims to streamline the grievance redressal specially of the Scheduled Caste population through this portal. The portal will facilitate an end-to-end e-filing of complaints and grievances and their tracking.

Other Constitutional Provisions for Upliftment of the Schedule Castes & Scheduled Tribes

- **Article 14:** Equality before law & Equal protection of Law
- **Article 15:** Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth. The focus of this article is to discuss the problem of caste-based discrimination, with particular emphasis on safeguarding and empowering SCs, STs and BC.
- **Article 16(4A)** speaks of “reservation in matters of promotion to any class or classes of posts in the services under the State in favour of SCs/STs, which are not adequately represented in the services under the State
- **Article 17:** The purpose of this article is to completely eradicate untouchability and forbid its practice in any manner.
 - The enactment of **the Protection of Civil Rights Act in 1955** aimed to eradicate harmful practices like untouchability. This legislation strives to ensure equal rights for every individual, regardless of their caste, class, or tribe.
 - The enactment of **the SC/ST Prevention of Atrocities Act 1989 (SC, ST rules in 1995)** is guided by the constitutional safeguards outlined in Articles 15 (Prohibition of Discrimination), 17 (Abolition of Untouchability), and 21 (Protection of Life and Personal Liberty).
- **Article 330 and Article 332** of the Constitution respectively provide for reservation of seats in favour of the Scheduled Castes and the Scheduled Tribes in the House of the People and in the legislative assemblies of the States.
- **Article 335** provides that the claims of the members of the Scheduled Castes and the Scheduled Tribes shall be taken into consideration, consistently with the maintenance of efficiency of administration, in the making of appointments to services and posts in connection with the affairs of the Union or of a State.
- Under **Part IX** relating to the Panchayats and **Part IXA** of the Constitution relating to the Municipalities, reservation for Scheduled Castes and Scheduled Tribes in local bodies has been envisaged and provided.

Kosovo-Serbia Tensions

- Violent clashes have taken place in Kosovo between ethnic Serbs and police belonging to the Albanian-led government.
- NATO has also announced that it is deploying an extra 700 troops to the country after more than 30 of its peacekeepers were injured.

Reason Behind Current Round Of Violence

- The current round of violence took place after **ethnic Serbs** tried to prevent Albanian mayors taking charge in local councils.
 - Ethnic Serbs are a minority in Kosovo but are in a majority in northern Kosovo.
- The Albanians took control of the councils after Serbs boycotted local elections in Kosovo's north in April.
- Results of the elections, which saw a turnout of less than 3.5%, were rejected by the Serbs as a sham.

All about Kosovo Conflict

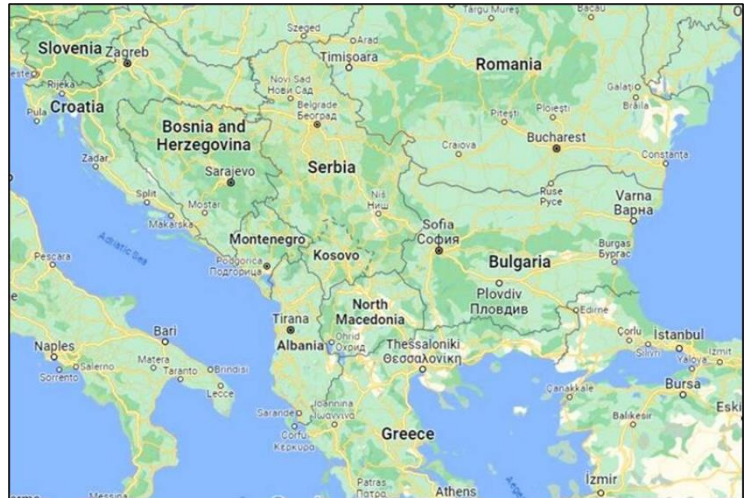
- **Ethnicities at the Centre**
 - Of the 1.8 million people living in Kosovo, 92% are Albanian and only 6% Serbian.
 - The rest are Bosniaks, Gorans, Turks and Roma.
 - Serbs are Eastern Orthodox Christians, while the Albanians in Kosovo are majority Muslims.
 - For many Serbians, the Kosovo region, is the heart of its national and religious identity — and home to numerous cherished mediaeval Serb Orthodox Christian monasteries.
 - On the other hand, Kosovo's majority ethnic Albanians view Kosovo as belonging to them, and accuse Serbia of occupation and repression.
- **Root of Conflict: Breakup of Yugoslavia in the 1990s**
 - After the disintegration, Kosovo - a province of the former country - sought its own autonomy and independence. This was opposed by Serbia.
 - As part of Yugoslavia, the republic of Serbia included the regions of Kosovo and Vojvodina.
 - Within Serbia, Kosovo and Vojvodina held the status of autonomous provinces.
- **Armed Clashes**
 - **In 1998**, armed clashes broke out between the Kosovo Liberation Army (KLA), an ethnic Albanian guerrilla group seeking independence, and the Serbian security forces.
 - The conflict intensified, leading to a significant loss of life and the displacement of thousands of people.
- **NATO's Intervention**
 - International efforts to resolve the conflict was led by the United Nations and the North Atlantic Treaty Organization (NATO).
 - It resulted in a military intervention in 1999.
 - NATO conducted a bombing campaign against Serbian targets and forced the withdrawal of Serbian security forces from Kosovo.
 - The NATO-led Kosovo Force (KFor) is still based in Kosovo, with a current strength of 3,762.
- **Kosovo unilaterally declared independence**
 - In 2008, Kosovo unilaterally declared independence.

- A total of 99 out of 193 UN countries now recognise Kosovo's independence, including the US, the UK and 22 out of 27 European Union (EU) countries.
 - But Russia and China (do not recognise Kosovo) have blocked Kosovo's membership of the UN.

Geographical Location of Kosovo & Serbia

• Serbia

- Serbia, officially known as the Republic of Serbia, is a landlocked country located to the north of Kosovo.
- It is **bordered by Hungary to the north, Romania and Bulgaria to the east, North Macedonia to the south, Kosovo to the southwest, Montenegro to the west, and Bosnia and Herzegovina to the northwest.**
- The capital and largest city of Serbia is Belgrade.



• Kosovo

- Kosovo, officially known as the Republic of Kosovo, is a **partially recognized country** situated in the central part of the Balkan Peninsula.
 - Kosovo declared independence from Serbia in 2008. Serbia does not recognise Kosovo's statehood.
 - Neither does **India, Russia, China** and five European Union countries – Spain, Slovakia, Cyprus, Romania and Greece recognise Kosovo.
- It is bordered by Serbia to the north and east, North Macedonia to the southeast, Albania to the southwest, and Montenegro to the west.
- The capital and largest city of Kosovo is Pristina.

Kakhovka Dam

- Floodwaters were released throughout the conflict area after a massive Soviet-era dam - **Kakhovka Dam - on the Dnipro River** that separates Russian and Ukrainian forces in southern Ukraine was breached.
- Russian officials presented inconsistent versions, some claiming it was destroyed by Ukrainian shelling and others claiming it collapsed as a result of earlier damage.
- On the other hand, Ukraine claimed Russia had demolished it.

About The Dam

- The dam [30 metres/98 feet tall and 3.2 km long] was built in **1956** on the Dnipro River as part of the **Kakhovka hydroelectric power plant**.
- The reservoir (18 km³ - a volume equal to the Great Salt Lake in the U.S. state of Utah) also supplies water to the -
 - **Crimean** Peninsula, which Russia claims to have annexed in 2014, and
 - **Zaporizhzhia** nuclear plant, which is also under Russian control.



US Decides To Rejoin UNESCO

- The United States has announced its plans to rejoin the UNESCO, after a decade-long dispute sparked by the inclusion of Palestine as a member.
- The return of the U.S., along with the payment of over \$600 million in back dues, is a significant financial boost for UNESCO's initiatives.
 - Before leaving, the US contributed 22 per cent of the agency's overall funding.
- The decision to return was motivated by concern that China is filling the gap left by the US in UNESCO policymaking, notably in **setting standards for artificial intelligence and technology education** around the world.

Background: US Leaving UNESCO

- **Background**
 - The US and Israel stopped funding UNESCO after it voted to include Palestine as a member state in 2011.
 - The Trump administration decided in 2017 to withdraw from the agency altogether the following year.
 - The United States had previously withdrawn from UNESCO in 1984 during the Cold War era.
 - The country rejoined the organization in 2003 under the administration of President George W. Bush.
- **Reasons**
 - One of the main reasons was concerns over the organization's perceived anti-Israel bias.
 - The U.S. government criticized UNESCO for its handling of the Israeli-Palestinian conflict and its recognition of Palestine as a member state.
 - Another factor was financial concerns.
 - United States had been contributing a significant portion of UNESCO's budget.
 - The U.S. government had concerns about fiscal management and accountability within UNESCO.
 - Furthermore, the decision to withdraw was also influenced by a broader scepticism towards multilateral institutions and a desire to reassess and prioritize U.S. engagement and funding in international organizations.



- UNESCO stands for United Nations Educational, Scientific and Cultural Organization.
- It is specialized agency of the United Nations (UN).
- The constitution, which entered into force in 1946, called for the promotion of international collaboration in education, science, and culture.
- The agency's permanent headquarters are in Paris, France.
- Parent Organisation - United Nations Economic and Social Council.

Goal

- The primary goals of UNESCO are to contribute to peace and security by promoting collaboration among nations through education, science, and culture, and to promote sustainable development and intercultural dialogue.
- UNESCO believes that these areas are crucial for building a more just, peaceful, and inclusive world.

Key Focus Areas of UNESCO

- **Education:** UNESCO promotes quality education for all, advocating for access to education, improving teacher training, and fostering global citizenship.

- **Natural Sciences:** UNESCO supports scientific research and the application of science to address global challenges, such as climate change, biodiversity loss, and sustainable development.
- **Culture:** UNESCO works to safeguard and promote cultural heritage, both tangible and intangible, including monuments, sites, traditions, and languages.
 - It also fosters cultural diversity and intercultural dialogue.
- **Communication and Information:** UNESCO promotes freedom of expression, media development, and access to information.
 - It aims to foster a free, independent, and pluralistic media environment.
- UNESCO designates and maintains a list of World Heritage Sites, which are places of outstanding universal value that deserve protection for future generations.

Key Reports Published By UNESCO

- Global Education Monitoring Report
- The United Nations World Water Development Report
- World Trends in Freedom of Expression and Media Development
- Global Ocean Science Report

The Wagner Mutiny

- Yevgeny Prigozhin, the chief of Russia's Wagner Private Military Company, staged a short-lived mutiny against the country's defence establishment.
- On June 24, the Russian mercenary chief Prigozhin announced that Wagner Group's troops have taken control of Rostov-on-Don, in southern Russia.
- He also launched a march of justice, with a convoy of armed men and armoured vehicles, towards Moscow. This rebellion was later called off.

What Is Wagner Group

- The Wagner Group first surfaced during Russia's annexation of Crimea in 2014.
- Essentially a network of contractors that supply soldiers for hire, the group isn't registered anywhere and its source of funding remains unknown.

Rostov-on-Don

About the city

- Rostov-on-Don is the largest city in southwestern Russia.
- It is home to a million people, and the administrative centre of Rostov Oblast and the Southern Federal District of Russia.
- This region borders eastern Ukraine where the ongoing Russia-Ukraine conflict has been raging.

Significance of this city

- The city itself is approximately just a 100 km away from the border.
- It is located along the main route between the border with Ukraine's Donbas region and Moscow, around 1,100 km further to the north.
- Consequently, it is a **crucial command and logistical hub for the Russian army**, housing the headquarters of the Russian Southern Military District.
- Rostov is also the home base for the command centre for the Russian Joint Group of Forces in Ukraine as a whole.



- The organisation's owner and head is Yevgeny Prigozhin.
- Apart from Ukraine, Wagner Group is reportedly also active in West Asia and several countries in Africa.
 - When Putin decided to invade Ukraine in 2022, Prigozhin and his Wagner Group was at the heart of Russian operations.
 - As the Russian advance stalled, the Wagner's manpower became increasingly important.
 - The organisation was accused of being involved in the massacres, rape, and torture of civilians in Ukraine's Bucha that took place in March 2022.

- According to media reports, it provides its services to different governments often in exchange for access to gold and diamond mines.

China-Pakistan Nuclear Deal

- China and Pakistan signed an agreement for a **1,200 MW nuclear power plant** in the Chashma nuclear complex in Pakistan.
 - This is the fifth reactor at the Chashma nuclear complex (C-5).
- C-5 will be the biggest reactor at Chashma, where China has already constructed four phases of the complex, with four reactors of around 325 MW each.

Implications of Recent China-Pak Nuclear Deal

- China's civilian nuclear projects with Pakistan have come under scrutiny.
- This is because the **Nuclear Suppliers Group (NSG) explicitly prohibits the transfer of nuclear technology by its members to countries that have not signed the nuclear Non-Proliferation Treaty (NPT)**.
- China has argued that the Chashma 3 and Chashma 4 reactors were conceived under its earlier Chashma deals with Pakistan that were pre-dated its joining of the NSG.

How This Deal Is Different From India-U.S. Nuclear Deal?

- **India and the U.S. had to seek a waiver from the NSG** for their civilian nuclear deal, which was granted in 2008. However, neither Pakistan nor China has got waiver for the current deal.

- Also, India was granted the waiver after India undertook a number of commitments such as:

- placing facilities under International Atomic Energy Agency (IAEA) safeguards,
- separating civilian and military nuclear programmes and
- a continued moratorium on testing.

- Pakistan has not given such commitments for this deal.

About Nuclear Suppliers Group (NSG):

- The Nuclear Suppliers Group (NSG) is a multilateral export control regime and a group of nuclear supplier countries.
- The group seeks to prevent nuclear proliferation by controlling the export of materials, equipment and technology that can be used to manufacture nuclear weapons.
- The NSG was founded in response to the Indian nuclear test in May 1974 and first met in November 1975.
- It is an informal organization, and its guidelines are non-binding. Decisions, including on membership, are made by consensus.
- Currently, the NSG has 48 participating governments. The NSG chair for 2023 - 2024 is Brazil.



Celebration of Indira Gandhi's Killing in Canada

- A massive controversy has erupted over a social media video of a parade **float depicting late Prime Minister Indira Gandhi's assassination in Canada**.
 - A tableau in the parade showed a female figure in a blood-stained white saree, with the hands up, as turbaned men pointed guns at her.
 - In 1984, Indira Gandhi was assassinated by her two Sikh bodyguards, months after the military **Operation Bluestar**.
 - A poster behind the scene read Revenge for the attack on Darbar Sahib.

- The parade was allegedly organised by pro-Khalistani supporters, days before the 39th anniversary of ‘Operation Bluestar’ (celebrated on June 6).

Khalistan Movement

- **About**

- It is a fight for a separate, sovereign Sikh state in present day Punjab (both India and Pakistan).
- The movement was crushed in India following **Operation Blue Star** (1984) and **Operation Black Thunder** (1986 and 1988).
 - Operation Blue Star began on June 1, 1984 to flush out militants from the Golden Temple and neutralise Bhindranwale.
- However, it continues to evoke sympathy and support among sections of the Sikh population, especially in the Sikh diaspora in countries such as Canada, UK, and Australia.

- **Khalistan and Canada**

- As per the 2021 Canadian census, Sikhs account for 2.1 per cent of Canada’s population, and are the country’s fastest growing religious group.
 - After India, Canada is home to the largest population of Sikhs in the world.
- In 2002, Toronto-based Punjabi-language weekly **Sanjh Savera** greeted Indira’s death anniversary with a cover illustration of her murder.
 - The magazine received government advertisements, and is now a prominent daily in Canada.
- Last year in Brampton - home to Canada’s largest Sikh population - a pro-Khalistan organisation known as *Sikhs for Justice (SFJ)* held a so-called **referendum on Khalistan**.

Challenges In India – Canada Relations

- **Separatist Khalistani Groups**

- Canada has been providing a safe haven for separatist Khalistani groups, which New Delhi sees as the Liberal Party’s pandering to these groups for votes.
 - Diaspora Sikhs are well represented in the Trudeau government. Some of them are politically supported by pro-Khalistan groups.
 - Jagmeet ‘Jimmy’ Dhaliwal, whose New Democratic Party supports Trudeau’s minority government in Parliament, is viewed with suspicion by the Indian establishment.
- Last year, New Delhi objected to Canada permitting a Khalistani secessionist “referendum” in the Sikh diaspora.

- **Canada is slow to act against anti-India elements on its soil**

- Recently, a Hindu temple near Toronto was vandalised and defaced with anti-India graffiti.
- Concerns that Canada is slow to act against *anti-India elements* on its soil have been a constant irritant in the relationship.

- **Other Irritants Include**

- Attacks on Indian-origin people;
- Canadian comments over India’s farmer protests and India’s cancellation of diplomatic talks in response.

In First, Saudi Naval Cadets Train With Indian Navy

- For the first time, 55 cadets of the Royal Saudi Naval Force (RSNF) along with five Directing Staff got training with the Indian Navy in Kochi, the headquarters of India's Southern Naval Command.

President Murmu Conferred with Suriname's Highest Civilian Award

- President Droupadi Murmu has been conferred with Suriname's highest civilian award by President Chandrikapersad Santokhi to honour the deep-rooted bilateral ties.
- She was conferred with the 'Grand Order of the Chain of the Yellow Star', the highest civilian award of Suriname.

India Gifts Missile Corvette INS Kirpan to Vietnam

- India gifted the indigenously-built in-service missile corvette INS Kirpan to Vietnam to enhance that country's naval capabilities.
 - INS Kirpan is the third indigenously built Khukri class missile corvette.
- This marked the first instance of such a gesture from India to any nation.
 - India has previously provided smaller vessels and military equipment to countries like Maldives, Mauritius, and even a submarine to Myanmar.
 - However, the gifting of a corvette to Vietnam marks the **first instance of India gifting a warship** to a Chinese neighbour with a coastline on the South China Sea.
- The transfer of the Kirpan reflects India's commitment to assist its like-minded partners in enhancing their capacity and capability.

Defence Cooperation Between India and Vietnam

- India and Vietnam have shared a **Comprehensive Strategic Partnership since 2016** and defence cooperation is a key pillar of this partnership.
 - Vietnam is an important partner in India's 'Act East' policy and the Indo-Pacific vision.
- In June 2022, India and Vietnam signed an MoU on **mutual logistics support**.
- The two nations also signed the "**Joint Vision Statement on India-Vietnam defence partnership towards 2030**", which would significantly enhance the scope and scale of existing defence cooperation.
- Vietnam has procured **12 high speed patrol boats** for the Vietnamese border guard force under a \$100 million Line of Credit (LoC) extended in September 2014.
- In 2016, India extended another \$500 million defence LoC, and discussions are under way to identify the equipment.
- India has also announced gifting two simulators and monetary grant towards the setting up of a Language and IT Lab at the Air Force Officers Training School for capacity building in the Vietnamese armed forces.

UN Report Warns Of Golden Triangle Crime Syndicates Pumping Drugs Into India

- A new report from the United Nations Office on Drugs and Crime (UNODC) warns that the synthetic drug market in East and Southeast Asia linked to the Golden triangle region is diversifying into South Asia.
 - Golden Triangle - regions where the borders of Myanmar, Laos and Thailand meet.

Key Highlights Of The Report

- **Large quantities of methamphetamine being smuggled**
 - Organised crime syndicates are **smuggling large quantities of methamphetamine (also known as meth or Ice) into India** and Bangladesh through the Myanmar border.
 - Shan state in Myanmar is home to the world's largest meth trade.
- **Syndicates are turning to the Andaman Sea route to ship out their drugs**
 - With the law enforcement agencies cracking down on the land route in the Golden Triangle region, crime syndicates have turned to the Andaman Sea route to ship out their drugs.
- **Criminal groups are regrouping after lengthy Covid pandemic border closures**
 - Criminal groups from across the region have started moving and reconnecting after lengthy Covid pandemic border closures.
 - As per the report, late 2022 and early 2023 patterns look similar to 2019.

After 12 Years, UN Drops India From Its Report On Children & Conflict

- Recently, the annual report of UN Secretary-General Antonio Guterres on **Children and Armed Conflict** was published.
- The report has dropped India's name from the list in view of measures taken by the Government, specifically in Jammu and Kashmir, to better protect children.

Key Highlights

- For the first time since 2010, India has not been named in the report alongside countries like Burkina Faso, Cameroon, Lake Chad basin, Nigeria, Pakistan and the Philippines.
- The report said **India has been "removed from the report in 2023" in view of measures taken by the Government, specifically in Jammu and Kashmir, to "better protect children".**
 - Earlier, India was used to be in the list due to the **use of boys by armed groups in Jammu and Kashmir and detention of boys by security forces.**
- Some of the measures taken by the Government –
 - **Training of security forces in protection of children;**
 - **Suspension of use of pellet guns by security forces;**
 - **Juvenile Justice Act (Care and Protection of Children), 2015;**
 - **Protection of Children from Sexual Offences Act, 2012.**

About Children and Armed Conflict Report:

- The Special Representative of the Secretary-General for Children and Armed Conflict serves as the leading UN advocate for the protection and well-being of children affected by armed conflict.
- The **annual report presents a comprehensive picture of child soldiers, highlights the disproportionate impact of war on children and identifies them as the primary victims of armed conflict.**

IAF Plans Its Biggest Air Exercise, To Bring Together Forces From 12 Nations

- The Indian Air Force is preparing to conduct a mega-multilateral exercise later this year that will bring together air forces of 12 nations.
 - six air forces will participate in the exercise, and the rest will attend as observers.
- The exercise, named **Tarang Shakti**, is slated to be the biggest air exercise to be conducted in India.
- Recently, the IAF took part in several joint exercises:
 - Exercise Orion at the Mont-de-Marsan airbase in France;
 - INIOCHOS exercise at Andravida base in Greece, hosted by the Hellenic Air Force;
 - In April, the IAF and the USAF had taken part in a joint exercise in Cope India-2023 across Kalaikunda, Panagarh and Agra bases;
 - Three Rafale fighter jets of the IAF will take part in the Bastille Day flypast over the Champs Elysees in Paris in July.

New Chief of Research and Analysis Wing (RAW)

- Senior IPS officer Ravi Sinha has been appointed as the new chief of India's external intelligence agency RAW for a tenure of two years.
- RAW is India's external intelligence agency.
 - Until 1968, the Intelligence Bureau (IB), which is responsible for India's internal intelligence, also handled external intelligence.
 - After India's defeat in a 1962 war with China, need was felt for a separate external intelligence agency.
 - Finally, RAW was formed in September 1968 under the guidance of Rameshwar Nath Kao, with its head office in New Delhi.

China Blocks Proposal At U.N. To Blacklist Pak-Based Lashkar-e-Taiba Terrorist Sajid Mir

- China blocked a proposal by India and the US at the United Nations to designate Pakistan-based Lashkar-e-Taiba terrorist Sajid Mir as a global terrorist.
 - Mir is wanted for his involvement in the 26/11 Mumbai terror attacks.
- The proposal was to blacklist Mir under the 1267 Al Qaeda Sanctions Committee of the UN Security Council as a global terrorist.

Sanctions regime of UNSC

- Under Chapter VII of the United Nations Charter, the UN Security Council can take action to maintain or restore international peace and security.
- The **application of sanctions is one of the possibilities the Council has in this respect.**
- Sanctions measures, under Article 41 of the UN Charter, encompass a broad range of enforcement options that do not involve the use of armed force.
- The measures can range from economic and trade embargoes to more targeted measures against specific individuals, companies or entities, such as the freezing of funds and travel bans.
- Pursuant to this, currently, the UNSC has 15 active sanctions regimes.
 - Sanctions regimes are enacted via a UN Security Council resolution.
 - The sanctions regimes focus on supporting political processes in armed conflicts, nuclear non-proliferation and counter-terrorism.

Sanctions Committee of UNSC

- Each sanctions regime is administered by a sanctions committee that consists of all 15 members of the Security Council.
 - 15 members include – 5 permanent member and 10 non-permanent members of UNSC.
- These sanctions committees ensure the implementation of the sanctions and can decide by consensus to adopt targeted sanctions against specific individuals, enterprises or entities.
- UNSC Al-Qaeda and ISIL Sanctions Committee or 1267 sanctions committee is one of such committee.

Functions of UNSC Sanctions Committee

- Once an entity or an individual is included in the list it gets designated as the “Global Terrorist”.
- The member states are required to:
 - freeze funds and financial assets of that individual/entity,
 - enforce a travel ban, and
 - cut off access to arms and related materials.

Procedures Followed By The UNSC Sanctions Committee

- **Decision by Consensus:** This requirement effectively gives a veto to all 15 members of the committee (10 non-permanent + 5 permanent).
- **Member can place a hold on the decision**
 - A committee member can place a “hold” on the decision should they require more time and information to consider the matter at hand.
 - As per the guidelines, a hold can last for as long as 6 months at a time, but can be extended further under “extraordinary circumstances”.
 - Apart from this vague condition, there is no restriction on repeatedly invoking a hold.
- **Meeting behind the close doors**
 - Committee meetings take place in closed sessions, with no publication of the agenda, proceedings and voting records of the committee.

What is UNSC Al-Qaeda and ISIL Sanctions Committee?

- The ISIL (Da’esh) and Al Qaida sanctions committee is also known as the 1267 sanctions committee.
- It is one of the most important UN subsidiary bodies working to combat terrorism, particularly in relation to ISIL (Da’esh), Al-Qaida and associated individuals, groups, undertakings and entities.
- This committee oversees the implementation of sanctions pursuant to UNSC resolutions 1267 (1999), 1989 (2011) and 2253 (2015).

Assam Rifles’ Ration Trucks Blocked In Manipur

- People in Meitei areas have allegedly blocked supplies from reaching the camps of the Assam Rifles deployed in south Manipur.
- The Meiteis have been accusing the Assam Rifles, the longest-serving paramilitary force in India, of being partisan and siding with the Kukis in the ongoing conflict.

The Assam Rifles

- **About**
 - Assam Rifles is one of the 7 Central Armed Police Forces (CAPFs) that come under the MHA’s administrative control.

- The other forces being: the Central Reserve Police Force (CRPF), the Border Security Force (BSF), the Indo-Tibetan Border Police (ITBP), the Central Industrial Security Force (CISF), National Security Guard (NSG) and the Sashastra Seema Bal (SSB).
- Besides **maintaining law and order in the Northeast** (a task it performs together with the Army), the Assam Rifles also **guards the border with Myanmar in the region.**
- Its history dating back to 1835 when its precursor, **Cachar Levy**, was formed in the Northeast to **protect British Tea estates** and their settlements against tribal raids.
- **Contributions of Assam rifles**
 - Since its formation, Assam Rifles has gone on to fight in two World Wars, the Sino-Indian war of 1962.
 - It is used as an anti-insurgency force against militant groups in the North East.
 - The Post-Independence role of the Assam Rifles continued to evolve ranging from
 - conventional combat role during Sino-India War 1962,
 - operating in foreign land as part of the Indian Peace Keeping Force (IPKF) to Sri Lanka in 1987 (Op Pawan)
 - to peacekeeping role in the North-Eastern areas of India.
 - It remains the **most awarded paramilitary force in both pre- and post-independent India.**
- **Uniqueness of Assam Rifles: Dual Control**
 - It is the **only paramilitary force with a dual control structure.**
 - The administrative control of the force is with the MHA.
 - Its operational control is with the Indian Army, which is under the Ministry of Defence (MoD).
 - Hence, salaries and infrastructure for this force is provided by the MHA, but the deployment, posting, transfer and deputation of the personnel is decided by the Army.

SUMMITS AND ORGANISATIONS

Copenhagen Meet On Ukraine Crisis

- A senior official from India attended a meeting of countries, including G7 nations, EU, Brazil, South Africa, Saudi Arabia and Turkey, on Ukraine in Copenhagen.
- During this meeting, the participants discussed Kyiv's work with allies to build broad international support for a peace blueprint.
- While India has not explicitly condemned the Russian invasion of Ukraine, it has always maintained that the conflict must be resolved by dialogue and diplomacy.

PM Modi Calls for G-20 Membership for African Union

- Prime Minister Narendra Modi has written to the leaders of the G-20 nations proposing that the African Union be given full membership of the grouping at its upcoming summit in India.
- India is hosting the G-20 summit in Delhi in September in its capacity as the current chair of the grouping.

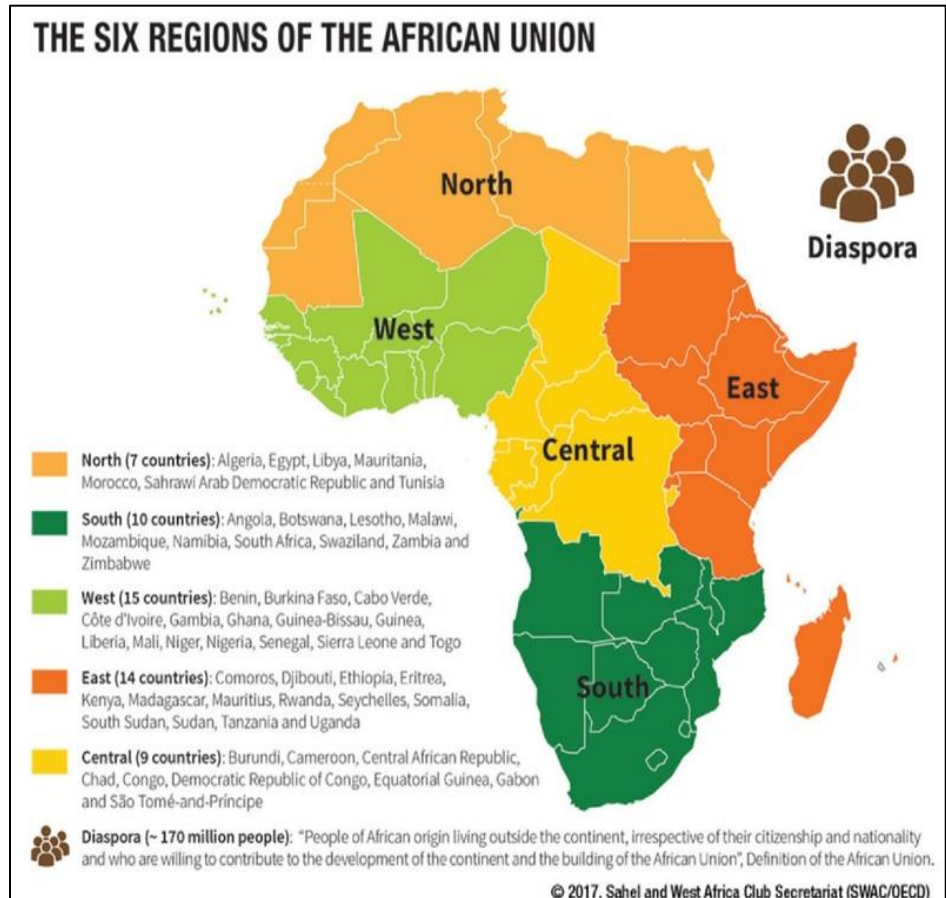
Why India has proposed the inclusion of AU in G20?

- By proposing the African Union for G20 membership, India has pitched itself as a leader of the developing and underdeveloped countries.
- This is also in sync with **India's aspiration for permanent membership of the UNSC**, for which Delhi is keen to garner support from Africa that has 55 votes.
- Also, analysts believe the inclusion of AU is a right step towards a just, fair, more inclusive and representative global architecture and governance.

- There is only one country from the entire African continent in the grouping – South Africa.
- On the other hand, Europe is represented by five countries as well as the European Union (EU).

African Union

- The AU is an intergovernmental organization consisting of the **55 member** states that make up the countries of the African Continent.
 - Basically, it is a continental union with a wide range of goals aimed at



strengthening its member states both individually and collectively.

- It was officially launched in 2002 as a successor to the Organisation of African Unity (OAU, 1963-1999).
- The **AU's headquarters are in Addis Ababa, Ethiopia.**

- **Purpose of AU**

- The AU is guided by its vision of "An Integrated, Prosperous and Peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena."
- A deadline of 2063 has been set to achieve this mission, representing the centenary of the OAU's formation.
- Agenda 2063's aspirations include:
 - A prosperous Africa, based on inclusive growth and sustainable development
 - An integrated continent, politically united, based on the ideals of Pan-Africanism
 - An Africa of good governance, democracy, respect for human rights, justice and the rule of law.
 - To achieve the goals set by Agenda 2063, the AU is setting itself a series of five 10-year plans, with the first plan running from 2014 to 2023.

- **Role of AU in promoting peace in the continent**

- The AU believes that conflicts must be settled before there can be a chance of achieving prosperity. To this end, it set up a Peace and Security Council in 2004.
- The council may intervene in conflicts, replacing the principle of non-interference with one of non-indifference.
- The council can deploy military forces in situations which include genocide and crimes against humanity. It can authorise peacekeeping missions.
- The AU oversees the **New Partnership for Africa's Development (Nepad).**
 - This is an anti-poverty blueprint which offers a bargain with the West: the promotion of good political and economic practice in return for more aid and investment.
- The African Union has regularly suspended member-states over coups d'etat, re-admitting them when they return to constitutional rule.

18th CII-EXIM Bank Conclave on India Africa Growth Partnership

- The **18th edition of the CII-EXIM Bank Conclave** on India Africa Growth Partnership with the theme of 'Creating Shared Future' was held in New Delhi.
 - The conclave was launched in the year 2005.
 - Over the last seventeen editions, the Conclave has played a pivotal role in encouraging Indian companies to establish and grow their footprints in Africa.
- The conclave was jointly organized by the Confederation of Indian Industry (CII) and EXIM Bank of India, in association with the Ministry of External Affairs and the Ministry of Commerce & Industry, Government of India.
- It was inaugurated by India's Minister of External Affairs.
- Key points from the speech of Indian EAM
 - India believes in forging a development partnership with Africa that is based on the needs and priorities of our partners.
 - Speaking of India's commitment to ties with Africa, Jaishankar cited the concessional loans of over \$ 12.37 billion.

- 197 projects – from drinking water schemes, irrigation, to rural solar electrification power plants and transmission lines – have been completed in the framework.
 - They have generated local employment even as they change the lives of many people in Africa.
- The future of India-Africa partnership focuses on “Digital”, “Green”, “Health”, “Food and on water.

ENVIRONMENT AND GEOGRAPHY

Myristica Swamps

Naturalists are telling that the Myristica swamp of Kerala is sinking.

About Myristica Swamps

Myristica Swamps	<ul style="list-style-type: none">These swamps are named after the dominant tree species found within them, which belong to the Myristicaceae family, commonly known as the nutmeg family. They have evolved over millions of years and are comprised of old-growth trees.
Distribution	<ul style="list-style-type: none">Myristica swamps are primarily found in the Western Ghats of southwestern India and in parts of Southeast Asia, particularly in the Indonesian island of New Guinea and its surrounding regions.A smaller distribution exists in the Andaman and Nicobar Islands.
Characteristics	<ul style="list-style-type: none">Myristica swamps are characterized by their waterlogged and acidic conditions.These swamps are typically situated in low-lying areas, often associated with river valleys or other water sources.The waterlogged conditions are influenced by factors such as poor drainage, high rainfall, and impermeable soils.
Tree Dominance	<ul style="list-style-type: none">The most well-known tree species in these swamps is Myristica malabarica, commonly known as the Malabar nutmeg or Bombay nutmeg.These trees have adaptations to the waterlogged conditions, such as stilt roots and pneumatophores (upward-growing root structures that help with aeration).
Threats	<ul style="list-style-type: none">Diversion of water from the swamps to the plantations and the building of check dams for potable water are detrimental to these ecosystems.It also exploited for non-timber forest products (NTFP) collection and medicinal plants.
Significance	<ul style="list-style-type: none">It possesses higher potential to store carbon than nearby non-swamp forests.It helps in retaining water and act as a sponge, ensuring perennial water availability.These swamps are home to many vertebrate and invertebrate faunal species.

World Environment Day 2023

When?	It is celebrated annually on 5 June since 1973. It is led by United Nations Environment Programme (UNEP).
Aim	To raise awareness on degrading environmental conditions as well as to encourage people worldwide to take positive environmental actions for a better future.
Features	<ul style="list-style-type: none">It is hosted by a different country each year.In year 2023 it is hosted by Cote d'Ivoire in partnership with the Netherlands.India hosted the 45th celebration of World Environment Day in 2018 under the theme 'Beat Plastic Pollution'.

Devankanam Charuharitham

On World Environment Day, the Kerala government inaugurated a project called Devankanam Charuharitham or the beautiful green abode of God.

- The primary focus of the project is to improve the green cover (Planting various flowering plants and fruit-bearing trees) around the temples (3800 temples across Kerala).
- Alongside the green cover enhancement, the project also includes the renovation of abandoned temple ponds.

About United Nations Environment Programme (UNEP)

Origin	<ul style="list-style-type: none"> • Established in 1972 (Headquartered in Nairobi, Kenya) • In 2022, UNEP celebrated its 50th anniversary, having served as an authoritative advocate for the global environment since 1972
United Nations Environment Assembly (UNEA)	
<ul style="list-style-type: none"> • UNEA is the governing body of the UNEP, established during the Rio+20 Conference in 2012. • It serves as the highest-level decision-making body within the United Nations system for environmental matters. UNEA convenes biennially in Nairobi, Kenya, with the objective of setting global environmental priorities and formulating international environmental law. • The assembly has held five sessions since its inception, with the first session occurring in 2014 and the fifth session taking place in 2022. Notably, during UNEA-5 in March 2022, held in Nairobi, a significant resolution was endorsed. • This resolution aimed to combat plastic pollution and emphasized the need to establish an international legally binding agreement by 2024 to address this issue effectively. 	
Reports	<ul style="list-style-type: none"> • Emission Gap Report, Frontiers Report, Invest into Healthy Planet, Global Environment Outlook, The Production Gap Report, Adaptation Gap Report, Greening the Blue report.

Rivers In News

Helmand River

There has been a long-standing dispute between Iran and Afghanistan over the sharing of the waters of the Helmand River.

- To regulate the allocation of river water, Iran and Afghanistan signed the Helmand River Treaty in 1973.
 - However, the agreement was never fully implemented, leading to ongoing disagreements and tensions. A major source of concern for Iran is Afghanistan's construction of dams, reservoirs and irrigation systems along the Helmand River. Tehran fears that these projects reduce water flow into Iran.

Origin	The Sanglakh Range of the Hindu Kush Mountains.
Course	<p>It is separated from the watershed of the Kabul River by the Unai Pass.</p> <p>It flows for approximately 1,150 kilometres before emptying into Lake Hamun, which straddles the Afghanistan-Iran border.</p> <ul style="list-style-type: none"> ➤ Lake Hamun, once the largest freshwater lake in Iran, has suffered immensely over time. Factors such as drought and the impact of dams and water controls have caused the lake to dry up.
Features	<ul style="list-style-type: none"> • It is the longest river in Afghanistan and the primary watershed for the Endorheic Sistan Basin. • Sistan Basin is an inland endorheic basin encompassing large parts of southwestern Afghanistan and minor parts of southeastern Iran • An endorheic basin is a drainage basin that normally retains water and allows no outflow to other water bodies.

Gaula River (Gola River)

The Ministry of Environment, Forest and Climate Change has given permission to the Uttarakhand government to continue mining activities in the Gaula River in Nainital district.

Origin	It originates from sat tal (7 lakes) in the Uttarakhand the Lesser Himalayas.
Course	<ul style="list-style-type: none">It flows south past Kathgodam, Haldwani, Kichha and Shahi and finally joins the Ramganga River in Uttar Pradesh, which is a tributary of the Ganges.
Features	<ul style="list-style-type: none">A barrage on this river, known as Gaula Barrage, is located in Kathgodam. It provides irrigation water for Bhabar's fields.

Study on Arctic Ocean Ice

An international study has suggested that the Arctic Ocean could be ice-free in the summers by 2030s.

Key Finding of This Study

- Arctic Ocean will become ice free irrespective of world's efforts to reduce emissions of greenhouse gases (*Anthropogenic causes Predominant*) which are leading to global warming.
- The contributions of aerosols and natural factors such as solar and volcanic activity were found to be much lower.

Consequences of Ice-Free Conditions of the Arctic Ocean

- Arctic indigenous communities will be affected because their hunting and travelling depend upon ice-free conditions.
- Animals that depend on sea ice will also be badly affected as permafrost melts and many species, including polar bears, walrus and reindeer, will have trouble surviving.
- Arctic warming and melting permafrost can enhance the release of greenhouse gases into the atmosphere, further intensifying global warming.

Significance of Sea Ice

- It helps regulate the planet's temperature by influencing the circulation of the atmosphere and ocean.
- It restricts wind and wave action near coastlines, lessening coastal erosion and protecting ice shelves.
- It also creates an insulating cap across the ocean surface, which reduces evaporation and heat loss to the atmosphere.
- When it melts in the summer, it releases nutrients into the water, stimulating the growth of phytoplankton, the center of the marine food web.
- It itself is habitat for animals such as seals, Arctic foxes, polar bears, and penguins.

Difference Between Sea ice and Glacier

Sea Ice	Glacier
Sea ice forms when the surface of the ocean freezes, typically in polar regions like the Arctic and Antarctic.	A glacier is a large mass of ice that forms on land, usually in mountainous regions where snow accumulates and compresses over time.
It is composed of frozen seawater, with no landmass involved.	It is made up of compacted snow and ice that has undergone years of accumulation and transformation.
Sea ice is temporary and seasonal, melting and re-forming with the changing seasons.	Glaciers can persist for hundreds or thousands of years, continuously moving down-slope under the influence of gravity.
Sea ice is dynamic and constantly in	Glaciers are much thicker than sea ice, often measuring hundreds of

<p>motion due to ocean currents, winds, and tides. It is relatively thin, typically measuring a few meters in thickness</p>	<p>meters to several kilometers in thickness. They shape the landscape through the process of erosion, carving valleys, and creating landforms like cirques, moraines, and fjords.</p>
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Ocean Census

- A new initiative called the Ocean Census jointly established by The Nippon Foundation and Nekton Foundation.
- It aims to expand marine biodiversity knowledge by finding 100,000 new marine species within a decade.
- It will send scientists on dozens of expeditions at **marine biodiversity hotspots** and use advanced technology like high-resolution imagery, DNA sequencing and machine learning, to identify new species.
- Scientists estimate that only about 10% of marine species have been formally described, and about 2 million species have yet to be identified.

Low Dissolved Oxygen

About Dissolved Oxygen (DO)

<p>What is DO?</p>	<ul style="list-style-type: none"> • It is the amount of oxygen present in water. It is a major indicator of water quality. • Unlike air, which is normally about 21% oxygen, water contains only a tiny fraction of a percentage of dissolved oxygen.
<p>Formation of DO in Water</p>	<p>Oxygen enters water primarily through two processes:</p> <p>1) Diffusion: Oxygen from the atmosphere can diffuse into water at the air-water interface. This process is influenced by the <i>concentration gradient between the air and water, temperature, and surface agitation (such as wind or waves)</i>.</p> <p>2) Photosynthesis: Aquatic plants and some microorganisms produce oxygen as a by-product of photosynthesis. During daylight hours, the dissolved oxygen levels can increase in bodies of water with a sufficient presence of photosynthetic organisms.</p>
<p>Utilisation of DO in water</p>	<p>Like the air we breathe, the survival of aquatic life depends on a sufficient level of oxygen dissolved in water.</p> <p>Dissolved Oxygen is consumed through various processes, including:</p> <p>1) Respiration: Aquatic organisms, such as fish and bacteria, consume oxygen through respiration, converting it into carbon dioxide and water.</p> <p>2) Decomposition: Organic matter, such as dead plants and animals, decomposes in water, and this decomposition process consumes dissolved oxygen.</p>
<p>Required Concentration of DO</p>	<p>The concentration of dissolved oxygen is typically measured in milligrams per liter (mg/L) or parts per million (ppm).</p> <ul style="list-style-type: none"> • The DO levels required for the survival of different aquatic organisms vary, but generally, higher levels are preferred. • In general, a DO level above 5 mg/L is considered suitable for most aquatic life, while levels below 2 mg/L can be stressful or even lethal for many species.

<p>Extra Mile</p> <ul style="list-style-type: none"> • Cool water can hold more oxygen than warm water, with variations ranging from seasonal to time of day or night.
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- Water with high concentrations of dissolved minerals such as salt will have a lower dissolved oxygen concentration than fresh water *at the same temperature*.
- At sea level, fresh water can absorb more oxygen per volume than water at mountainous elevations because of the *higher atmospheric pressure near sea level*.

Causes of Low Dissolved Oxygen

- **Eutrophication** - It is an overgrowth of algae caused by excess nutrients, such as nitrogen and phosphorus, in the water.
 - As the algae die and decompose, they use up the available oxygen in the water, leading to a decrease in dissolved oxygen levels.
 - The process of decomposition is called Carbonaceous Biochemical Oxygen Demand (CBOD).
- **Temperature** - Warmer water temperatures can lead to a decrease in dissolved oxygen levels, as warmer water is less able to hold oxygen than cooler water.
- **Salinity** - Changes in salinity levels can also lead to a decrease in dissolved oxygen levels.
 - For example, when saltwater and freshwater mix, the resulting brackish water may have lower dissolved oxygen levels than either pure saltwater or freshwater.
- **Pollution** - The presence of pollutants such as oil or chemicals in the water can also lead to a decrease in dissolved oxygen levels. These pollutants can directly consume oxygen, or can lead to the growth of bacteria that consume oxygen.
- **Natural phenomena** - Natural phenomena such as algal blooms or sudden changes in water flow can also lead to a decrease in dissolved oxygen levels.
- **High Altitude or Pressure:** Dissolved oxygen levels decrease at higher altitudes (or under low pressure) conditions. This is because the partial pressure of oxygen in the atmosphere decreases with increasing altitude, resulting in lower oxygen diffusion into the water.
- **Insufficient Mixing or Turbulence:** Adequate mixing or turbulence in water is crucial for the exchange of oxygen between the water and the atmosphere. Calm water conditions, such as stagnant ponds or slow-flowing rivers, can result in reduced oxygen transfer and lower DO levels.

Solution To Tackle The Problem Of Low-Level Dissolved Oxygen

- One of the most effective solutions is to reduce the amount of nutrients that enter the water.
 - This can be done by reducing the use of fertilizers and other chemicals on land, as well as by reducing the amount of runoff from urban areas.
- We need to improve the quality of wastewater treatment.
- Increasing the amount of oxygen in the water can also help to prevent low dissolved oxygen levels.
 - This can be done by increasing the amount of water flow in the affected area, or by adding oxygen to the water through the use of aerators or other devices.

LEED Certification

According to the USGBC and GBCI, India ranks 1st in the world in LEED (Leadership in Energy and Environmental Design) Zero certified green building projects, surpassing the US and China.

LEED Certification	<ul style="list-style-type: none"> • LEED is one of the most popular green building certification programs used worldwide. • It recognises projects that have reached net zero or net positive status in the categories of carbon, energy, water, or waste. • It is available for virtually all building types.
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Developed by	The non-profit U.S. Green Building Council (USGBC)
Aim	It aims to provide a framework to building owners and operators for identifying and implementing practical green building solutions.
Types of ratings	<ul style="list-style-type: none"> It has 4 types of ratings: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points) and Platinum (80+ points).
Significance	<ul style="list-style-type: none"> It provides a framework for healthy, highly efficient and cost-saving green buildings, which deliver environmental, social and governance benefits. It encourages and accelerates the adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted standards.

Other Green Building Certifying Agencies

- **Indian Green Building Council (IGBC) Ratings** – It is a division of the Confederation of Indian Industry that works closely with the government and aims at sustainably built environment.
- **Energy Conservation Building Code (ECBC)** – It was established by the Indian Bureau of Energy Efficiency (BEE) to set energy efficiency standards for design and construction of buildings.
- **TERI Green Rating for Integrated Habitat Assessment (GRIHA)** – It is a national rating system for green buildings that is adopted while designing and evaluating new buildings.

Groundwater Extraction has Tilted Earth's Spin

A recent study has revealed that the extraction of groundwater from the earth has caused a shift in the planet's axis, tilting it nearly 80 cm to the east.

Linking Groundwater Pumping and Axis Tilt

- The locations of the North and South poles aren't static. They are unchanging spots on our planet.
- The Earth's axis spins around or more specifically the surface that invisible line emerges from is always moving due to processes scientists don't completely understand.

Understanding the Earth's Axis Tilt

- The Earth's axis tilt, also known as obliquity, refers to the angle between the Earth's rotational axis and its orbital plane around the Sun. This tilt is responsible for the changing seasons and variations in the length of daylight throughout the year.
- Earth's axis is tilted at an angle of approximately 23.5 degrees (oscillates between 22.1 and 24.5 degrees) relative to its orbital plane. This means that as the Earth orbits the Sun, different parts of the planet receive varying amounts of sunlight, leading to the seasonal changes we experience.
- Earth's axis tilt is not constant and undergoes slight variations over long periods of time. This phenomenon is known as axial precession, which causes the axis to trace out a circular path (wobble motion) over a period of about 26,000 years.
- This means that the orientation of the Earth's axis changes slowly over time, altering the positions of the North and South Poles in relation to the stars.



- The way water is distributed on Earth's surface is one factor that drives the drift.
- The Earth spins around an axis kind of like a top. If the weight of a top is moved around, the spinning top would start to lean and wobble as its rotational axis changes.
- The same thing happens to the Earth as weight is shifted from one area to the other.

HI-WISE Report

The International Centre for Integrated Mountain Development (ICIMOD) released the **Water, Ice, Society, and Ecosystems** in the **Hindu Kush Himalaya (HI-WISE) report**.

Key Findings of This Report

- Glaciers disappeared 65% faster in the 2010s than in the previous decade
- On current emissions pathways 80% of glaciers' current volume will be gone by 2100
- Availability of water is expected to peak in mid-century and then decline
- Vulnerable mountain communities are already experiencing major adverse impacts: loss and damage to lives, property, heritage, infrastructure
- Floods and landslides are projected to increase
- Impacts on fragile mountain habitats are particularly acute


About the Hindu Kush Himalaya

- It stretches 3,500 km from Afghanistan to Myanmar
- The region harbours the highest mountain ranges in the world and contains the largest volume of ice on earth outside of the polar areas and is called "Asia's water tower".
- It is considered the Third Pole (after the North and South Poles), and has significant implications for climate.
- Water flowing from these mountains feeds major rivers including the Brahmaputra, Ganges, Indus, Irrawaddy, Mekong, Yangtze, and Yellow.
- The region is undergoing "unprecedented and largely irreversible" changes triggered by global warming.

About the HI-WISE Report

- It was first published in 2019
- It focused specifically on climate change, cryosphere, water, and biodiversity and first established the region's significance and vulnerability in global and regional fora.
- This new assessment report, co-authored by 35 researchers and scientists, from 12 different countries, and 23 institutions, zeroes in on the ecological and human impacts of changes in the cryosphere.
- The assessment went through a comprehensive, double-blind, peer-review process.

About ICIMOD

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- It is a regional intergovernmental learning and knowledge-sharing centre serving the 8 regional member countries (RMCs) of the HKH region – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan.
 - It was established in 1983 and is headquartered at Lalitpur, which is located in the Kathmandu valley.
 - It promotes and fosters partnerships amongst the RMCs to secure a better future for the people and environment of the HKH region.

Subsidies Don't Help Fight Climate Change

A new World Bank report highlights the negative consequences of indirectly and apparently inefficient subsidies to the agriculture, fishing and fossil fuel sectors.

Key Findings of This Report

- Subsidies for fossil fuels, agriculture, and fisheries exceed \$7 trillion in explicit and implicit subsidies, which is around 8% of global GDP.
- In 2021, countries shelled out \$577 billion to actively lower the price of polluting fuels such as oil, gas, and coal.
 - These measures amounted to incentivising the overuse of fossil fuels.
- Most countries spend 6 times more money on subsidizing fossil fuel consumption as compared to the financial allocation made for commitments made under the 2015 Paris Agreement.
- Agriculture subsidies are responsible for the loss of 2.2 million hectares of forest per year - or 14% of global deforestation.

- Fossil fuel usage, incentivized by subsidies, is a key driver of the 7 million premature deaths each year due to air pollution.
- Fisheries subsidies, which exceed \$35 billion each year, are a key driver of dwindling fish stocks, oversized fishing fleets, and falling profitability.

Global Environment Facility

At the 64th Global Environment Facility council meeting in Brazil, the governing body approved the disbursement of \$1.4 billion to accelerate efforts to tackle the climate, biodiversity and pollution crises.

About Global Environment Facility (GEF)

- It is a multilateral financial organization that was established in 1991 to help address global environmental problems.
- It provides grants and funding to support projects that promote sustainable development, biodiversity conservation, and climate change mitigation and adaptation.
- It is unique as it brings together governments, civil society organizations, and the private sector to work towards common environmental goals.
- It is governed by a council of representatives from 183 member countries, who make decisions on funding and policy.
- It serves as a "financial mechanism" to five conventions -
 - Convention on Biological Diversity (CBD)
 - United Nations Framework Convention on Climate Change (UNFCCC)
 - Stockholm Convention on Persistent Organic Pollutants (POPs)
 - UN Convention to Combat Desertification (UNCCD)
 - Minamata Convention on Mercury.
- The GEF operates on the principle of "incrementality," which means that its funding is meant to go beyond what would have been done in the absence of GEF support.
- It has funded over 4,000 projects in over 170 countries, with a total investment of over \$20 billion.

Salt Cavern-Based Reserves V. Rock Cavern-Based Reserves

	Salt cavern-based Reserves	Rock cavern-based Reserves
Formation	Created by injecting water into salt deposits and then pumping out the brine, leaving behind an empty space that can be used for storage.	Created by drilling into solid rock and excavating a cavern that can be used for storage.
Usage	Used for storing hydrocarbons, natural gas, and liquid petroleum products due to their excellent sealing properties and high storage capacity	Used for various purposes, including storage of perishable goods, strategic reserves (e.g., emergency supplies), or specialized storage for hazardous materials.
Cost	Generally more cost-effective and can be built more quickly.	Generally more expensive to construct
Safety	More prone to leaks and other safety issues, since salt is more porous than rock.	More secure and reliable

Mawar, Biparjoy, and Guchol

- Mawar, Biparjoy, and Guchol are names of tropical cyclones that occurred in the Western Pacific Ocean.
- Mawar was a Category 4 super typhoon that hit the Philippines and China.
- Biparjoy was a Category 3 typhoon that hit the Philippines.
- Guchol was a Category 4 super typhoon that hit Japan.
- Tropical cyclones are violent storms that originate over oceans in tropical areas and move over to the coastal areas.

Cotton Crop in India

- India is the world's 2nd-largest producer of cotton, after China, and accounts for about 25% of global cotton production.
- It is grown in many parts of India, including Maharashtra, Gujarat, Andhra Pradesh, Telangana, and Punjab.
- It requires a significant amount of water to grow, it is typically grown in areas that receive at least 600 mm of rainfall per year.
- It also requires well-drained soil that is rich in nutrients such as nitrogen, phosphorus, and potassium.
- BT cotton was 1st introduced in India in 2002 and has since become the dominant variety of cotton grown in the country.
- India cultivates different varieties of cotton, including both short-staple (medium-fiber length) and long-staple (extra-long fiber length) cotton. The most widely grown cotton varieties in India are hybrid cotton (Bt cotton) and desi cotton.

Ionosphere

What is it?

- It is a layer of the Earth's atmosphere that extends from about 60 km to 1,000 km above the Earth's surface.
- It is divided into several layers, including the D layer, E layer, F1 layer, and F2 layer. (F2 layer is the highest layer and is primarily responsible for long-distance radio communication)

Importance of Ionosphere

- **Propagation of Electromagnetic Waves:** The ionosphere affects the propagation of various electromagnetic waves, including radio waves, by altering their speed, direction, and polarization.
- **Radio Communication:** The ionosphere's ability to reflect radio waves back to the Earth's surface allows for long-distance radio communication, especially in the high-frequency (HF) and very high-frequency (VHF) ranges.
- **Aurora Borealis and Aurora Australis:** The ionosphere interacts with energetic particles from the Sun, resulting in the beautiful natural light displays known as the Northern Lights (Aurora Borealis) and Southern Lights (Aurora Australis).
- **Global Navigation Satellite Systems (GNSS):** Signals from satellite-based navigation systems, such as GPS (Global Positioning System), pass through the ionosphere.
- **Space Weather:** The ionosphere is highly influenced by space weather phenomena, such as solar flares and coronal mass ejections. These disturbances can disrupt radio communication, satellite operations.

Singhbhum Craton

Location	It is one of the oldest cratons in the world, located in Jharkhand, dating back to the Archean era, which began around 4 billion years ago.
Geological Significance	<ul style="list-style-type: none">• The craton represents a stable portion of the Earth's crust that has remained relatively unchanged for billions of years.• It is also home to several important geological formations, such as the Iron Ore Group and the Dhanjori Formation.• The craton is characterized by a complex geological history, including periods of mountain-building, volcanic activity, and sedimentation.
Mineral Resources	<ul style="list-style-type: none">• The craton is known for its rich mineral resources. It contains significant deposits of iron ore, copper, manganese, chromite, gold, and uranium, among other minerals.• The mining industry in the region has played a crucial role in the economic development of the area.

Brahmani Natural Arch

GSI proposes the 'Geo Heritage' tag for the Jurassic age 'Natural Arch' in Odisha.

- It is a geological feature located in the Deomali mountain range in Odisha.
- It was created by the erosive forces of wind and water over millions of years.
- It is made of sandstone and stands at a height of about 200 feet.
- It is a popular tourist attraction and is considered to be one of the largest natural arches in Asia.

Critical Minerals

What are Critical Minerals?	<ul style="list-style-type: none">• Critical minerals, also known as strategic minerals or rare earth elements, are a group of minerals that are essential for the production of a wide range of modern technologies, including smartphones, electric vehicles, and renewable energy systems.• These are considered to be critical because of their economic and strategic importance, as well as their potential to become scarce due to limited supply and geopolitical factors.
Critical Minerals: Examples	
<ul style="list-style-type: none">• Lithium (White gold) is a key component in rechargeable batteries, making it essential for electric vehicles, portable electronics, and energy storage systems.• Cobalt is used in the production of lithium-ion batteries, as well as in aerospace alloys and superalloys for gas turbines.• Platinum group metals (such as platinum, palladium, and rhodium) are critical for catalytic converters, fuel cells, and various chemical processes.• Rare earth elements (such as neodymium, dysprosium, and yttrium) are vital for manufacturing high-strength magnets used in electric vehicle motors, wind turbines, and computer hard drives.	
Critical Minerals: Key Distribution	
<ul style="list-style-type: none">• About three-fourths of the world's cobalt, is produced by the Democratic Republic of the Congo.	

- Major Global Lithium Reserves: Chile > Australia > Argentina are top countries with Li reserves. Lithium Triangle: Chile, Argentina, Bolivia.
- The Geological Survey of India has for the first-time found Lithium 'inferred' resources in Salal-Haimana area of the UT of Jammu & Kashmir.

Climate Change Related Developments At Global Level

Global Stocktake

- It is a process established under the Paris Agreement on climate change to assess progress towards the long-term goal of limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C.
- The first stocktake got underway at the UN Climate Change Conference in Glasgow last November (COP26) and will conclude at COP28 in 2023. Each stocktake is a two-year process that happens every five years.
- The first global stocktake is critical to assessing collective progress under the Paris Agreement and addressing opportunities for enhanced action and support.

Carbon Border Adjustment Mechanism (CBAM)

- It was announced by the European Union (EU).
- It would impose a carbon tax on imported goods based on their carbon footprint.
- It aims to prevent "carbon leakage", which occurs when companies move their production to countries with less stringent climate policies to avoid paying for carbon emissions.

New Collective Quantified Goal

- The 2015 Paris Climate Agreement agreed on setting a New Collective Quantified Goal (NCGQ) for climate financing prior to 2025.
- The NCGQ is expected to be finalised by 2024. It will replace the current climate finance goal of \$100 billion annually from developed countries.
- The NCGQ is thus termed the "most important climate goal". It pulls up the ceiling on commitment from developed countries.

Blue Ocean Event







- It refers to a situation in which the Arctic Ocean becomes ice-free during the summer, with the sea ice area dropping below 1 million square kilometres.
- It signifies the absence of sea ice at the top of the world and is considered a significant and alarming consequence of climate change.
- It represents a critical tipping point in the Arctic system, as more sea ice melts, it reduces the amount of sunlight reflected into space, leading to further warming and ice loss.






SPECIES IN NEWS

Himalayan Brown Bear



- It is a large carnivore found in the high-altitude regions of the Himalayas including Pakistan, India, Nepal, China and Bhutan.
- It is omnivorous and hibernate in dens during the winter.
- The mammal is listed as Critically Endangered in IUCN Red List and in Schedule I

<p>Axolotls</p> 	<p>in Wildlife (Protection) Act of 1972</p> <ul style="list-style-type: none"> • It is a species of salamander (lizard-like amphibians). • They are Carnivorous and remain aquatic throughout their lives. • It has been variously interpreted as water dog, water twin, water sprite, or water slave. • They were originally found in Lake Xochimilco, near Mexico City. But, they are now almost extinct in the wild. • It is listed as critically endangered in the IUCN Red list.
<p>Alligator gar fish</p> 	<ul style="list-style-type: none"> • It is known for its crocodile-like head and razor-sharp teeth. • It is normally found in northern and central America and also in Mexico. • It is a predator fish and a carnivore. It can eat all types of fish and therefore poses a threat to native species. • It is listed as least concerned in the IUCN Red list.
<p>Duck-billed dinosaur</p> 	<ul style="list-style-type: none"> • It is a species of herbivorous dinosaur previously unknown in the southern hemisphere. • Duck-billed dinosaurs were herbivorous. • These were slender-looking dinosaurs, which could easily adopt a bipedal and quadrupedal posture to reach the vegetation at height and ground level. • During the Cretaceous period duck-billed dinosaurs lived in the Americas, Europe, and Asia.
<p>Spotted pond turtles</p> 	<ul style="list-style-type: none"> • Spotted pond turtles are named for the yellow or white spots on their black heads, legs and tails. • They have large heads and short snouts, and their webbed feet help them swim. • They are found in large, deep rivers in India, Pakistan and Bangladesh. • They are Carnivorous and they bask in the sun to regulate their body temperature. • In India, the species is distributed across the north, northeast and a few parts of central India. • It is listed as Endangered in the IUCN Red list.
<p>Black Buck</p> 	<ul style="list-style-type: none"> • It is the sole extant member of the genus Antelope found in India. • It lives mainly in open grasslands or dry deciduous forests. • It has been declared as the state animal by the governments of Punjab, Haryana and Andhra Pradesh. • It is listed as Least concerned in the IUCN Red List and Schedule I in Wildlife Protection Act of 1972.
<p>Hasarius Mumbai</p> 	<ul style="list-style-type: none"> • It is a newly discovered species of jumping spider. • These are spiders who, instead of trapping their prey in a web, stalk and hunt them by pouncing. • It has multiple eyes that give a 360-degree view of its surroundings and a bulbous body covered in hair. • In India, there are only two other Hasarius species which have been documented

<p>White-Rumped Vulture</p> 	<ul style="list-style-type: none"> • It is a medium-sized Old World vulture. • It is also known as Indian White-backed Vulture or Oriental White-backed Vulture. • It is frequently spotted close to areas where people are present. • It is listed as Critically Endangered in the IUCN Red list and Schedule-1 in Wildlife Protection Act 1972. • White-rumped vultures die of kidney failure caused by diclofenac poisoning.
<p>Sal Tree</p> 	<ul style="list-style-type: none"> • It is a large sub deciduous tree found in Assam, Nepal, Bengal and on the bank of the Yamuna River. • It is widely grown in the foothills of the Himalayas. • Its resin is used in the indigenous system of medicine as an astringent and detergent. • The leaves of the Sal tree are used by the tribal people for preparing rice cakes and for smoking.
<p>Red-eared sliders turtle</p> 	<ul style="list-style-type: none"> • It is a semi-aquatic turtle from fresh and brackish water ecosystems. • It is native to the south-eastern USA and Mexico. • It is considered one of the world's 100 worst invasive non-native species. • It is known for its distinct red stripes behind each ear. • It is listed as Least Concern IUCN Red List.
<p>Indian Skimmer</p> 	<ul style="list-style-type: none"> • It is a species of bird, that gets its name from the way it feeds, flying low over the water surface and 'skimming' for fish. • It is native to India, Bangladesh, Myanmar, Nepal, Pakistan and Vietnam. • It is listed as Endangered in the IUCN Red List. • Its population is declining primarily because of the degradation of wetland and riverine habitats.
<p>Hyena</p> 	<ul style="list-style-type: none"> • It is doglike carnivores found in Asia and Africa and are noted for their scavenging habits. • There are three hyena species — spotted, brown, and striped. Spotted hyenas are the largest of the three. • All hyenas are more or less nocturnal. • They are four-legged animals with scraggly fur and large ears. • Spotted Hyena is listed as least concern in IUCN Red list; brown and striped hyenas are listed as near threatened.

Higgs Boson

The European Organization for Nuclear Research (CERN) announced that scientists at the organisation found the 1st evidence of the rare process by which the Higgs boson decays into a Z boson and a photon.

About Higgs Boson (Popularly referred as the God Particle)

Higgs Boson	<ul style="list-style-type: none"> The Higgs boson is a subatomic particle that was discovered in 2012 at the Large Hadron Collider (LHC), a particle accelerator located at CERN in Geneva, Switzerland. Its discovery was a major milestone in particle physics and confirmed the existence of the Higgs field, which is a fundamental component of the Standard Model of particle physics.
Higgs Field	<ul style="list-style-type: none"> Higgs boson is associated with the Higgs field, a field of energy that permeates the entire universe. According to the Higgs mechanism proposed by physicists Peter Higgs, François Englert, and others in the 1960s, particles acquire mass by interacting with this field.
Particle Mass	<ul style="list-style-type: none"> The Higgs field is responsible for giving elementary particles (such as electrons and quarks) their masses. When particles move through the Higgs field, they experience resistance, similar to wading through a medium. This resistance to motion translates into the particle's mass. Not all fundamental particles have mass.
Discovery	<ul style="list-style-type: none"> The Higgs boson was detected through experiments conducted at the LHC. Protons were accelerated to high energies and collided together, releasing enormous amounts of energy. The collisions produced a variety of particles, including the Higgs boson. By analyzing the debris of these collisions, scientists identified the presence of the Higgs boson based on its decay products. Scientists confirmed its existence in 2012 through the ATLAS and CMS experiments at the Large Hadron Collider (LHC). This discovery led to the 2013 Nobel Prize in Physics being awarded to Higgs and Englert.
Properties	<ul style="list-style-type: none"> The Higgs boson has a mass of approximately 125 giga-electronvolts (GeV) or about 130 times the mass of a proton. It has a short lifetime (also Chargeless) and rapidly decays into other particles after being produced in high-energy collisions. Once it is created during the particle collisions, it sticks around for merely less than a trillionth of a billionth of a second.
Importance	<ul style="list-style-type: none"> It was a crucial piece of the puzzle in understanding the origin of mass and the fundamental forces that govern the behaviour of matter.

Agni-1 Missile

India carries out successful training launch of Agni-1 ballistic missile.

About Agni- 1 Missile

- It is a medium-range ballistic missile that was developed by DRDO under the Integrated Guided Missile Development Programme (**IGMDP**).
- It is a single-stage, solid-fuel missile, having range 700–900 km.

- It is capable of carrying a **nuclear warhead** with an estimated payload of 1,000 kg.
- It was first tested in **1989** at the Interim Test Range in Chandipur, but they were Short-range ballistic missiles (SRBM).
- The Indian Army's Strategic Forces Command 1st deployed this missile in 2007

Integrated Guided Missile Development Programme (IGMDP)

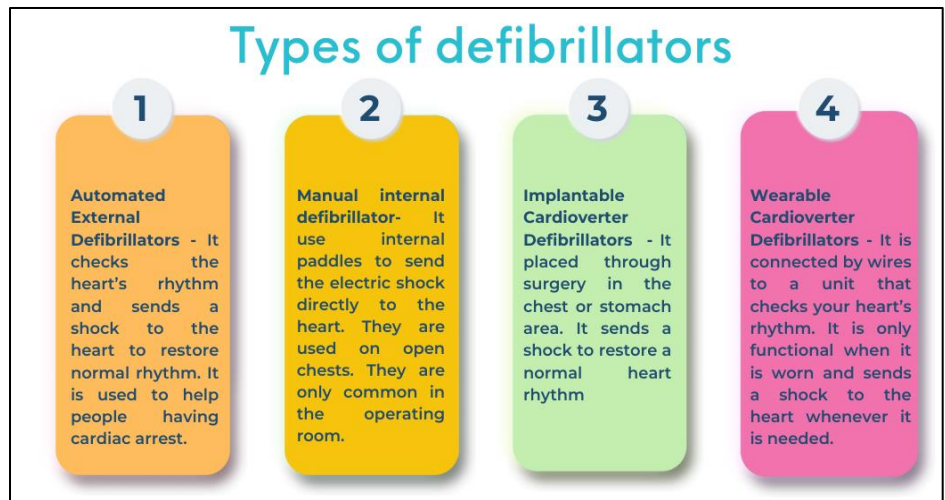
- It was an Indian Ministry of Defence programme to research and develop a comprehensive range of missiles.
- It was **launched in 1982-83**.
- It was **conceived by Dr. A.P.J. Abdul Kalam**.
- **The programme was managed by the DRDO and Ordnance Factory Board** in partnership with other Indian government political organisations.
- **The 5 missiles developed under this program**
 - **Prithvi:** Short range *surface to surface* ballistic missile.
 - **Agni:** Intermediate-range *surface-to-surface* ballistic missile
 - ✓ (Agni missile was later separated from the IGMDP due to its strategic importance)
 - **Trishul:** Short-range low-level *surface to air* missile.
 - **Akash:** Medium range *surface to air* missile.
 - **Nag:** 3rd generation fire and forget anti-tank missile.

Defibrillator

According to new research defibrillators are used in only one out of every ten cardiac arrests where lifesaving devices are available.

About Defibrillator

- It is devices that send an electric energy or shock to the heart to restore a normal heartbeat.
 - If the heart suddenly stops, defibrillator can also help it beat again.
- It used to prevent or correct an arrhythmia, an uneven heartbeat that is too slow or too fast.
- The procedure used to treat life threatening conditions that affect the rhythm of the heart is known as Defibrillation.



Fattah Missile

Iran has unveiled an intermediate range ballistic missile named Fattah.

Features	<p>Speed: Hypersonic speeds of up to 15 times the speed of sound.</p> <p>Range: 1,400 kilometres (can penetrate missile defence system)</p> <p>Fuel Used: solid propellants, allowing high manoeuvrability</p>
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Significance	Iran will become the 1 st country in the entire Middle Eastern region to possess a hypersonic weapon
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What are Hypersonic Missiles?

Hypersonic missiles travel at speeds of **at least Mach 5** — five times the speed of sound — and can manoeuvre mid-flight, making them harder to track and intercept.

Difference Between Cruise and Ballistic Missile		
	Cruise Missile	Ballistic Missile
Flight Path	A cruise missile follows a relatively <u>low-altitude and controlled flight</u> path. It operates within the Earth's atmosphere and can maneuver to navigate around obstacles and reach its target.	It follows a high-altitude trajectory. It is launched into space and then <u>re-enters the Earth's atmosphere</u> to strike its target. It primarily relies on the force of gravity and momentum to reach its destination.
Range and Speed	Cruise missiles generally have shorter ranges compared to ballistic missiles. They can typically travel at <u>subsonic or supersonic speeds</u> , depending on the design.	Ballistic missiles are capable of traveling much longer distances. They can reach hypersonic speeds.
Guidance System	Cruise missiles employ sophisticated guidance systems, such as GPS, inertial navigation systems, and terrain contour matching, to accurately navigate and strike their intended targets.	Ballistic missiles typically follow a <u>pre-determined trajectory</u> and have <u>less maneuverability</u> compared to cruise missiles. They rely on guidance systems, including inertial navigation and sometimes celestial navigation, to reach their target area.
Purpose	Cruise missiles are commonly used for precision strikes against specific targets, such as military installations, infrastructure, or high-value targets.	Ballistic missiles serve various purposes, including delivering <u>nuclear or conventional warheads</u> over long distances. They can be used for strategic deterrence, intercontinental strikes, or shorter-range tactical operations.

Silent Barker

The US Space Force, in collaboration with the National Reconnaissance Office (NRO), is set to launch a satellite constellation named Silent Barker.

Aim	<ul style="list-style-type: none"> To observe and supervise Chinese or Russian space vehicles that may pose a risk to vital orbiting objects. To identify, detect, and monitor potential dangers targeting valuable US systems in space. (Satellite threat intelligence and space situational awareness)
Position	<ul style="list-style-type: none"> The satellites of this constellation will be positioned in geosynchronous orbit about 22,000 miles (35,400 kilometers) above the earth. This orbit allows the satellites to match the Earth's rotational speed, ensuring continuous coverage and effective monitoring capabilities.
Features	Silent Barker addresses the limitations of ground or lower-orbit surveillance systems and allows it to "really figure out what is going on up there in space."

CL-20

Chinese scientists have integrated nanotechnology to make a new form of CL-20 explosive with five times the regular shock resistance.

About CL-20

- It deemed to be the most lethal **non-nuclear explosive** in existence.
- Its full name, Hexa-nitro-hexa-azaisowurtzitane, reflects its chemical composition.
- It has not yet been incorporated into any production weapon system, but is undergoing tests for stability, production capabilities and other weapon characteristics.
- Its high energy output and low sensitivity to shock and abrasion make it an attractive option for developing more powerful and effective weapons.
- The improved shock resistance achieved through China's new method opens doors for increased safety and reliability in the utilization of CL-20 in military operations.

International Conference on Spacecraft Mission Operations (SMOPS-2023)

ISRO organised the International Conference on Spacecraft Mission Operations (SMOPS-2023) in Bengaluru.

About SMOPS	It was organised in collaboration with the Italian Space Agency (ASI) and the International Academy of Astronautics (IAA) and in association with industry partners.
Objective	To bring together Space agencies, start-ups, industry, and academia to discuss emerging technologies and automation in Space mission operations and ground segment.
Theme	"Emerging Technologies for Automation in Ground and Space Segment in satellite mission operations."

Protosterol Biota

Scientists have discovered **fossilized remains** of Protosterol Biota inside a rock at the bottom of the ocean near the Northern Territory in Australia.

- These remains are from the Proterozoic Eon period (over 1.6 billion years ago) which was important in the development of complex life.
- It is the microscopic organism, belongs to the family of organisms called Eukaryotes.

Significance Of This Discovery

- The study reveals that it could have been the first predators on Earth, marking an important milestone in the evolution of life.
- They were abundant in marine ecosystems and likely shaped Earth's ecosystems for much of its history.

	Prokaryotes	Eukaryotes
Cell Structure	single-celled organisms that lack a distinct nucleus and membrane-bound organelles. (Circular DNA)	single-celled or multicellular and possess a well-defined nucleus that houses their linear DNA molecules.
Size	Prokaryotic cells are generally smaller and simpler compared to eukaryotic cells.	
Genetic Material	Prokaryotes have a single circular DNA molecule that contains their genetic information. This DNA is not associated with histone proteins.	eukaryotes have multiple linear DNA molecules that are organized into chromosomes. The DNA is tightly wound around histone proteins, forming a complex called chromatin.
Reproduc	Prokaryotes reproduce mainly through	Eukaryotes have more diverse modes of reproduction,

tion	binary fission, a process where the cell divides into two identical daughter cells.	including mitosis, meiosis, and sexual reproduction, involving the fusion of gametes.
Diversity	Prokaryotes are represented by two major domains: Bacteria and Archaea. They exhibit a wide range of metabolic diversity and can inhabit various environments, including extreme ones.	Eukaryotes belong to the domain Eukarya and include organisms from protists, plants, fungi, and animals. Eukaryotes show a higher level of cellular specialization and complexity.

Millisecond Pulsars (MSP)

PUNE-BASED astronomers have discovered two new Millisecond Pulsars (MSP).

About Millisecond Pulsars (MSP)

- These are dense, **tiny neutron stars**, which are formed when a massive star collapses.
- They are named pulsars because they emit pulses of radiation at regular intervals.
- Millisecond pulsars emit radiations *every few milliseconds*.
- The properties of these radiations can reveal important information about **neutron stars**, the most dense objects in the universe except black holes.
 - ✓ Neutron stars are formed when a massive star runs out of fuel and collapses
- Additionally, gravitational waves are more likely to be detected if there is a significant population of MSPs in an area.

Pulsar

- Pulsars are **rotating neutron stars** observed to have pulses of radiation (radio waves and other electromagnetic radiations) at very regular intervals that typically range from **milliseconds to seconds**.
- Pulsars have very strong magnetic fields which funnel jets of particles out along the two magnetic poles. These accelerated particles produce very powerful beams of light
- They are formed from the explosive deaths of their parent star.
- It is packed with the mass of at least 1.4 times the mass of the sun.

Magnetars

Another type of neutron star is called a magnetar. In a typical neutron star, the magnetic field is trillions of times that of the Earth's magnetic field; however, in a magnetar, the magnetic field is another 1000 times stronger.

Virgin Birth

Scientists have documented the first-known instance of a **Facultative parthenogenesis** also referred as "virgin birth" by a crocodile.

About Facultative Parthenogenesis (FP)

What is Parthenogenesis?	It is a reproductive process in which an organism develops from an unfertilized egg . It occurs naturally in certain species, primarily invertebrates, such as insects, reptiles, and some fish. However, it is extremely rare in mammals, including humans.
What is Facultative Parthenogenesis?	<ul style="list-style-type: none"> • Facultative parthenogenesis refers to a form of reproduction in which an organism has the ability to reproduce either <u>sexually or asexually</u> through parthenogenesis, depending on the circumstances. • In facultative parthenogenesis, the female retains the ability to reproduce sexually and produce offspring through the union of sperm and egg.

	<ul style="list-style-type: none"> • However, if mating opportunities are limited or absent, the female can switch to asexual reproduction by producing viable offspring from unfertilized eggs.
FP around the Ecosystem	<ul style="list-style-type: none"> • This phenomenon has been documented in several reptile species, including certain snakes, lizards, and Komodo dragons. • It has also been documented in other species of fish, birds, lizards. • For example, female Komodo dragons have been known to lay fertile eggs even without mating, resulting in the production of viable offspring.
Importance of FP	<ul style="list-style-type: none"> • FP has important implications for population dynamics and evolutionary biology. It allows females to reproduce and maintain their genetic lineage even when males are scarce or unavailable. • It can also lead to the establishment of new populations or colonization of new habitats by a single individual, which can have implications for genetic diversity and adaptation.

Solar Ultraviolet Imaging Telescope (SUIT)

A unique space telescope called *Solar Ultraviolet Imaging Telescope (SUIT)* is now ready and has been delivered to ISRO.

About SUIT (one of the seven payloads on Aditya-L1)

By	<ul style="list-style-type: none"> • It is developed by Pune's Inter-University Center for Astronomy and Astrophysics (IUCAA). It is expected to last five years.
Features	<ul style="list-style-type: none"> • It will provide full disk images of the Sun in the 2000 - 4000 A wavelength range. Full disk images in the entire wavelength range which have never been obtained. • It will record images in this wavelength crucial for maintaining the Ozone and Oxygen content in the atmosphere of the Earth. • SUIT will also measure the UV radiation hazardous for skin cancer. • It will also address few fundamental questions, for example, the existence of a higher temperature atmosphere above the cooler surface, the origin and variation of near-ultraviolet radiation from the Sun etc. • It will help in the measurement of solar radiation from Hard X-ray to Infrared, as well as in-situ measurements of particles in the solar wind, including the Sun's magnetic field at the L1 point.

About Aditya-L1 Mission

- It is the 1st Indian space observatory to study the Sun and the solar corona and its effect on space weather.
- It will be placed in a halo orbit around the first Lagrange point, L1, of the Sun-Earth system which allows it to look at the Sun continuously.
- It will carry seven different payloads capable of studying various phenomena on the Sun across the electromagnetic spectrum and solar wind.
- The satellite will be launched by a PSLV-XL launch vehicle from Sriharikota.

Solar System probes around the World

- NASA: Parker Solar Probe (November 2018 - December 2025)
- ESA & NASA: SOHO (Solar and Heliospheric Observatory; May 1996 - extended to December 2025)
- ESA: Solar Orbiter (To study solar and heliospheric physics)

The Hiroshima AI (Artificial Intelligence) Process

During the annual Group of Seven (G-7) Summit, held in Hiroshima, Leaders introduced the Hiroshima AI Process (HAP).

Hiroshima AI process	<ul style="list-style-type: none"> HAP is an initiative designed to foster international discussions and collaboration on the governance and interoperability of artificial intelligence (AI) with a focus on achieving trustworthy AI. It is an effort to set common rules for governing AI with the launch of “Hiroshima AI Process”. They also plan to continue discussions on how to protect copyright and tackle false information generated by AI.
Aim	<ul style="list-style-type: none"> To govern AI in a way that upholds democratic values, ensures fairness and accountability, promotes transparency, and prioritizes the protection of AI technologies.
Feature	<ul style="list-style-type: none"> It will work in collaboration with international organizations such as the Organization for Economic Co-operation and Development (OECD) and the Global Partnership on AI (GPAI). It recognizes the growing prominence of Generative AI (GAI) across countries and regions and stresses the need to address the opportunities and challenges associated with GAI such as ChatGPT4. It can also differentiate use for machine-learning per se from other AI-related uses of copyrighted materials.
Significance	<ul style="list-style-type: none"> It ensures that any disagreement doesn't result in complete discord. It can bring greater clarity to the role and scope of the 'fair use' doctrine in the use of AI for various purposes.

India & Artificial Intelligence

India & Global Partnership on AI (GPAI)

- GPAI is a congregation of 25 member countries, including India, the US, the UK, EU, Australia, Canada, France, Germany, Italy, Japan, Mexico, New Zealand, Republic of Korea, and Singapore.
- India had in 2020 joined the group as a founding member. It is a first-of-its-type initiative for evolving better understanding of challenges and opportunities around AI.
- In November 2022, India has been handed over the presidency Global Partnership on Artificial Intelligence (GPAI) for 2022-23.

RAISE 2020 ('Responsible AI for Social Empowerment 2020)

- It is a first of its kind, global meeting of minds on Artificial Intelligence to drive India's vision and roadmap for social transformation, inclusion and empowerment through responsible AI.

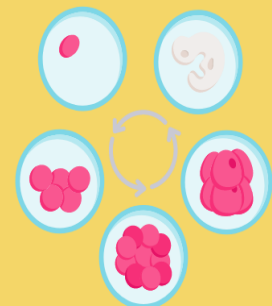
Scientists Develop Synthetic Embryo Using Stem Cells

Two teams of scientists have announced that they have grown embryo-like structures, made entirely from human stem cells.

- These embryos resemble natural embryos in the earliest stages of human development.
- While they lack a beating heart or the beginnings of a brain, they contain cells that would give rise to the placenta, yolk sac and the embryo.

Embryonic Stage in Human Reproduction & its importance

- In human reproduction, an embryo is formed when a sperm fertilizes an egg, resulting in the formation of a single-celled zygote.
- An embryo is the early developmental stage of a multicellular organism. In humans, an embryo refers specifically to the stage of development from fertilization until the eighth week of pregnancy.
- During this period, the embryo undergoes critical processes such as cell division, differentiation, and the formation of organ systems.
- During the embryonic stage, the developing organism is highly vulnerable and susceptible to external influences, and this is a critical period for organogenesis and the establishment of the basic body plan.



Importance of This Development

- It will help understanding the impact of genetic disorders and the biological reasons behind recurrent miscarriages.
- It reportedly dodges the need for eggs or sperms for the creation of human embryos.
- It could provide opportunities to study human embryonic development at later stages than ever before.

About Stem Cells

- Stem cells are undifferentiated cells that have the remarkable ability to develop into different types of specialized cells in the body.
- They are characterized by their ability to self-renew, dividing and creating more copies of themselves, as well as their potential to differentiate into various cell types with specialized functions.
- Stem Cells hold promise for treating a wide range of diseases and conditions, including neurodegenerative disorders, heart disease, diabetes, spinal cord injuries, and certain types of cancer.

There are two primary types of stem cells:

Embryonic stem cells (ESCs)	Adult stem cells (Somatic or tissue-specific stem cells)
<ul style="list-style-type: none">• These stem cells are derived from embryos that are typically created through in vitro fertilization (IVF) for reproductive purposes.• ESCs are pluripotent, meaning they can differentiate into any type of cell in the body. They have the highest potential for differentiation and are valuable in research and medical applications.• However, the use of embryonic stem cells raises ethical concerns because their extraction involves the destruction of the embryo.	<ul style="list-style-type: none">• These are found in various tissues and organs throughout the body.• Unlike ESCs, adult stem cells are multipotent, meaning they can differentiate into a limited range of cell types.• For example, hematopoietic stem cells in the bone marrow can differentiate into different blood cell types, while mesenchymal stem cells in the bone marrow can differentiate into bone, cartilage, and fat cells.• Adult stem cells play crucial roles in tissue repair, regeneration, and maintenance of organ function.

Paper-based Super Capacitor

Scientists from Gujarat institute develop biodegradable paper supercapacitor from seaweed

Paper-based Supercapacitor	<ul style="list-style-type: none">• It is created by leveraging cellulose nanofibers derived from seaweed• It can fully charge a device within 10 seconds.
Applications	<ul style="list-style-type: none">• It can be integrated into electronics, memory backup systems, airbags, heavy machines, electric vehicles, and more.
Significance	<ul style="list-style-type: none">• Paper-based supercapacitors offer several advantages over traditional supercapacitors, including lightweight, flexibility, low cost, and environmental friendliness.• They are typically constructed by incorporating conductive materials and electrolytes onto paper substrates, which serve as the electrodes and separator in the device.
Supercapacitor or Ultracapacitors	<ul style="list-style-type: none">• It is an electrochemical charge storage device with a fast charging/discharging cycle, high power density and a longer lifecycle.• These electrochemical charge storage devices provide efficient and reliable energy storage solutions.

Seaweeds	<ul style="list-style-type: none"> • These are the primitive, marine non-flowering marine algae without root, stem and leaves. • They are attached to rocks or other substratas-found in coastal areas. • They are classified as chlorophyta (green), rhodophyta (red) and phaeophyta (brown) on the basis of their pigmentation.
Significance of Sea weed	<ul style="list-style-type: none"> • It also acts as a bioindicator of the marine ecosystem. • It is a source of vitamins, minerals and fibre. • It contains anti-inflammatory and anti-microbial agents. • It works as an effective binding agent in many commercial items such as toothpaste and fruit jelly, and is a popular softener in organic cosmetics and skin care products. • It acts as an iron sequesterant as it is heavily dependent on iron for photosynthesis.

LIDAR

The Archaeological Survey of India (ASI) plans to conduct a Light, Detection and Ranging (LiDAR) survey in PuranaQila to determine the earliest cultural deposits at the site.

LiDAR	<ul style="list-style-type: none"> • It is a remote sensing method that uses light in the form of a pulsed laser (near-infrared spectrum.) to measure ranges (variable distances) to the Earth. • It consists primary three components — the scanner, laser and GPS receiver.
How its work	<ul style="list-style-type: none"> • It works by emitting a laser beam and measuring the time it takes for the beam to bounce back after hitting an object. • By repeating this process many times per second, it can create a detailed map of the environment, including the location and shape of objects within it.
Applications of LiDAR	<ul style="list-style-type: none"> • Topographic Mapping: LiDAR is used to create high-resolution digital elevation models (DEMs) for mapping terrain features, such as mountains, valleys, and rivers. It helps in flood modelling, urban planning, and natural resource management. • Autonomous vehicles - It is a key component of self-driving cars and trucks. It allows the vehicle to create a detailed 3D map of its surroundings, which it can then use to navigate and avoid obstacles. • Archaeology - It can be used to create highly detailed maps of archaeological sites, which can help researchers better understand the layout and features of the site. • Agriculture - It can be used to create detailed maps of crops and farmland, which can help farmers optimize their irrigation and fertilization practices. • Forest management - It can be used to create detailed maps of forests, which can help forest managers better understand the health and composition of the forest. • Urban planning -It can be used to create detailed maps of urban areas, which can help city planners optimize traffic flow, identify areas at risk of flooding, and plan for new infrastructure projects.
Limitations of LiDAR	<ul style="list-style-type: none"> • Cost - LiDAR systems can be expensive, which can make them prohibitive for some applications. • Limited range - LiDAR is most effective at short to medium range distances, which means that it may not be suitable for mapping large areas. • Weather conditions -It can be affected by weather conditions such as rain, snow, and fog,

	<p>which can reduce its effectiveness.</p> <ul style="list-style-type: none"> • Reflectivity - It requires a certain level of reflectivity from objects in order to create an accurate map. Objects that are too reflective or not reflective enough may not be accurately captured. • Data processing - It generates a large amount of data, which can be difficult and time-consuming to process and analyze. • Limited Penetration of Dense Vegetation: Dense vegetation, such as thick forests or dense canopies, can obstruct the laser pulses from reaching the ground or objects of interest. This can result in incomplete data or inaccuracies in the representation of the underlying terrain.
Way Forward	<ul style="list-style-type: none"> • Improved range - Advances in LiDAR technology may allow for longer range detection, which could make the technology more useful for mapping large areas. • Improved accuracy - Continued research and development may lead to LiDAR systems that are even more accurate and precise. • Integration with other technologies – It may be integrated with other technologies such as GPS and cameras to create even more detailed and accurate maps.

Solar Mean Magnetic Field (SMMF)

According to the Department of Science and Technology, scientists are now one step closer to identifying the source of the Solar Mean Magnetic Field (SMMF).

About Solar Mean Magnetic Field

What is SMMF?	<ul style="list-style-type: none"> • It is a measure of the average magnetic field of the Sun over a period.
How SMMF is analysed?	<ul style="list-style-type: none"> • It is by observing the Sun's magnetic field at its poles, which are areas of the Sun that are less affected by the Sun's rotation than other areas. • These measurements can be used to estimate the strength and direction of the solar mean magnetic field, and to track changes in the field over time.
Significance of SMMF	<ul style="list-style-type: none"> • It is important for studying the Sun's magnetic activity, as it provides insights into various solar phenomena, including sunspots, solar flares, and coronal mass ejections (CMEs). <ul style="list-style-type: none"> ➤ Sunspots are dark areas on the Sun's surface associated with strong magnetic fields, while solar flares and CMEs are explosive events driven by magnetic energy release. • Understanding the SMMF and its variations is crucial for space weather forecasting and predicting the impact of solar activity on Earth. Strong magnetic fields associated with solar flares and CMEs can cause geomagnetic storms and disrupt satellite communications, power grids, and other technological systems.

Sun Magnetic Field

- It is generated by the motion of charged particles within the Sun's interior.
- As these particles move, they generate electric currents, which in turn create magnetic fields.
- It is complex and dynamic, and it can have a significant impact on the Sun's behavior, including the formation of sunspots and solar flares.
- One of the key features of the Sun's magnetic field is the presence of sunspots.

Deep Sequencing (Next-Generation Sequencing (NGS))

- It is a method of DNA sequencing that allows researchers to analyze large amounts of genetic information in a relatively short amount of time.
- This technique is based on the use of high-throughput sequencing technologies, which can generate millions of DNA sequences in a single experiment.
- In deep sequencing, DNA samples are fragmented into smaller pieces and then amplified using various techniques, such as polymerase chain reaction (PCR) or library preparation protocols.
- By analyzing these sequences, researchers can identify genetic variations, mutations, and other changes that may be associated with disease or other biological processes.

Leptospirosis Disease

Leptospirosis is a disease that surges in the monsoon months

Type of Disease	<ul style="list-style-type: none">• Leptospirosis has emerged as an important infectious disease in the world today.• It is a potentially fatal zoonotic bacterial disease that tends to have large outbreaks after heavy rainfall or flooding.• It is a bacterial disease that affects humans and animals.• It is caused by bacteria of the genus <i>Leptospira</i>.
Signs & Symptoms	<ul style="list-style-type: none">• Range from none to mild including headaches, muscle pains, and fevers to severe including bleeding in the lungs or meningitis.• Without treatment, it can lead to kidney damage, meningitis (inflammation of the membrane around the brain and spinal cord), liver failure, respiratory distress, and even death.
Diagnosis and Treatment	<ul style="list-style-type: none">• Early treatment with antibiotics, such as doxycycline or penicillin, can be effective in reducing the severity and duration of the illness.• Severe cases may require hospitalization for supportive care.

Precision Fermentation

What is it?	<ul style="list-style-type: none">• Precision fermentation refers to a technology that utilizes microbial fermentation to produce specific compounds, ingredients, or products with high precision and control.• It involves the use of genetically engineered microorganisms, such as bacteria, yeast, or fungi, to produce target molecules through fermentation processes.
Key Features	
<ul style="list-style-type: none">• It can be used to produce specific proteins, enzymes, flavors, fragrances, vitamins, and other biomolecules that have applications in food and beverages, pharmaceuticals, cosmetics, and other industries.• Examples: plant-based meat alternatives, dairy-free milk, and medicines such as insulin.	

Betelgeuse

What is it?	<ul style="list-style-type: none">• Betelgeuse is a red supergiant star located in the constellation of Orion.
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	<ul style="list-style-type: none"> It is one of the largest and brightest stars visible to the naked eye and holds significant astronomical interest.
Key Features	
<ul style="list-style-type: none"> Supernova Potential: Betelgeuse has drawn attention due to its potential to undergo a supernova explosion. As a red supergiant, it is approaching the end of its life cycle and is expected to explode as a Type II supernova at some point in the future. Variability: Betelgeuse is known to be a semiregular variable star, meaning its brightness fluctuates over time. Apart from the brightness, the size of the star has also been changing. The star now appears to be "crushed into an ovum" instead of appearing round. 	

Nilotinib

- It is a medication used to treat chronic myeloid leukemia (CML), a type of blood cancer that affects the white blood cells.
- It works by inhibiting the activity of an enzyme called tyrosine kinase, which is responsible for the uncontrolled growth of cancer cells in the body.

Chiral Bose Liquid State

Scientists are now claiming that they have found a new phase of matter, the new phase called the chiral Bose-liquid state.

What is it?	<ul style="list-style-type: none"> "Chiral Bose liquid state" refers to a theoretical state of matter that can arise in certain quantum systems.
Its Formation	<ul style="list-style-type: none"> The chiral Bose-liquid state is formed by bringing two layers of a special material close together at very low temperatures (close to absolute Zero). One layer has an abundance of electrons, while the other layer has "holes" where electrons can go. When these layers are brought together, a local imbalance is created, causing electrons to not have enough holes to fill. This imbalance triggers the formation of the chiral Bose-liquid state
Importance	<ul style="list-style-type: none"> The study of chiral Bose liquids and related phenomena is an active area of research in condensed matter physics. Understanding their properties and behavior can provide insights into the fundamental principles of quantum mechanics, topology, and the collective behavior of quantum systems.

Kharchi Puja

- The centuries-old Kharchi Puja was recently inaugurated in Tripura. Originally a tribal Hindu festival, it is now observed by all communities and religions.
- It is centred around the worship of **Chaturdasa Devata**, the ancestral deity of the Tripuri people.
- Also called the '**Festival of 14 Gods**'. Kharchi Puja is observed annually on the Shukla Ashtami day, which falls on the eighth day of the lunar month of Ashadha.
- The 14 deities are -- Shiva, Durga, Vishnu, Laxmi, Saraswati, Kartik, Ganesha, Brahma, Abadhi (God of water), Chandra, Ganga, Agni, Kamdev and Himadri (Himalaya).
- The word 'Kharchi' is derived from two Tripuri words--'khar' or kharta meaning sin and 'chi' or si meaning cleaning.
- During the festival, the people of Tripura also worship the earth along with their 14 deities.
- It is believed that the Mother Goddess or Tripura Sundari, the presiding deity of the land who protects the people of Tripura, menstruates during the time of Ambubachi, which is observed in June.
- There is a popular belief that the Earth becomes impure during the menstruation period of the Goddess.
- Hence, Kharchi Puja is observed to ritualistically clean the Earth after her menstruation is over and wash away the sins of the people in the land.
- Although the festival has tribal origins, it is celebrated by both tribal and non-tribal people of Tripura.

Rituals of The Festival

- An important ritual of the festival is the construction of the Chaturdasha Mandapa, which symbolises the royal palace of the Tripuri kings and is constructed by traditional artisans who craft the structure out of bamboo and thatched roofs.
- On the day of the main puja, the idols of all the 14 deities from the ancient Ujjayanta Palace are carried by the royal priest Chantai from the temple premises in Agartala to the holy Saidra river.
- There they are dipped in the holy waters of the river and carried back to the temple.

Rani Durgavati

- The six-day Rani Durgavati Gaurav Yatra was recently held in Madhya Pradesh and June 24 – when the queen is believed to have died while fighting the Mughals in the mid-16th century – was marked as a day of sacrifice.
- Rani Durgavati is said to have been born in 1524, in **Mahoba's Chandela dynasty**. The region comes under present-day Uttar Pradesh, near the southern border with MP.
- Her father was **Raja Salbahan of Ratha and Mahoba**, and the Chandelas were known for building the famous **Khajuraho temples** in the 11th century.
- She was later married to **Dalpat Shah**, the son of the Gond King Sangram Shah of the **kingdom of Garha-Katanga**.
- This kingdom included the Narmada Valley and parts of northern MP. It was first welded together by Sangram Shah and is noted as one of the most powerful kingdoms of the Gond tribe.
- Durgavati, however, was widowed in 1550, a few years after her marriage. Her young son Bir Narayan presided over the throne in name and she then ruled the country.

- According to government records the queen and her generals managed the affairs of the kingdom for 16 years.

Encounters With Mughals

- The period of the mid-16th century was one of early Mughal expansion in India (between 1556-76) under Akbar.
- During her reign, Durgavati fought with Baz Bahadur, the sultan of the neighbouring Malwa who was eventually defeated by Akbar.
- But the frequent battles between the two adjoining states continued even after the takeover.
- The Mughal governor of Allahabad, Asaf Khan, also attacked Garha-Katanga. Another point of view states it was Akbar who dispatched him. In this battle Rani Durgavati died on the 24th June 1564.
- Abul Fazl, the court historian of Akbar who chronicled these years in Akbarnama, described Durgavati as a combination of “beauty, grace and manlike courage and bravery”.
- He further added that the prosperity of the kingdom was such that people paid their taxes in gold coins and elephants.