Current Affairs
(Consolidation)

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(Part – I)

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Polity and Governance

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Assisted Reproductive Technology (Regulation) Bill, 2021

Why in News

Recently, the **Lok Sabha** has passed the **Assisted Reproductive Technology (Regulation) Bill, 2021.**

➢ The bill has excluded live-in couples, single men and the **LGBTQ community.**

Key Points

Regulating ART

Illustration of in vitro fertilisation

regulate and supervise Assisted Reproductive Technology (ART) clinics. It establishes ART banks to promote ethical practices

▪ It proposes stringent punishment for those who attempt to control the offspring's sex, sell embryos or gametes

▪ As of Feb. 20, there are 517 ART clinics under the National Registry of ART clinics and banks in India, according to the ICMR

▪ The Bill establishes the National Board, the State Boards, and the National Registry to

➢ **Background:**
  ○ The Government had been working on the bill to **regulate the ART industry** since 2008 when it was first drafted by the **Indian Council of Medical Research (ICMR).**
  ○ The bill was **first introduced in Lok Sabha** in 2020 but the House had referred it to a **standing committee**.

➢ **About the Bill:**
  ○ **National Registry and Registration Authority:**
    ● The bill **proposes the establishment of a national registry and registration authority** for all clinics and medical professionals serving in the field.
      ■ It will help in **maintaining a database of all clinics** and medical professionals serving in the field.
      ■ **State governments will appoint** registration authorities for facilitate the registration process. The registration will be **valid for five years** and can be renewed for a further five years.
  ○ **Regulate ART Services:**
    ● It seeks to **regulate and supervise Assisted Reproductive Technology (ART)** clinics and ART banks, prevent misuse, adopt safe and ethical practice and so on.

Note:

- **National Board:**
  - The bill **proposes the constitution of a national board.**
    - The board will **set minimum standards of physical infrastructure,** laboratory, diagnostic equipment and expert manpower to be employed by clinics and banks.
- **Stringent Punishment:**
  - It further **seeks stringent punishment** for those **practicing sex selection, sale of human embryos or gametes**, or found running agencies, rackets and organisations for such practices in violation of the law.
    - For First-Time Offenders:
      - It may attract a penalty between **Rs. 5 lakhs and Rs. 10 lakhs.**
    - For Subsequent Contraventions:
      - Punishable with imprisonment for a term between **eight and 12 years, and a fine between Rs. 10 and Rs. 20 lakh**.
    - Any Clinic or Bank Advertising or Offering Sex-Selective ART:
      - Punishable with imprisonment between five and **ten years, or fine between Rs. 10 lakh and Rs. 25 lakh, or both**.

- **Need:**
  - **To Standardise Protocols:**
    - There are so many such **ART clinics that have been running without regulation** and there are **implications on the health** of those who undertake the procedure.
      - If there is no regulation, the **unethical practices will increase.**
  - **To Protect Women and Children:**
    - The **oocyte** (a cell in an ovary) donor needs to be supported by an insurance cover. Multiple embryo implantation needs to be regulated and **children born through ART need to be protected.**
- **Concerns:**
  - **Discrimination in Accessibility:**
    - The Bill **allows for a married heterosexual couple and a woman above the age of marriage to use ARTs** and **excludes single men, cohabiting

heterosexual couples and LGBTQ+ individuals** and couples from accessing ARTs.
- **Duplicacy:**
  - Both **Surrogacy and ART Bills will set up multiple bodies for registration** which will result in duplication or worse, lack of regulation.
    - **For example**, a surrogacy clinic is not required to report surrogacy to the National Registry.
- **Violates Article 14:**
  - The bill **violates Article 14 of India's constitution** and is also silent on the rights of children.
    - According to **Article 14**, equality before law and equal protection of law to any person within India cannot be denied.
- **Cost of the Services:**
  - The **cost of the procedure should be effectively monitored** so that even the poor can avail of its services.

Assisted Reproductive Technology (ART)

➢ ART is used to **treat infertility.** It includes fertility treatments that handle both a woman's egg and a man's sperm. It works by removing eggs from a woman's body and mixing them with sperm to make embryos. The embryos are then put back in the woman's body.

➢ **In Vitro fertilization (IVF)** is the most common and effective type of ART.

➢ ART procedures sometimes use donor eggs, donor sperm, or previously frozen embryos. It may also involve a surrogate carrier.

Road Accidents in India

Why in News

Recently, the **Minister of Road Transport and Highways** has informed in a written reply to the **Lok Sabha** about the death due to Road Accident in India.

➢ The Minister also informed that the ministry has **issued guidelines for improving the road safety** through road safety audits at all stages (design stage, construction stage and Operation & Management stage) by **engaging independent road safety experts.**

Key Points

➢ **Road Accidents:**

- ○ **Related Data:**
  - Road Accidents **killed as many as 47,984 people** on **National Highways (NHs),** including on expressways, during 2020 and **53,872 people killed in 2019.**
  - Globally, road accidents account for **1.3 million deaths and 50 million injuries.** Of this, **India's contribution to the fatalities is 11%.**
- ○ **Major Causes:**
  - The **major causes of the accidents on the NHs** were vehicle design and condition, road engineering, speeding, drunken driving/ consumption of alcohol and drugs, driving on the wrong side, jumping the red light, use of mobile phones, etc.
- ➢ **Impact of Road Accidents:**
  - ○ **Economic:**
    - **India's socio-economic cost of road traffic accidents** for the year 2019 was in the range of USD15.71 billion to USD38.81 billion, which amounts to 0.55–1.35% of the **Gross Domestic Product (GDP).**
  - ○ **Social:**
    - **Burden on Households:**
      - At the individual level, **road crash injuries and deaths impose a severe financial burden** and push entire (non-poor) households into poverty and the already poor into debt.
      - Every road accident death causes depletion of nearly seven months' household income in poor families, and pushes the kin of victims in a cycle of poverty and debt.
    - **Vulnerable Road Users (VRUs):**
      - VRUs **bear a disproportionately large burden of road crashes** and account for more than half of all road crash deaths and serious injuries in the country.
      - It is often the poor, **especially male road-users of working age**, that constitute the category of VRUs.
        - Daily wage workers and workers employed as casual labourers in informal activities are more prone to be defined as vulnerable compared to workers engaged in regular activities.
      - In India, where **VRUs are forced to share**

space with other less vulnerable road users, the income level of an individual has a direct bearing on the mode of transport used.

- **Gender Specific Impact:**
  - **Women in the families of victims bore the burden across poor** and rich households, often taking up extra work, assuming greater responsibilities, and performing caregiving activities.
    - **About 50% of women were severely affected** by the decline in their household income after a crash.
    - **About 40% of women reported a change in their working patterns post-accident**, while around 11% reported taking up extra work to deal with the financial crisis.
- **Rural-Urban Divide:**
  - The **income decline for low-income rural households (56%)** was the most severe compared to low-income urban (29.5%) and high-income rural households (39.5%).

➢ **Related Initiatives:**
  - ○ **World:**
    - **Brasilia Declaration on Road Safety (2015):**
      - The **declaration** was signed at the second Global High-Level Conference on Road Safety held in Brazil. **India is a signatory** to the Declaration.
      - The countries plan to achieve the **Sustainable Development Goal 3.6** i.e. to half the number of global deaths and injuries from road traffic accidents by 2030.
    - **UN Global Road Safety Week:**
      - It is celebrated every two years, the **fifth edition (held from 6-12 May 2019)** highlighted the need for strong leadership for road safety.
    - **The International Road Assessment Programme (iRAP) :**
      - It is a registered charity dedicated to saving lives through safer roads.
  - ○ **India:**
    - **Motor Vehicles Amendment Act, 2019:**
      - The **Act** hikes the penalties for traffic violations, defective vehicles, juvenile driving, etc.

Note:

- It provides for a Motor Vehicle Accident Fund, which would provide compulsory insurance cover to all road users in India for certain types of accidents.
- It also provides for a National Road Safety Board, to be created by the Central Government through a notification.
- It also provides for the protection of good samaritans.
- **The Carriage by Road Act, 2007:**
  - The **Act provides for the regulation of common carriers,** limiting their liability and declaration of value of goods delivered to them to determine their liability for loss of, or damage to, such goods occasioned by the negligence or criminal acts of themselves, their servants or agents and for matters connected therewith or incidental thereto.
- **The Control of National Highways (Land and Traffic) Act, 2000:**
  - The Act provides the **control of land within the National Highways,** right of way and traffic moving on the National Highways and also for removal of unauthorised occupation thereon.
- **The National Highways Authority of India Act, 1998:**
  - The **Act provides for the constitution of an authority** for the development, maintenance and management of NHs and for matters connected therewith or incidental thereto.

Global Health Security Index 2021

Why in News

Recently, the **Global Health Security (GHS) Index 2021** has been recently released.

➢ In India, NITI **Aayog** releases its own **health index.**

Key Points

➢ **GHS Index:**
  - ❍ **About:**
    - It is an **assessment and benchmarking of health security** and related capabilities across 195 countries.

- It has been developed in partnership by the **Nuclear Threat Initiative (NTI)** and the Johns Hopkins Center.
  - NTI is a **nonprofit global security organization** focused on reducing nuclear and biological threats imperiling humanity.
  - Johns Hopkins Center was **created to recognize the crucial role of communication in public health.**
- ❍ **Methods of Ranking:**
  - The GHS Index assesses countries' **health security and capabilities across six categories.**

GLOBAL HEALTH SECURITY INDEX FRAMEWORK
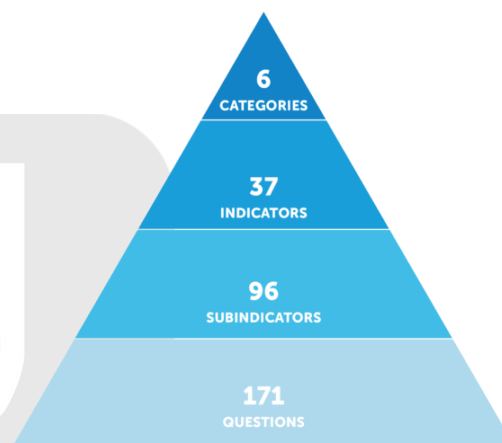
- The six categories are as follows:
  - **Prevention:** Prevention of the emergence or release of pathogens.
  - **Detection and Reporting:** Early detection and reporting for epidemics of potential international concern.
  - **Rapid Response:** Rapid response to and mitigation of the spread of an epidemic.
  - **Health System:** Sufficient and robust health system to treat the sick and protect health workers.
  - **Compliance with International Norms:** Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms.
  - **Risk Environment:** Overall risk environment and country vulnerability to biological threats.
- The index measures countries' **capabilities from 0-100**, with 100 representing the highest level

Note:

of preparedness. The GHS Index scoring system includes three tiers.

- **Low Scores:** Countries that score between 0 and 33.3 are in the bottom tier.
- **Moderate Scores:** Countries that score between 33.4 and 66.6 are in the middle tier
- **High Scores:** Countries that score between 66.7 and 100 are in the upper or "top" tier.

➤ **Ranking:**

○ **India's:**
- India, with a **score of 42.8 (out of 100)** and it has slipped by **0.8 points since 2019.**

○ **World:**
- Three neighbouring countries of India like **Bangladesh, Sri Lanka and Maldives** have **improved their score by 1-1.2 points.**
- The world's overall performance on the GHS Index score slipped to **38.9 (out of 100) in 2021**, from a score of 40.2 in the GHS Index, 2019.
- In 2021, **no country scored in the top tier of rankings** and no country scored above 75.9.

➤ **Overall Performance of the Countries:**

○ **Unprepared for Future Epidemic:**
- **Countries across all income levels remain dangerously unprepared** to meet future **epidemic and pandemic** threats.
  - This, even as **infectious diseases are expected** to have the greatest impact on the global economy in the next decade.

○ **Insufficient Health Capacities:**
- All countries had insufficient health capacities.
  - This left the **world acutely vulnerable to future health emergencies,** according to the Index that **measured the capacities of 195 countries** to prepare for epidemics and pandemics.

○ **National Public Health Emergency:**
- **65% of assessed countries had not published and implemented** an overarching national public health emergency response plan for diseases with epidemic or pandemic potential.

○ **Medical Countermeasures:**
- **73% of countries did not have the ability** to provide expedited approval for **medical countermeasures**, such as vaccines and antiviral drugs, during a public health emergency.

- Thus, the **world was acutely vulnerable to health emergencies** in the future.

○ **Lack of Financial Investments:**
- Most countries, including **high-income ones, have not made dedicated financial investments** in strengthening epidemic or pandemic preparedness.
  - Close to **79% of the 195 countries assessed had not allocated national funds** within the past three years to improve their capacity to address epidemic threats.

○ **Public Confidence in their Governments:**
- A whopping **82% of countries** have **low to moderate levels** of public confidence in their government.
  - Health emergencies demand a **robust public health infrastructure** with effective governance. But the trust in government, which has been a key factor associated with success in countries' responses to Covid-19, is low and decreasing.

➤ **Recommendations:**

○ **Allocate Health Security Funds:**
- Countries should allocate **health security funds in national budgets** and conduct assessments using the 2021 GHS Index to develop a national plan to identify their risks and fill gaps.

○ **Additional Support:**
- International organizations should use the **GHS Index to identify countries most in need of additional support.**

○ **Involvement of Private Sector:**
- The **private sector should use the GHS Index to look for opportunities** to partner with governments.

○ **New Financing Mechanisms:**
- Philanthropies and funders **should develop new financing mechanisms** and use the GHS Index to prioritize resources.

Status of India's Health Response
➤ **Underprepared:**
○ The **influenza A (H1N1) outbreaks since 2009** in Rajasthan, Maharashtra, Tamil Nadu and other States have acutely underscored the need for better detection, awareness of symptoms and quarantining.

Note:

○ **Covid-19 pandemic** has also shaken the foundations of India's healthcare system.

➢ **Low Expenditure:**

○ Health expenditure by the government in India is **less than 1.35%** of **Gross Domestic Product**, which is low for a middle-income country.

➢ **Availability of Health Professionals:**

○ There is **one doctor for every 1,445 Indians** as per the country's current population estimate of 135 crore, which is lower than the **World Health Organization (WHO)** prescribed norm of one doctor for 1,000 people.

➢ **Impact of Climate Change:**

○ India's health status is **being worsened by climate shocks.**

● According to the **Climate Vulnerability Index**, more than **80% of Indians live in climate vulnerable districts.**

Default Bail

Why in News

Recently, the **National Investigation Agency (NIA)** has filed an appeal against the **Bombay High Court order,** which granted **statutory bail** to **lawyer-activist Sudha Bharadwaj.**

➢ **Bail** is the **conditional/provisional release of a person** held under legal custody (in matters which are yet to be pronounced by the Court), by undertaking a promise to appear in the Court as and when required.

Key Points

➢ **About Default Bail:**

○ **Legal Source:** This is a right to bail that accrues **when the police fail to complete investigation within a specified period** in respect of a person in judicial custody.

● It is also known as **statutory bail.**

● This is enshrined in **Section 167(2) of the Code of Criminal Procedure.**

○ **Supreme Court Judgment:** In **Bikramjit Singh case 2020,** the **Supreme Court** had observed that the **accused gets an indefeasible right to 'default bail'** if he makes an application after the maximum period for investigation of an offence is over, and before a charge sheet is filed.

● **Right to default bail** under Section 167(2), CrPC not merely a statutory right, but part of p**rocedure established by law under Article 21.**

○ **Underlying Principle:** In general, the right to bail on the investigation agency's default is **considered an 'indefeasible right'**, but it should be availed of at the appropriate time.

● Default bail is a right, regardless of the nature of the crime.

● The stipulated period within which the charge sheet has to be filed begins from the day the accused is remanded for the first time.

● Under **Section 173 of CrPC**, the police officer is obligated to file a report after the completion of the necessary investigation of an offence. This report is called the **Charge Sheet in common parlance**.

○ **Time Period:** The issue of default bail arises where it is not possible for the police to **complete an investigation in 24 hours**, the police produce the suspect in court and seek orders for **either police or judicial custody.**

● For most offences, the police have **60 days** to complete the investigation and file a final report before the court.

● However, where the offence attracts **death sentence or life imprisonment,** or a jail term of not less than 10 years, **the period available is 90 days.**

● In other words, a magistrate cannot authorise a person's judicial remand beyond the 60-or 90-day limit.

● At the end of this period, if the investigation is not complete, the court shall release the person "if he is prepared to and does furnish bail".

○ **Special Cases:** The 60- or 90-day limit is only for ordinary penal law. Special enactments allow greater latitude to the police for completing the probe.

● In the **Narcotic Drugs and Psychotropic Substances Act 1985,** the period is 180 days, which can be extended up to one year.

● In the **Unlawful Activities (Prevention) Act 1967,** the default limit is 90 days only, which can be extended to another 90 days.

● This extension can be granted only on a report by the **Public Prosecutor** indicating the progress made in the investigation and giving reasons to keep the accused in continued detention.

Note:

● These provisions show that the extension of time is not automatic but requires a judicial order.

Other Types of Bail in India

➢ **Regular Bail:** It is a direction given by the Court (any Court within the country) to release a person who is already under arrest and kept in police custody. For such Bail, a person can file an application under **Section 437 and 439 of the CrPC.**

➢ **Interim Bail:** Bail granted for a **temporary and short period** by the Court till the application seeking Anticipatory Bail or Regular Bail is pending before a Court.

➢ **Anticipatory Bail:** A direction issued to **release a person on Bail even before the person is arrested**. In this situation, there is apprehension of arrest and the person is not arrested before the Bail is granted.

   ❍ For such Bail, a person can file an application under **Sec. 438** of the **Code of Criminal Procedure (CrPC)**. It is issued only by the Sessions Court and High Court.

Constitutional Provisions Related To Arrest

➢ **Article 22** grants protection to persons who are arrested or detained. Detention is of two types, namely, punitive and preventive.

   ❍ Punitive detention is to punish a person for an offence committed by him after trial and conviction in a court.

   ❍ Preventive detention, on the other hand, means detention of a person without trial and conviction by a court.

➢ **Article 22** has two parts—the first part deals with the cases of ordinary law and the second part deals with the cases of preventive detention law.

Rights Given Under Punitive Detention	Rights Given Under Preventive Detention
➢ Right to be informed of the grounds of arrest.	➢ The detention of a person cannot exceed three months unless an advisory board reports sufficient cause for extended detention.
	➢ The board is to consist of judges of a high court.
➢ Right to consult and be defended by a legal practitioner.	➢ The grounds of detention should be communicated to the detenu.
	➢ However, the facts considered to be against the public interest need not be disclosed.
➢ Right to be produced before a magistrate within 24 hours, excluding the journey time. ➢ Right to be released after 24 hours unless the magistrate authorises further detention.	➢ The detenu should be afforded an opportunity to make a representation against the detention order.
➢ These safeguards are not available to an enemy alien.	➢ This protection is available to both citizens as well as aliens.

Private Members Bill

Why in News

Recently, Rajya Sabha reserved its decision to allow the introduction of a **Private Member's Bill** to amend the Preamble to the Constitution.

➢ The Bill seeks to change the words in the Preamble "**EQUALITY of status and of opportunity**" to "**EQUALITY of status and of opportunity to be born, to be fed, to be educated, to get a job and to be treated with dignit**y".

Amendability of Preamble

➢ As a part of the Constitution, the preamble can be amended under **Article 368** of the Constitution, but the **basic structure** of the preamble can not be amended.

   ❍ As per the **Supreme Court** verdict in the **Kesavananda Bharati vs State of Kerala, 1973**, **Parliament cannot change the basic structure of the Constitution.**

➢ As of now, the preamble is only amended once through the **42ⁿᵈ Amendment Act, 1976.**

   ❍ It added **three new words—Socialist, Secular and Integrity.**

Key Points

➢ **About**:

○ Any **Member of Parliament** (MP) who is **not a minister** is referred to as a private member.

○ Its drafting is the responsibility of the member concerned. Its **introduction in the House requires one month's notice.**

○ The government bills\public bills can be introduced and discussed on any day, **private member's bills can be introduced and discussed only on Fridays.**

● In case of multiple Bills, **a ballot system is used to decide the sequence of bills for introduction.**

● The **Parliamentary Committee on Private Member's Bills and Resolutions** goes through all such Bills and **classifies them based on their urgency and importance.**

○ Its rejection by the House has **no implication on the parliamentary confidence** in the government or its resignation.

○ Upon conclusion of the discussion, the member piloting the bill can either withdraw it on the request of the minister concerned, or he may choose to press ahead with its passage.

➢ **Previous Private Bills:**

○ The **last time a private member's bill was passed by both Houses was in 1970.**

● It was the **Supreme Court** (Enlargement of Criminal Appellate Jurisdiction) Bill, 1968.

○ **14 private member's bills** — five of which were introduced in Rajya Sabha — have become law so far. Some other private member bills that have become laws include-

● Proceedings of Legislature (Protection of Publication) Bill, 1956, in the Lok Sabha.

● The Salaries and Allowances of Members of Parliament (Amendment) Bill, 1964, introduced in the Lok Sabha.

● The Indian Penal Code (Amendment) Bill, 1967 introduced in the Rajya Sabha.

➢ **Significance:**

○ The purpose of the private member's bill is **to draw the government's attention to what individual MPs see as issues and gaps** in the existing legal framework, which require legislative intervention.

● Thus it **reflects the stand of the opposition party on public matters.**

Public Bill vs Private Bill

	Public Bill		Private Bill
1.	It is introduced in the Parliament by a minister.	1.	It is introduced by any member of Parliament other than a minister.
2.	It reflects of the policies of the government (ruling party).	2.	It reflects the stand of opposition party on public matter.
3.	It has greater chance to be approved by the Parliament.	3.	It has lesser chance to be approved by the Parliament.
4.	Its rejection by the House amounts to the exp-ression of want of parliamentary confidence in the government and may lead to its resignation.	4.	Its rejection by the House has no implication on the parliamentary confidence in the government or its resignation.
5.	Its introduction in the House requires seven days' notice.	5.	Its introduction in the House requires one month's notice.
6.	It is drafted by the concerned department in consultation with the law department.	6.	Its drafting is the responsibility of the member concerned.

Dam Safety Bill, 2019

Why in News

Recently, the Parliament has cleared the **Dam Safety Bill, 2019** for surveillance, inspection, operation and maintenance of all specified dams across the country.

Key Points

➢ **Salient Features of the Bill:**

○ **National Committee on Dam Safety:** The National Committee on Dam Safety will be constituted and will be chaired by the **Chairperson, Central Water Commission.**

● **Functions of the Committee** will include formulating policies and regulations regarding dam safety standards and prevention of dam failures, and analysing the causes of major dam failures and suggesting changes in dam safety practices.

○ **National Dam Safety Authority:** The Bill also envisages setting up of a National Dam Safety Authority to be **headed by an officer not below the rank of an Additional Secretary,** to be appointed by the central government.

● The **main task of the National Dam Safety Authority includes** implementing the policies formulated by the **National Committee on Dam Safety**, resolving issues between State Dam Safety Organisations (SDSOs), or between an

SDSO and any dam owner in that state, specifying regulations for inspection and investigation of dams.

- The NDSA **will also provide accreditation to agencies** working on construction, design and alteration of dams.

○ **State Dam Safety Organisation:** The proposed legislation also **envisages constituting a State Dam Safety Organisation** whose functions will be to keep perpetual surveillance, inspection, monitoring the operation and maintenance of dams, keeping a database of all dams, and recommending safety measures to owners of dams.

○ **Obligations of Dam Owners:** The owners of the specified dams are required to provide a **dam safety unit in each dam**. This unit will inspect the dams before and after the monsoon session, and during and after every earthquake, flood, or any other calamity or sign of distress.

- Dam owners will be required to prepare an **emergency action plan**, and carry out **risk assessment studies** for each dam at specified regular intervals.

- Dam owners will also be required to conduct a **comprehensive dam safety evaluation of each dam**, at regular intervals, through a panel of experts.

○ **Punishment**: The Bill provides for **two types of offences** - obstructing a person in the discharge of his functions, and refusing to comply with directions issued under the proposed law.

- Offenders will be **punishable with imprisonment of up to one year**, or a fine, or both. If the offence leads to loss of lives, the term of imprisonment may be extended up to two years.

- Offences will be **cognisable only when the complaint is made by the government,** or any authority constituted under the Bill.

➢ **Need:**

○ **Ageing of Dams:**

- India is the **third largest dam owning country.** There are 5,745 reservoirs in the country of which 293 are more than 100 years old. There are a number of challenges to the dam safety and some are mainly due to the **age of the dams.**

- As the dams become old, their design, hydrology and everything else do not remain at par with the latest understanding and practices.

- Huge siltation is taking place as a result of which the water holding capacity of dams is getting reduced.

➢ **Dependency on Dam Managers:**

○ The regulation of dams is entirely dependent upon individual dam managers. There is **no systemisation and no actual understanding in terms of the downstream water requirement** or the kind of flows that are already there.

➢ **Factors not Considered:**

○ Dam safety is dependent upon many factors such as landscape, land use change, patterns of rainfall, structural features etc. **All the factors have not been taken into account by the government in ensuring the safety of a dam.**

➢ **Dam Failures:**

○ In the **absence of a proper dam safety institutional framework, shortcomings of varying degrees** may get ingrained in the investigation, design, construction, operation and maintenance of dams. Such shortcomings **lead to serious incidents and sometimes dam failure.**

○ Beginning with the failure of the **Tigra dam (Madhya Pradesh) in 1917,** about 40 large dams are reported to have failed so far. The most recent case of failure of the Annamayya dam (Andhra Pradesh) in November 2021 is reported to have led to the death of 20 people.

○ Collectively, these failures have **caused thousands of deaths and economic losses of mammoth proportions.**

➢ **Significance:**

○ **Will Bring Uniformity:**

- The government wants that there should be a **uniformity of procedures which is followed by all dam owners** for a particular type of large dams.

○ **Provides Strict Guidelines:**

- **Water is a state subject** and the Bill in no way takes away the authority of the state. The Bill provides **guidelines and a mechanism to ensure that the guidelines are followed.**

- There are many protocols, including pre and post-monsoon inspections, for ensuring dam safety. However, as of now these **protocols are not legally mandated, and the agencies concerned** (including Central and State Dam

Safety Organisations) have no powers to enforce them.

- ○ **Will Ensure Quality:**
  - So far the professional efficiency of various contractors, designers and planners has never been evaluated, and that is the reason why India's dams today have a design problem. The Bill provides a **mechanism where accreditation of the people who are really going to take part in the construction and maintenance, has to be taken care off.**
- ○ **Security:**
  - Dams are prone to damage and therefore their **safety is very important.** The Bill provides for the formulation of dam safety standards.
- ➢ **Concerns:**
  - ○ **Illogical**:
    - The Central Water Commission will be responsible for the techno-economic appraisal of all the dam projects. It is also the authority to audit the same project (if the project fails).
    - **It is like being a judge of one's own cause**.
  - ○ **Silent on Compensation:**
    - The bill is silent on the payment of compensation to **people affected by dam projects**.
  - ○ **Interferes with Federal Structure:**
    - The states alleged that it needs scrutiny as it is **unconstitutional and encroaches upon the states' rights.** certain provisions of the bill **interfere with the federal structure.**

Constitutional Validity of the Bill

- ➢ Although water is **under the state list (Entry 17)**, the Centre has brought the legislation under **Article 246 of the Constitution** read with **Entry 56** and **Entry 97 of** the Union list.
  - ○ **State List, Entry 17:** Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power **subject to the provisions of entry 56 of List I.**
  - ○ **Entry 56 of List I** allows Parliament to make laws on the **regulation of inter-state rivers** and river valleys if it declares such regulation to be **expedient in public interest**.
- ➢ **Article 246 empowers Parliament** to legislate on any matter **enumerated in List I of the Union list** in the Seventh Schedule of the Constitution.

- ➢ **Entry 97** allows Parliament to legislate on any other matter **not enumerated in List II** or **List III** including any tax not mentioned in either of those Lists.

Ujjwala Scheme

Why in News

The **Pradhan Mantri Ujjwala Yojana** saw a spurt in new distribution just before the 2019 general election as per **RTI (Right To Information)** plea.

- ➢ The **target under the scheme** was to release 8 crore LPG connections to the deprived household by 2020. This was achieved in August 2019, **seven months ahead of the March 2020 deadline.**
- ➢ In August 2021, the Prime Minister launched the second phase of **Pradhan Mantri Ujjwala Yojana (PMUY) or Ujjwala 2.0 Scheme.**

Key Points

- ➢ **About:**
  - ○ **PMUY-I:**
    - Launched in May 2016 to provide LPG (liquefied petroleum gas) connections to poor households.
  - ○ **PMUY-II:**
    - It is aimed to provide maximum benefit to the migrants who live in other states and find it difficult to submit address proof.
    - Now they will only have to give **"Self Declaration"** to avail the benefit.
- ➢ **Objectives:**
  - ○ Empowering women and protecting their health.
  - ○ Reducing the number of deaths in India due to unclean cooking fuel.
  - ○ Preventing young children from a significant number of acute respiratory illnesses caused due to indoor air pollution by burning fossil fuel.
- ➢ **Features:**
  - ○ The scheme provides a financial support of **Rs 1600 for each LPG connection to the BPL households.**
  - ○ Along with a deposit-free LPG connection, **Ujjwala 2.0 will provide the first refill and a hotplate free of cost to the beneficiaries.**
- ➢ **Target:**
  - ○ **Under Ujjwala 1.0**, the target was to provide LPG connections to 50 million women from the Below

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Note:

Poverty Line (BPL) households, by March 2020. However, in August 2018, women from seven other categories were brought under the purview of the scheme:

- **SC/ST,** those under the **Pradhan Mantri Awas Yojana (PMAY),** beneficiaries of the **Antyoday Anna Yojana (AAY), Forest Dwellers,** most backward classes, tea gardens and Islands.

○ **Under Ujjwala 2.0**, an additional 10 million LPG connections will be provided to the beneficiaries.

- Government has also **fixed a target of providing piped gas to 21 lakh homes in 50 districts.**

➢ **Nodal Ministry:**

○ Ministry of **Petroleum and Natural Gas** (MoPNG).

➢ **Achievements:**

○ In the first phase of the PMUY, **8 crore poor families, including from the Dalit and tribal communities, were given free cooking gas connections.**

○ The LPG infrastructure has expanded manifold in the country. In the last six years, more than 11,000 new LPG distribution centres have opened across the country.

➢ **Challenges:**

○ **Low Consumption of Refills:**

- Encouraging the **sustained usage of LPG remains a big challenge**, and low consumption of refills hindered recovery of outstanding loans disbursed under the scheme.

- The annual average refill consumption on 31th December 2018 was only 3.21.

○ **System Anomalies:**

- There are **deficiencies** such as the **issuance of connections to unintended beneficiaries,** and problems with the software of the state-run oil marketing companies for identifying intended beneficiaries and inadequacies in the deduplication process.

Hunar Haats

Why in News

Recently, the **Ministry of Minority Affairs** has organised the **34th Edition of Hunar Haat** in Gujarat where Artisans from 30 states and union territories have participated.

Key Points

➢ **About:**

○ First **launched in 2016,** it is an exhibition of handicrafts and traditional products made by artisans from the **minority communities.**

○ Hunar Haat has been conceptualized **to protect and promote the country's ancestral legacy of arts and crafts** in the current global competition and to support the traditional artisans and craftsmen.

○ The **artisans selected in the Hunar Haat exhibition are those whose forefathers were involved in such traditional handmade work** and are still continuing the profession.

➢ **Theme:**

○ Vocal for Local.

➢ **Organizer:**

○ These are organised by the **Ministry of Minority Affairs** under **USTTAD (Upgrading the Skills & Training in Traditional Arts/Crafts for Development) scheme.**

- The USTTAD scheme aims **to promote and preserve the rich heritage of the traditional arts & crafts** of the minority communities.

➢ **Aim:**

○ To **provide market exposure and employment opportunities** to artisans, craftsmen and traditional culinary experts.

○ **Boosting the skills** of craftsmen, weavers and artisans who are already engaged in traditional ancestral work.

➢ **SIgnificance:**

○ 'Hunar Haat' has proved to be an **"Empowerment Exchange" for master artisans and craftsmen.**

○ It has proved to be immensely beneficial and encouraging for artisans and craftsmen as **lakhs of people visit the "Hunar Haat" and purchase indigenous handmade products** of artisans on a large scale.

○ It is **also providing employment opportunities to lakhs of artisans** and craftsmen from across the country.

- Presently around 7 lakh people across the country are directly and indirectly associated with Hunar Haat, **About 40 % of them are women artisans.**, and in the next couple of years, around 17 lakh families are expected to join Hunar Haat.

Other Schemes Related to Minorities

➢ **Pradhanmantri Jan Vikas Karyakram:**
  ○ The programme **aims to develop socio-economic and basic amenities** assets like school, college, polytechnic, girls hostel, ITI, skill development centre etc for the minority communities.

➢ **Begum Hazrat Mahal Girls Scholarships:**
  ○ It provides **scholarships for economically backward girls** belonging to the six notified Minority communities.

➢ **Gharib Nawaz Employment Scheme:**
  ○ Was launched so that **short term job oriented skill development courses** may be provided to minorities' youth in order to enable them for skill based employment.

➢ **Seekho aur Kamao:**
  ○ This is a **placement linked skill development scheme** for minorities aiming to upgrade the skills of minority youth in various modern/traditional skills depending upon their qualification, present economic trends and market potential, which can earn them suitable employment or make them suitably skilled to go for self-employment.

➢ **Nai Manzil:**
  ○ It is a scheme for formal school education & skilling of school dropouts l**aunched in 2015.**

➢ **Usttad (Upgrading the Skills and Training in Traditional Arts/Crafts for Development):**
  ○ The scheme aims **to preserve the rich heritage of traditional arts/crafts** of minorities..

➢ **Nai Roshni:**
  ○ Launched for **leadership development of women** belonging to minority communities.

Upskilling of Street Vendors

Why in News

Recently, the Ministry of Skill Development and Entrepreneurship (MSDE) announced a pilot project to train 2,500 street food vendors in Delhi under the **Recognition of Prior Learning (RPL)** component of **Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 3.0**.

Key Points

➢ **About:**
  ○ The project will be implemented by the **Tourism and Hospitality Sector Skill Council (THSSC)** and training partners of NSDC.
  ○ The registered **street food vendors will go through four-five days of counselling sessions** where they will get clarity on their competencies, aptitude, interests, opportunities, and structure of the itinerary.
  ○ The Vendors will be educated **on health and safety standards, safety provisions under Covid-19 protocols**, effective communication techniques with staff and customers, new-age skills such as **digital literacy**, **financial literacy,** digital payments and e-selling.
  ○ The vendors will also be supported with loans under the **Mudra Scheme.**
  ○ It will make vendors eligible for **e-cart licenses**, make them learn to improve the hygiene conditions in food preparation and aesthetics of vending. They will be given Rs 500 per day for four days of training.

➢ **Objective:**
  ○ The objective is **to impart relevant skills to street food vendors, which can lead to better services for consumers, more opportunities for revenue generation and awareness on civic regulations.**

➢ **Significance:**
  ○ India has around **5.5 million street food vendors who contribute around 14% to the informal economy**, making their upskilling vital for the economy.
  ○ It will surely **help in lifting the working and living conditions of the workforce**.
  ○ It will **provide social security and safety** to 4,000 vendors in east Delhi and 25 lakh street vendors nationally..

➢ **Other Schemes related to Food vendors:**
  ○ **PM SVANidhi Scheme**
  ○ **Main Bhi Digital (me too digital)**
  ○ **The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.**
  ○ **Pradhan Mantri Shram Yogi Maandhan Yojana.**
  ○ **Pradhan Mantri Matru Vandana Yojana.**

Note:

Pradhan Mantri Kaushal Vikas Yojana

➢ **About:**

○ PMKVY was **launched in 2015** under **Skill India Mission**.

○ It aims to **train over 40 crore people in India in different skills by 2022.**

○ It aims at **vocational training and certification of Indian youth** for a better livelihood and respect in the society.

➢ **PMKVY-1.0:**

○ Launched on 15th July, 2015 **(World Youth Skills Day)** to encourage and promote skill development in the country by providing free short duration skill training, **Special Projects, Recognition of Prior Learning**, Kaushal & Rozgar Mela, etc.

➢ **PMKVY 2.0 (2016-20):**

○ Launched by scaling up both in terms of Sector and Geography and by greater alignment with other missions of the Government of India like **Make in India**, **Digital India**, **Swachh Bharat**, **etc.**

○ More than 1.2 Crore youth have been trained/ oriented through an improved standardized skilling ecosystem in the country under PMKVY 1.0 and PMKVY 2.0.

➢ **PMKVY 3.0:**

○ Launched in **January 2021,** in 717 districts, 28 States/eight UTs, as a step towards '**Atma Nirbhar Bharat'.**

○ It envisages **training of eight lakh candidates over a scheme period of 2020-2021 with an outlay of Rs. 948.90 crore.**

○ The focus is on bridging the demand-supply gap by promoting skill development in areas of new-age and **Industry 4.0** job roles.

RPL Programme:

➢ It is being implemented by the **National Skill Development Corporation** (NSDC).

➢ It aims **to promote decentralization and local governance** for better planning and implementation of skill development programmes.

➢ It recognizes the value of learning acquired outside a formal setting and provides a government certificate for an individual's skills.

Beti Bachao Beti Padhao Scheme

Why in News

A **parliamentary committee on empowerment of women** has flagged under-utilisation of central funds for schemes related to programmes targeted at the girl child - particularly the flagship **Beti Bachao, Beti Padhao scheme** from 2014 to 2019.

Key Points

➢ **Findings of the Committee:**

○ **Poor Utilization of Funds:**

● **Since the inception of BBBP in 2014-15** till 2019-20, the total Budgetary allocation under **the scheme was Rs. 848 crore,** excluding the Covid-stricken financial year of 2020-21.

● During this period, **an amount of Rs. 622.48 crore was released** to the States but **only 25.13% of the funds** has been spent by the States and Union Territories.

○ **Improper Spending of Funds:**

● A whopping **80% of funds** under the flagship BBBP scheme **was spent on media campaigns.**

● The massive spend on advertisements was **despite the clearly laid down formula for utilisation of funds** – Rs. 50 lakh per year is earmarked for a district for utilisation under six different components.

■ Of the Rs 50 lakh, 16% of funds are for inter- sectoral consultation or capacity building, 50% for innovation or awareness generation activities, 6% for monitoring and evaluation, 10% for sectoral interventions in health, 10% for sectoral interventions in education and 8% as flexi funds.

○ **Recommendation:**

● The government should **reconsider spending on advertisements** under the BBBP scheme and should **focus on planned expenditure allocation** for sectoral interventions in education and health.

➢ **BBBP Scheme:**

○ **About:**

● It was **launched in January 2015** with the aim to address **sex selective abortion and the declining**

child sex ratio which was at 918 girls for every 1,000 boys in 2011.

- This is a **joint initiative** of the Ministry of Women and Child Development, Ministry of Health and Family Welfare and Ministry of Human Resource Development.
- The programme is being **implemented across 405 districts in the country.**

○ **Main Objectives:**
- Prevention of gender-biased sex-selective elimination.
- Ensuring survival & protection of the girl child.
- Ensuring education and participation of the girl child.
- Protecting rights of Girl children.

○ **Performance Analysis:**
- **Sex Ratio at Birth:**
  - **Sex Ratio at Birth (SRB)** has improved by **16 points from 918 (2014-15) to 934 (2019-20)**, as per the **Health Management Information System (HMIS)** data.
  - **Notable Examples (Districts):**
    - Mau (Uttar Pradesh) from 694 (2014-15) to 951 (2019-20),
    - Karnal (Haryana) from 758 (2014-15) to 898 (2019-20),
    - Mahendergarh (Haryana) from 791 (2014-15) to 919 (2019-20), etc.
- **Health:**
  - **ANC Registration:** Percentage of 1st Trimester ANC (AnteNatal Care) Registration has shown an improving trend from 61% in 2014-15 to 71% in 2019-20.
  - **Institutional Deliveries:** Percentage of Institutional Deliveries has shown an improving trend from 87% in 2014-15 to 94% in 2019-20.
- **Education:**
  - **Gross Enrolment Ratio (GER):** GER of girls in the schools at secondary level has **improved from 77.45 (2014-15) to 81.32 (2018-19)** as per Unified District Information System for Education (UDISE) provisional data.
  - **Toilet for girls:** Percentage of schools with functional separate toilets for girls has shown

improvement from 92.1% in 2014-15 to 95.1% in 2018-19.

- **Attitudinal Change:**
  - The BBBP scheme has been **able to bring the focus on important issue** of female infanticide, lack of education amongst girls and deprivation of their rights on a life cycle continuum.
  - BetiJanmotsav is one of the key programmes celebrated in each district.

Other Initiatives for Girl Children
- ➢ **UJJAWALA:** To tackle the problem of trafficking, it is a Comprehensive Scheme for Prevention of Trafficking and Rescue, Rehabilitation and Re-Integration of Victims of Trafficking for Commercial Sexual Exploitation.
- ➢ **Kishore Health Card:** To record the information about the weight, height, Body Mass Index (BMI) of Adolescent Girls (AGs). These health cards for AGs are maintained at the AnganWadi centres (AWCs).
- ➢ **Scheme for Adolescent Girls (SAG).**
- ➢ **Sukanya Samridhi Yojana,** etc.

First Democracy Summit

Why in News

Recently, the **Summit for Democracy was hosted by the United States** "to renew democracy at home and confront autocracies abroad".

- ➢ The **US President also announced the establishment of the Presidential Initiative for Democratic Renewal** that will provide foreign assistance initiatives.
  - ○ The initiative will be powered by $424.4 million and will be aimed to support free media, fight corruption, strengthen democratic reforms, for use of technology for democracy and for defence of free and fair elections.

Key Points

- ➢ **About:**
  - ○ It aims **to show how open, rights-respecting societies can work together** to effectively tackle the challenges of present time, such as the **Covid-19 pandemic**, the **climate crisis**, **and inequality.**
  - ○ The Summit was centered around three principal themes:

- Defending against **authoritarianism**
- Addressing and fighting **corruption**
- Advancing respect for **human rights**

➤ **India's Stand:**

○ **Democracies should jointly deal with social media and crypto currencies**, so that they are used to empower democracy, not to undermine it.

○ India is the **largest democracy in the world** which has 2,500-year-old democratic traditions and **proposes to share India's democratic experience** through digital solutions.

- Referred to the **civilisational tradition of democracy in India** citing the ancient city states under the Lichhavis and other people that flourished in India during the late Vedic and Buddhist period and continued to the early medieval period.

○ **Democracy has taken various shapes across the world** and there is a need to work on the **democratic practices and symptoms**.

○ It is needed to constantly **improve the democratic practices and systems** and to continuously enhance inclusion, transparency, human dignity, responsive grievance redressal and decentralisation of power.
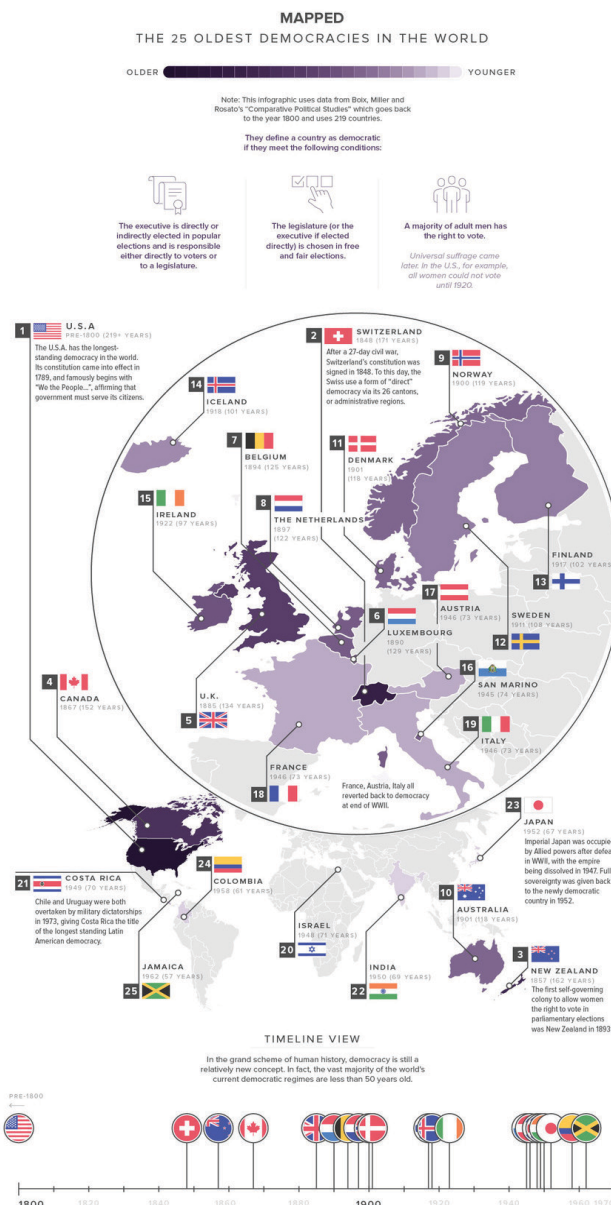
Democracy

➤ **About:**

○ Democracy is a **system of government** in which the citizens exercise power directly or elect representatives from among themselves to form a governing body, such as a parliament.

○ It is also referred to as **"rule of the majority".** Here the power can't be inherited. People elect their leaders.

○ Representatives stand in an election and the citizens vote for their representative. The representative with the most number of votes gets the power.

➤ **Brief History:**

○ **India is the world's largest democracy.** India became a democratic nation post its **independence in the year 1947**. Thereafter, the citizens of India were given the right to vote and elect their leaders.

➤ **India's Role in Strengthening Democracy:**

○ **Around the World:**

- **Capacity Building:**

MAPPED
THE 25 OLDEST DEMOCRACIES IN THE WORLD

OLDER ━━━━━━━━ YOUNGER

Note: This infographic uses data from Boix, Miller and Rosato's "Comparative Political Studies" which goes back to the year 1800 and uses 219 countries.

They define a country as democratic if they meet the following conditions:

The executive is directly or indirectly elected in popular elections and is responsible either directly to voters or to a legislature.

The legislature (or the executive if elected directly) is chosen in free and fair elections.

A majority of adult men has the right to vote.
Universal suffrage came later. In the U.S. for example, all women could not vote until 1920.

1 **U.S.A** PRE-1800 (219+ YEARS)
The U.S.A. has the longest-standing democracy in the world. Its constitution came into effect in 1789, and famously begins with "We the People...", affirming that government must serve its citizens.

2 **SWITZERLAND** 1848 (171 YEARS)
After a 27-day civil war, Switzerland's constitution was signed in 1848. To this day, the Swiss use a form of "direct" democracy via its 26 cantons, or administrative regions.

14 **ICELAND** 1918 (101 YEARS)
7 **BELGIUM** 1894 (125 YEARS)
9 **NORWAY** 1900 (119 YEARS)
11 **DENMARK** 1901 (118 YEARS)
15 **IRELAND** 1922 (97 YEARS)
8 **THE NETHERLANDS** 1897 (122 YEARS)
17 **AUSTRIA** 1946 (73 YEARS)
13 **FINLAND** 1917 (102 YEARS)
6 **LUXEMBOURG** 1890 (129 YEARS)
12 **SWEDEN** 1911 (108 YEARS)
16 **SAN MARINO** 1945 (74 YEARS)
4 **CANADA** 1867 (152 YEARS)
5 **U.K.** 1885 (134 YEARS)
19 **ITALY** 1946 (73 YEARS)
18 **FRANCE** 1946 (73 YEARS)
France, Austria, Italy all reverted back to democracy at end of WWII.
23 **JAPAN** 1952 (67 YEARS)
Imperial Japan was occupied by Allied powers after defeat in WWII, with the empire being dissolved in 1947. Full sovereignty was given back to the newly democratic country in 1952.
21 **COSTA RICA** 1949 (70 YEARS)
Chile and Uruguay were both overtaken by military dictatorships in 1973, giving Costa Rica the title of the longest standing Latin American democracy.
24 **COLOMBIA** 1958 (61 YEARS)
10 **AUSTRALIA** 1901 (118 YEARS)
3 **NEW ZEALAND** 1857 (162 YEARS)
The first self-governing colony to allow women the right to vote in parliamentary elections was New Zealand in 1893.
25 **JAMAICA** 1962 (57 YEARS)
20 **ISRAEL** 1948 (71 YEARS)
22 **INDIA** 1950 (69 YEARS)

TIMELINE VIEW
In the grand scheme of human history, democracy is still a relatively new concept. In fact, the vast majority of the world's current democratic regimes are less than 50 years old.

PRE-1800

1800 1820 1840 1860 1880 1900 1920 1940 1960 1970

- Beyond demonstrating the **Election Commission** (EC)'s enviable record in conducting free and fair elections, India **has given training to the thousands of electoral officials** from Asia, Africa, and other regions of the world in election management and parliamentary affairs for several decades.

● **Developmental Partnership Administration (DPA):**

- India has created a Developmental Partnership Administration (DPA) within the Ministry of External Affairs (MEA) to **offer critical development assistance projects** for many

developing and new democracies across geographies.

- **Examples:** The building of the Afghan Parliament, providing support to Myanmar for upgrading its administrative and judicial capabilities, amongst others.

● **Funding to Democracy Watch Dogs:**

- Together with the US, India was instrumental in the creation of the UN Democracy Fund (UNDEF) and the Community of Democracies to support democracy at international levels.

- Incidentally, **India is one of the largest contributors to UNDEF** that supports 66 NGO-led projects in South Asia.

● **United Nations Democracy Caucus:**

- India also helped to form the **United Nations Democracy Caucus**, the only body within the UN system to **convene democratic states** based on shared values.

❍ **In India:**

● **Breaking Racial Discrimination:**

- India has **given representation to a Dalit woman** to rise to the highest office (as Chief Minister).

● **Right to Information Act, 2005:**

- The act, a **totally civil society driven grassroot movement** has truly democratised information spaces for ordinary citizens.

● **Democratic Decentralisation:**

- Twin **constitutional amendments (73rd and 74th) in 1992** to create third-tier governments (rural and urban local bodies), has taken deep ground in the last three decades.

- With 3 million representatives at **various levels (Gram Sabha, Panchayat Samiti, and Zilla Parishad)**, this is by far the largest democratic exercise anywhere in the world.

➢ **Concerns Related to Democracy:**

❍ **World:**

● **Decline in Political Rights and Civil Liberties:**

- Democracies across the world—rich and established, developing and newly established ones—are grappling with serious crises on many key parameters.

- According to the reports of leading democracy watchdogs, democracy is witnessing an alarming decline.

- According to **Democracy Index 2020**, as low as **9% of the world population live in a "full" democracy.**

  - The recent **military coups in Myanmar, Tunisia, and Sudan** are testimonies to the steady rise of anti-democratic forces and the failure of the global democracy collective to do anything meaningful to stem the rot.

● **Rising Authoritarian:**

- Rising threats stemming from the steady rise of **authoritarian powers, particularly China, is a** major concern.

- At a time when the West, particularly the US and rich European countries, have considerably ceded their global commitment to democratic values, **China has set its eyes on re-defining global human rights** and democracy norms.

- **Examples:**

  - China has **marshalled the military and diplomatic means to threaten Taiwan**, forced territorial claims in the disputed **South China Sea**, thrown millions of **Uyghur Muslims** in internment camps, curbed political freedoms in **Hong Kong**, and launched influence operations across many geographies.

❍ **India's:**

● The **Freedom House 2021 report** put India as only **"partly free"**, the V-Dem report went a step ahead to call it an **"electoral autocracy"**.

● According to the Global **State of Democracy 2021** report, India was amongst the **10 most backsliding democracies**—a more severe and deliberate kind of democratic erosion.

NIPER Amendment Bill, 2021

Why in News

Recently, **Rajya Sabha** passed the **National Institute of Pharmaceutical Education and Research (NIPER) Amendment Bill, 2021.**

Note:

➢ It seeks to amend the **National Institute of Pharmaceutical Education and Research Act, 1998** which established the National Institute of Pharmaceutical Education and Research at Mohali in Punjab and **declared it an institution of national importance.**

Key Points

➢ **About the Bill:**
  ❍ **Status of Institute of National Importance:**
    ● It seeks to accord the status of **'institute of national importance'** to six more institutes of pharmaceutical education and research institutes – NIPERs – situated in Ahmedabad, Hajipur, Hyderabad, Kolkata, Guwahati and Raebareli.
  ❍ **Establishment of Advisory council:**
    ● The council will be a **central body, to coordinate the activities of all the institutes** to ensure coordinated development of pharmaceutical education and research and maintenance of standards.
    ● The **functions** of the council include:
      ■ **Advising on matters related to course duration**, **formulating policies for recruitment**, examining and approving **development plans of the institutes, examining annual budget estimates** of the institutes for recommendations to the central government for allocation of funds.
  ❍ **Rationalizes the Board of Governors:**
    ● The Bill **rationalises the Board of Governors of each NIPER** from its existing strength of 23 to 12 members and widens the scope and number of courses run by the institutes.

➢ **Significance:**
  ❍ The NIPERs would be governed on the lines of the IITs.
  ❍ NIPERs will help **in research that could bring more patents for India**, which in turn, would mean the **nation can produce high-cost pharmaceuticals.**

➢ **Issues with the Bill:**
  ❍ **State governments along with Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities Act), 1989 (SC/ST Act), OBC and women** have not been included in the apex council of the NIPERs.
  ❍ Issues like **autonomy and over-centralisation of power** have also been raised.

● It has been said that the **proposed council has been empowered with excessive powers** with regard to **financial, administrative and managerial matters** of these institutes, which has to be looked into very carefully.

● The Bill **potentially compromises the institutes' autonomy** as the council will mostly be composed of central government bureaucrats and some MPs, wherein it may take decisions that may not be in a particular institute's best interest.

National Institutes of Pharmaceutical Education and Research (NIPERs)

➢ They are the **institutes of national importance** under the aegis of the Department of Pharmaceutical, Ministry of Chemicals and Fertilizers.
  ❍ **Any Institution of National Importance** is an **autonomous body/institute** with the power to hold examinations and grant educational certificates/degrees.
    ● They get **funding from the central government.**
➢ The Institute is **conceived to provide leadership in pharmaceutical sciences** and related areas not only within the country, but also to the countries in SouthEast Asia, South Asia and Africa.
➢ NIPER, Mohali is a **member of Association of Indian Universities** and Association of Commonwealth Universities.
  ❍ Association of Indian Universities (AIU), formed in 1925 as **Inter-University Board (IUB)**, is an association of all universities in India. It is actively engaged in the growth and development of higher education.
  ❍ The **Association of Commonwealth Universities** is an international organisation dedicated to building a better world through higher education in over 50 countries across the **Commonwealth.**

National Judicial Infrastructure Authority of India

Why in News

Recently, the **Chief Justice of India** proposed creation of a **National Judicial Infrastructure Authority of India (NJIAI)**.

Note:

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Key Points

- ➢ **NJIAI:**
  - ○ **About:**
    - ● The proposed NJIAI could **work as a central agency with each State** having its own State Judicial Infrastructure Authority, much like the National Legal Services Authority (NALSA) model.
      - ■ NALSA was constituted to **establish a nationwide uniform network** for providing free and competent legal services to the weaker sections of the society.
    - ● NJIAI will **take control of the budgeting and infrastructure development** of subordinate courts in the country.
    - ● The proposed **NJIAI should be placed under the** Supreme Court of India unlike NALSA which is serviced by the **Ministry of Law and Justice.**
    - ● It will **not suggest any major policy change** but will **give complete freedom to HCs** to come up with projects to strengthen ground-level courts.
  - ○ **Members:**
    - ● In the NJIAI there could be a **few High Court judges as members**, and some central government officials because the centre must also know where the funds are being utilised.
    - ● Similarly, in the **State Judicial Infrastructure Authority**, in addition to the Chief Justice of the respective High Court and a nominated judge, four to five district court judges and state government officials could be members.
- ➢ **Need of NJIAI:**
  - ○ **To Manage the Funds:**
    - ● Of a total of Rs. 981.98 crore sanctioned in 2019-20 under the Centrally Sponsored Scheme (CSS) to the States and Union Territories for development of infrastructure in the courts, only Rs. 84.9 crore was utilised by a combined five States, rendering the remaining 91.36% funds unused.
      - ■ The issue has been **plaguing the Indian judiciary for nearly three decades** when the CSS was introduced in 1993-94.
  - ○ **Manage Rising Number of Litigations:**
    - ● The Indian judiciary's infrastructure **has not kept pace with the sheer number of litigations** instituted every year.

- ■ A point cemented by the fact that the **total sanctioned strength of judicial officers in the country** is 24,280, but the number of court halls available is just 20,143, including 620 rented halls.
  - ○ **Greater Autonomy:**
    - ● The improvement and maintenance of judicial infrastructure is **still being carried out in an ad-hoc and unplanned manner.**
      - ■ The need for **"financial autonomy of the judiciary"** and creation of the NJIAI that will **work as a central agency with a degree of autonomy.**
- ➢ **Reasons Behind Infrastructural Lag:**
  - ○ **Lack of Funds:**
    - ● To develop judicial infrastructure, **funds are extended by the central government and states** under the **Centrally-Sponsored Scheme** for Development of Judiciary Infrastructure, which **began in 1993** and was extended for another five years in July 2021.
    - ● However, **states do not come forward with their share of funds** and consequently, money allocated under the scheme is often left unspent with them and lapses.
  - ○ **Use of Funds for Non-Judicial Purposes:**
    - ● In some cases, they claimed, **states have also transferred part of the fund for non-judicial purposes.**
      - ■ Even in the judiciary, particularly trial courts, nobody is willing to take responsibility to execute infrastructure projects.

Issues of Judiciary in India

- ➢ The **judge-population ratio** in the country is **not very appreciable.**
  - ○ While for the other countries, the ratio is about 50-70 judges per million people, in India it is 20 judges per million heads.
- ➢ It is only since the **pandemic** that the **court proceedings** have started to take place **virtually** too, earlier the role of technology in the judiciary was not much larger.
- ➢ The posts in the judiciary **are not filled up as expeditiously as required.**
  - ○ The **process of judicial appointment is delayed**

Note:

due to delay in recommendations by the **collegium** for the higher judiciary.

○ Delay in recruitment made by the state commission/high courts for lower judiciary is also a cause of the **poor judicial system.**

➢ **Frequent adjournments** are granted by the courts to the advocates which leads to unnecessary delays in justice.

Sedition Law

Why in News

Recently, a Journalist was **charged with Sedition** by the Assam Police for allegedly promoting animosity between the Assamese and Bengali-speaking people of Assam.

Key Points

➢ **Historical Background:**

○ Sedition laws were enacted in **17th century England** when lawmakers believed that **only good opinions of the government should survive**, as bad opinions were detrimental to the government and monarchy.

○ The law was **originally drafted in 1837 by Thomas Macaulay, the British historian-politician**, but was inexplicably omitted when the **Indian Penal Code (IPC)** was enacted in 1860.

○ Today the Sedition is a crime u**nder Section 124A of the Indian Penal Code (IPC).**

➢ **Sedition Law Today:**

○ **Section 124A IPC:**

● It defines **sedition as an offence committed when** "any person by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection **towards the government established by law in India".**

● Disaffection includes **disloyalty and all feelings of enmity.** However, comments without exciting or attempting to excite hatred, contempt or disaffection, will not constitute an offence under this section.

○ **Punishment for the Offence of Sedition:**

● It is a non-bailable offence. Punishment under the Section 124A ranges from **imprisonment up to three years to a life term**, to which fine may be added.

● A person charged under this law **is barred from a government job.**

■ They have to live without their passport and must produce themselves in the court at all times as and when required.

➢ **Significance of Sedition Law:**

○ **Reasonable Restrictions:**

● The constitution of India **prescribes reasonable restrictions (under Article 19(2))** that can always be imposed on this right in order to ensure its responsible exercise and to ensure t**hat it is equally available to all citizens.**

○ **Maintaining Unity & Integrity:**

● Sedition law helps the government in **combating anti-national, secessionist and terrorist elements.**

○ **Maintaining Stability of State:**

● It helps in **protecting the elected government from attempts to overthrow** the government with violence and illegal means. The continued existence of the government established by law is an essential condition of the stability of the State.

➢ **Issues With Sedition Law:**

○ **Relic of Colonial Era:**

● Colonial administrators used sedition **to lock up people who criticised the British policies**.

● Stalwarts of the freedom movement such as **Lokmanya Tilak, Mahatma Gandhi, Jawaharlal Nehru, Bhagat Singh**, etc., were convicted for their "seditious" speeches, writings and activities under British rule.

● Thus, rampant use of the sedition law recalls the colonial era.

○ **Stand of Constituent Assembly:**

● The **Constituent Assembly did not agree to include sedition in the Constitution**. The members felt it would curtail freedom of speech and expression.

● They **argued that the sedition law can be turned into a weapon to suppress people**'s legitimate and constitutionally guaranteed right to protest.

Note:

○ **Disregarding Supreme Court's Judgement:**

- Supreme Court in **Kedar Nath Singh vs State of Bihar case 1962**, limited application of sedition to **"acts involving intention or tendency to create disorder, or disturbance of law and order, or incitement to violence"**.

- Thus, invoking sedition charges against academicians, lawyers, socio-political activists and students is in disregard of the Supreme Court's order.

○ **Repressing Democratic Values:**

- Increasingly, India is being described as an elected autocracy primarily because of the callous and calculated use of sedition law.

➢ **Recent Developments:**

○ **In February 2021**, the **Supreme Court (SC)** **protected a political leader and six senior journalists** from arrest, for allegedly tweeting and sharing unverified news, in **multiple sedition FIRs** registered against them.

○ **In June 2021**, the SC while protecting two Telugu (language) news channels from coercive action by the Andhra Pradesh government **emphasized on defining the limits of sedition.**

○ **In July 2021**, a petition was filed in the **SC**, that sought a relook into the Sedition Law,

- The court ruled that **"a statute criminalising expression based on unconstitutionally vague definitions of 'disaffection towards Government' etc. is an unreasonable restriction** on the fundamental right to free expression guaranteed under **Article 19** **(1)(a)** and causes constitutionally impermissible **'Chilling Effect' on speech".**

Consent of States for CBI Investigations

Why in News

Recently, a **Supreme Court** bench has referred a case, in which the **CBI (Central Bureau of Investigation)** had filed an affidavit on the withdrawal of **'general consent'** to the CBI by several States, for consideration of the Chief Justice of India.

Central Bureau of Investigation (CBI)

➢ The CBI was **set up in 1963** by a resolution of the **Ministry of Home Affairs**.

○ Now, the CBI comes under the administrative control of the **Department of Personnel and Training (DoPT)** of the **Ministry of Personnel, Public Grievances and Pensions**.

➢ The establishment of the CBI was recommended by the **Santhanam Committee** on **Prevention of Corruption (1962–1964)**.

➢ The CBI is **not a statutory body**. It derives its powers from the **Delhi Special Police Establishment Act, 1946**.

➢ The CBI is the **main investigating agency of the Central Government.**

○ It also provides assistance to the **Central Vigilance Commission** and **Lokpal**.

○ It is also the nodal police agency in India which coordinates investigations on behalf of **Interpol Member countries**.

Key Points

➢ **Background:**

○ **Withdrawal of Consent**: Eight States have withdrawn consent to the CBI for launching investigations in their territory.

- **Eight States** — West Bengal, Maharashtra, Kerala, Punjab, Rajasthan, Jharkhand, Chhattisgarh and Mizoram have withdrawn consent to the CBI for launching investigations in their territory.

○ **Argument of CBI**: According to the CBI, such widespread withdrawal of consent is **rendering it redundant with regard to investigation of corruption charges against Central employees** and undertakings working within the territorial jurisdiction of various States.

- While the States' responses were primarily an **act of politico-legal ring-fencing** against the politics of the Central Government employing its agencies, the withdrawal of general consent by a number of States **has left the CBI handicapped.**

➢ **About the Consent Given by State Government**:

○ **Legal and Constitutional Basis**: According to **Section 6** of the **Delhi Special Police Establishment Act of 1946** under which the CBI functions, the State's consent is required to extend CBI investigation beyond Union Territories.

- The legal foundation of the CBI has been construed to be based on **Entry 80** of the **Union List** which provides for the extension of powers of the police force belonging to one State to any area in another State but not without its permission.
- "Police'' is Entry 2 in the **State List** under the **Seventh Schedule** of the Constitution.

○ **Types of Consent:**

- There are **two types of consent** for a probe by the CBI.
  - **General Consent**: When a state gives a general consent (Section 6 of the Delhi Special Police Establishment Act) 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.
    - A general consent is given to facilitate that seamless investigation in a case of corruption or violence.
  - **Specific Consent**: When a general consent is withdrawn, CB**I needs to seek case-wise consent** for investigation from the concerned state government.
    - If specific consent is not granted, the CBI officials will not have the power of police personnel when they enter that state.
    - This hurdle impedes seamless investigation by the CBI.

○ **SC Judgement**:

- In the *Advance Insurance Co. Ltd case, 1970*, a Constitution Bench held that the definition of "State", as contained in **The General Clauses Act,** includes Union Territories as well.
- Hence the CBI, being a force constituted for Union Territories as recognised under the Delhi Special Police Establishment Act of 1946, **can conduct investigations into the territories of the States only with their consent.**

○ **Impact on Pending Investigation**:

- The withdrawal of general consent does not affect pending investigation (*Kazi Lendhup Dorji v. CBI, 1994*) or the cases registered in another State in relation to which investigation leads into the territory of the State which has withdrawn general consent; **nor does the withdrawal circumscribe the power of the jurisdictional High Court to order a CBI investigation.**

NHA Report on Health Expenditure

Why in News

Recently, **National Health Accounts (NHA)** reported that the government has increased the expenditure on health, making the **decline of Out-Of Pocket Expenditure (OOPE)** to **48.8% in 2017-18 from 64.2% in 2013-14.**

➢ This report was produced by the **National Health Systems Resource Centre**, designated as the National Health Accounts (NHA) Technical Secretariat in 2014 by the Health Ministry.

➢ The NHA estimates are prepared by using an accounting framework based on the internationally accepted System of Health Accounts 2011, provided by the **World Health Organization** **(WHO).**

National Health Systems Resource Centre

➢ It was established in 2006-07 under the National Rural Health Mission (NRHM) of Government of India to serve as an apex body for technical assistance.

➢ Its mandate is to assist in policy and strategy development in the provision and mobilization of technical assistance to the states and in capacity building for the Ministry of Health and Family Welfare (MoHFW).

Key Points

➢ **Increased Government Share in the Total GDP:**

○ For 2017-18, t**here had been an increase in the share of Government health expenditure** in the total **GDP (Gross Domestic Product)** of the country.

○ It has increased from 1.15% in 2013-14 to 1.35% in 2017-18.

➢ **Increased Government Spending on Per-Capita Terms:**

○ In per capita terms, the Government health expenditure has increased from Rs 1,042 to Rs 1,753 between 2013-14 to 2017-18.

➢ **Share of Primary Health Care:**

○ The share of primary healthcare in current Government health expenditure has increased from **51.1% in 2013-14 to 54.7% in 2017-18.**

Note:

○ Primary and secondary care accounts for more than 80% of the current Government health expenditure.

➢ **Social Security Expenditure on Health:**

○ Also the share of social security expenditure on health, which includes the social health insurance programme, Government financed **health insurance schemes**, and medical reimbursements made to Government employees, has **increased**.

➢ **Decline in out-of-pocket expenditure:**

○ The rise in government spending on healthcare led to an increase in the share of government expenditure in the total health expenditure to 40.8% and **a decline in out-of-pocket expenditure to 48.8%** for 2017-18.

● The fall in OOPE is attributed to the **increased utilisation of government health facilities and reduction in the cost of services** at these facilities.

Issues with Health Sector

➢ **Lack of Primary Healthcare Services:** The existing public primary health care model in the country is limited in scope.

○ Even where there is a well-functioning public primary health centre, only services related to pregnancy care, **limited** childcare and certain **services** related to national health programmes are **provided**.

➢ **Supply-Side Deficiencies:** Poor health management skills and lack of appropriate training and supportive supervision for health workers prevent delivery of the desired quality of health services.

○ A report released by the Johns Hopkins Bloomberg School of Public Health in 2019 suggested tha**t nearly one out of every 100 Indian children does not live to celebrate their fifth birthday** on account of either diarrhoea or pneumonia.

○ Suboptimal access to clean water and sanitation is directly linked to diseases such as diarrhoea, polio and malaria.

➢ **Inadequate Funding:** India spent **1.8% of its GDP on health in FY 2020-21** and 1-1.5% in the previous years. India's total out-of-pocket expenditure is around 2.3 % of GDP.

○ As compared with the **OECD countries**' average of 7.6% and other **BRICS** countries' average of 3.6% on their health sector, this is considerably low.

➢ **Overlapping Jurisdiction:** There is no single authority responsible for public health that is legally empowered to issue guidelines and enforce compliance of the health standards.

➢ **Sub-optimal Public Health System:** Due to this, it is challenging to tackle **Non-communicable Diseases,** which is all about prevention and early detection.

○ It diminishes preparedness and effective management for new and emerging threats such as pandemic like **Covid-19.**

➢ **Less than Required Doctors:**

○ India currently has one doctor over the population of **1,445 against the WHO norm of 1:1000.**

Related Government Initiatives:

➢ **Janani Shishu Suraksha Karyakram (JSSK).**

➢ **Rashtriya Bal Swasthya Karyakram (RBSK).**

➢ **Implementation of Free Drugs and Free Diagnostics Service Initiatives.**

➢ **PM National Dialysis Programme.**

➢ **Ayushman Bharat.**

➢ **Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).**

Nagaland Statehood Day

Why in News

Nagaland has celebrated its **59th Statehood day** on December 1st 2021.

➢ Nagaland was formally **recognised as a separate state on 1st December, 1963**, with Kohima being declared as its capital.

➢ The **State of Nagaland Act, 1962**, was enacted by the Parliament to give Nagaland statehood.

Nagaland

➢ **Historical Background:**

○ After India became independent in 1947, the Naga territory **initially remained a part of Assam.** However, a **strong nationalist movement began seeking a political union of the Naga tribes,** and extremists demanded outright secession from the Indian union.

○ In **1957, the Naga Hills region of Assam and the Tuensang frontier division to the northeast were brought together** under a single unit directly administered by the Indian government.

NAGALAND
ARUNACHAL
PRADESH

INDIA

- In **1960 it was resolved that Nagaland should become a constituent state of the Indian union**. **Nagaland achieved statehood in 1963,** and a democratically elected government took office in 1964.

➢ **Geography:**
  - It is bounded by the Indian states of **Arunachal Pradesh** to the northeast, Manipur to the south, and Assam to the west and northwest and the country of Myanmar (Burma) to the east. The state **capital is Kohima**, located in the southern part of Nagaland.
  - Nagaland has a **Monsoonal (wet-dry) Climate**. Annual rainfall averages between 70 and 100 inches and is concentrated in the months of the **southwest monsoon (May to September).**

➢ **Biodiversity:**
  - **Flora: Forests cover about one-sixth of Nagaland**. Below 4,000 feet are tropical and subtropical evergreen forests, containing palms, rattan, and bamboo, as well as valuable timber species. Coniferous forests are found at higher elevations. Areas cleared for **jhum (shifting cultivation)** have a secondary growth of high grass, reeds, and scrub jungle
  - **Fauna: Elephants**, **tigers**, **leopards**, bears, several kinds of monkeys, sambar deer, buffalo, wild oxen,

and the occasional rhinoceros live in the lower hills. Porcupines, **pangolins** (scaly anteaters), wild dogs, foxes, civet cats, and mongooses also are found in the state.

  - **Mithun** (Gayal) is the state animal of Nagaland and Arunachal Pradesh.
  - **Blyth's tragopan** is the state bird of Nagaland.

➢ **Tribes:**
  - The **Konyaks are the largest tribe**, followed by the **Aos, Tangkhuls, Semas, and Angamis.**
  - Other tribes include the Lothas, Sangtams, Phoms, Changs, Khiem Hungama, Yimchunger, Zeliangs, Chakhesangs (Chokri), and Rengmas.

➢ **Economy:**
  - Agriculture employs **about nine-tenths of the population**. Rice, corn (maize), small millets, pulses (legumes), oilseeds, fibres, sugarcane, potato, and tobacco are the principal crops.
  - Nagaland, however, still **has to depend on imports of food from neighbouring states.**

➢ **Protected Areas in Nagaland:**
  - Intanki National Park
  - Singphan Wildlife Sanctuary
  - Puliebadze Wildlife Sanctuary
  - Fakim Wildlife Sanctuary

➢ **Major Festival:**
  - The **Hornbill Festival** is a celebration held every year from 1 to 10 December, in Nagaland.
  - The significance of the festival lies in the fact that it is not an ancient festival, and it was **started in the year 2000 to popularise Nagaland among the tourists.**

Nagas

➢ Nagas are a **hill people who are estimated to number about 2.5 million** (1.8 million in Nagaland, 0.6 million in Manipur and 0.1 million in Arunachal states) and living in the remote and mountainous country between the Indian state of Assam and Burma.
  - There are **also Naga groups in Burma.**

➢ The Nagas **are not a single tribe, but an ethnic community** that comprises several tribes who live in the state of Nagaland and its neighbourhood. Nagas belong to the **Indo-Mongoloid Family.**

Note:

> There are **nineteen major Naga tribes,** namely, Aos, Angamis, Changs, Chakesang, Kabuis, Kacharis, Khain-Mangas, Konyaks, Kukis, Lothas (Lothas), Maos, Mikirs, Phoms, Rengmas, Sangtams, Semas, Tankhuls, Yamchumgar and Zeeliang.

National Energy Conservation Awards

Why in News

Recently, the **Bureau of Energy Efficiency (BEE)** felicitated various industrial units, institutions and establishments with 31st **National Energy Conservation Awards (NECA)** on the occasion of **National Energy Conservation Day** (14th December) to showcase India's achievements in **energy efficiency and conservation.**

> A new award - **National Energy Efficiency Innovation Awards (NEEIA)** is also institutionalized.

Bureau of Energy Efficiency
> The BEE is a **statutory body** established through the **Energy Conservation Act, 2001** under the Union Ministry of Power.
> It **assists in developing policies and strategies** with the primary objective of reducing the energy intensity of the Indian economy.
> BEE coordinates with designated consumers, designated agencies, and other organizations to identify and utilize the existing resources and infrastructure, in performing its functions.

Key Points

> **About:**
  o The Ministry of Power had launched a scheme in 1991, **to give national recognition through awards to industries and establishments** that have taken special **efforts to reduce energy consumption** while maintaining their production.
    • The awards were given away for the **first time on 14th December, 1991**, which was declared as the **National Energy Conservation Day.**
  o It **recognizes the energy efficiency achievements** in 56 sub-sectors across industry, establishments and institutions.
> **Energy Efficiency in India:**

o Energy efficiency means using less energy to perform the same task – that is, eliminating energy waste. **Energy efficiency brings a variety of benefits:** reducing **GreenHouse Gas (GHG)** emissions, reducing demand for energy imports, and lowering our costs on a household and economy-wide level.
o India's energy sector is **set for a transition with recent developmental ambitions of the government** e.g.
  • **175 GW of installed capacity of renewable energy by 2022**, 24X7 Power for all, **Housing for all by 2022**, **100 smart cities mission**, promotion of **e- mobility**, **electrification of railway sector**, 100% **electrification of households**, **Solarization of agricultural pump sets**, and **promotion of clean cooking**.
o India **can avoid building 300 GW of new power generation up to 2040** with implementation of **ambitious energy efficiency policies.**
o Successful implementation of energy efficiency measures contributed to electricity savings of **7.14% of total electricity consumption** of the country and emission **reduction of 108.28 million tonnes of CO_2** during 2017-18.
> **Efforts Related to Energy Efficiency and Conservation:**
o **Indian:**
  • **Energy Conservation Act, 2001:**
    ▪ The Act provides regulatory mandates for: Standards & labeling of equipment and appliances; Energy conservation building codes for commercial buildings; and Energy consumption norms for energy intensive industries.
  • **PAT Scheme:**
    ▪ **Perform Achieve and Trade Scheme (PAT)** is a market based mechanism to enhance the cost effectiveness in improving the Energy Efficiency in Energy Intensive industries through certification of energy saving which can be traded.
  • **Standards and Labeling:**
    ▪ The scheme was launched in 2006 and is currently invoked for equipment/appliances Room Air Conditioner (Fixed/VariableSpeed), Ceiling Fan, Colour Television, Computer, Direct Cool Refrigerator etc.

- **Energy Conservation Building Code (ECBC):**
  - It was developed for new commercial buildings in 2007.
  - It sets **minimum energy standards for new commercial buildings** having a connected load of 100kW (kilowatt) or contract demand of 120 KVA (kilovolt-ampere) and above.
- **Demand Side Management:**
  - DSM is the **selection, planning, and implementation of measures** intended to have an influence on the demand or customer-side of the electric meter.
- ○ **Global:**
  - **International Energy Agency:**
    - **IEA** works with countries around the world to shape energy policies for a secure and sustainable future.
  - **Sustainable Energy for All (SEforALL):**
    - It is an international organization that works in partnership with the United Nations and leaders in government, the private sector, financial institutions and civil society to drive faster action towards the achievement o**f Sustainable Development Goal 7 (SDG7).**
  - **Paris Agreement:**
    - It is a **legally binding international treaty** on climate change. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.
  - **Mission Innovation (MI):**
    - It is a global initiative of 24 countries and the European Commission (on behalf of the European Union) to accelerate clean energy innovation.
- ➢ **Suggestions to Improve Energy Efficiency:**
  - ○ **Change in Energy Use Behaviour:**
    - The high ambitions of citizens to live and work in comfortable air conditioned spaces with appliances providing ease of living will lead to a multi fold increase in energy consumption.
    - An **approach to change the course of energy use behaviour through energy efficiency programmes is needed** to curb future energy demand.

- ○ **Push for Nearly Zero Energy Buildings Programme:**
  - It is crucial for India to push for the expansion of the **Nearly Zero Energy Buildings (NZEB) programme** to all segments of the construction sector. The objective of this programme is to develop a framework for conventional buildings to achieve low energy use per unit area.
- ○ **Amending the Electricity Act:**
  - Also, India's power sector is slated for a revamp with multiple policy level changes through the **amendment of the Electricity Act.**
- ○ **Installation of Smart Meters:**
  - One of the major initiatives as a solution to issues like low billing efficiencies leading to revenue losses, heavy transmission and distribution losses, monitoring of electricity consumption, etc. is installation of **smart meters.**
  - The **installation of smart meters at a fast pace** can help India in facilitating energy efficiency interventions at a large scale.
- ○ **Energy efficiency interventions:**
  - Embracing an energy efficient lifestyle will provide a positive impetus towards transformation of India's energy system for the better. Energy efficiency interventions are one of the most cost-effective means of achieving a low carbon transition.

Shyama Prasad Mukherji Rurban Mission

Why in News

According to the Lok Sabha, **Shyama Prasad Mukherji Rurban Mission (SPMRM)** has performed significantly well in the last four years.

Key Points

- ➢ **About:**
  - ○ It is a **Centrally Sponsored Scheme (CSS),** launched in 2016 by the MInistry of Rural Development (MoRD) to **deliver integrated project based infrastructure in the rural areas**, which also include development of economic activities and skill development.
    - A predecessor to SPMRM was the **Provision of Urban Amenities to Rural Areas (PURA), announced in 2003.**

Note:

○ Main objective of the scheme is **bridging the rural-urban divide**-viz: economic, technological and those related to facilities and services.

➢ **Background:**

○ According to the **2011 Census**, India has more than 6 lakh villages while there are around 7,000 towns and urban centres. Out of a total population **the rural population accounts for 69% and urban population 31%.**

● About 70% of the population lives in rural areas and **about 50% of the overall labour force is still dependent on agriculture** that is not productive enough.

● The **GDP (Gross Domestic Product)** contribution of **agriculture to the nation is only about 14%** while fo**r industries and services sector (employers of people living in urban areas), it is 26% and 60%** respectively.

○ Large parts of rural areas in the country are not stand-alone settlements but part of a **cluster of settlements**, which are relatively proximate to each other. These clusters **typically illustrate potential for growth, have economic drivers and derive locational and competitive advantages.**

○ These clusters, once developed, **can then be classified as 'Rurban'.** Hence taking cognizance of this, the Government of India, has launched the SPMRM, **aimed at developing such rural areas by provisioning of economic, social and physical infrastructure** facilities.

➢ **Rurban Clusters (Non-Tribal and Tribal):**

○ They are identified **across the country's rural areas showing increasing signs of urbanization** - i.e. increase in population density, high levels of non-farm employment, presence of growing economic activities and other socioeconomic parameters.

○ For the purposes of SPMRM, **Rurban areas refer to a cluster of 15-20 villages having about 30 to 40 lakh population**.

○ The clusters will be **geographically contiguous Gram Panchayats** with a **population of about 25000 to 50000 in plain** and coastal areas and a population of **5000 to 15000 in desert, hilly or tribal areas.**

➢ **Role of states:**

○ The **State Government identifies the clusters** in accordance with the Framework for Implementation prepared by the MoRD.

○ For the selection of clusters, the MoRD is adopting a scientific process of cluster selection **which involves an objective analysis at the district, sub district and village level**, of the demography, economy, tourism and pilgrimage significance and transportation corridor impact.

➢ **Progress:**

○ Out of 300 rurban clusters, 291 Integrated Cluster Action Plans (ICAPs) and 282 Detailed Project Reports (DPRs) have been developed by States / UTs with a proposed investment of Rs. 27,788.44 (Critical Gap Fund + Convergence Fund).

○ Out of total 76,973 projected works, a total of 40,751 **(55%) works are either completed or near completion.**

➢ **Significance:**

○ SPMRM growth clusters are playing a role in **reducing urban migration** by ensuring that basic infrastructure, utilities are provided and industrialization is promoted.

○ It is very relevant fo**r ensuring transformational developments** as against transitional developments in India's rural development sector.

Provision of Urban Amenities to Rural Areas

➢ **About:**

○ PURA was **mooted by the former President Dr. Abdul Kalam in January 2003** as a way of empowering and accelerating rural development.

● PURA 2.0 as a **central sector scheme** was launched in 2012 focussing on the **development of potential growth centres** such as census towns.

○ It was launched in order to ensure Provision of livelihood opportunities and urban amenities in rural areas to bridge the rural – urban divide.

➢ **Mission:**

○ Holistic and accelerated development of compact areas around a potential growth centre in a Gram Panchayat (or a group of Gram Panchayats) through **Public Private Partnership (PPP) framework** for providing livelihood opportunities and urban amenities to improve the quality of life in rural areas.

○ Amenities and economic activities provided under PURA include **Water and Sewerage**, Construction and maintenance of Village streets, Drainage,

Note:

> Solid Waste Management, Skill Development, village street lighting, telecom, electricity generation, village linked tourism, etc.

Governor's Role in Universities

Why in News

Recently, a controversy has erupted in Kerala over the **reappointment of Gopinath Ravindran as the Vice Chancellor of Kannur University.**

➢ The appointment was **against the decision of the Governor** as the Chancellor of State Universities.

➢ While the Governor's powers and functions as the Chancellor are laid out in the statutes that govern the universities under a particular state government, their role in appointing the Vice Chancellors has often **triggered disputes with the political executive.**

Key Points

➢ **Role of Governors in State Universities:**

○ In most cases, the Governor of the state is the **ex-officio chancellor of the universities in that state.**

○ While as Governor he functions with the **aid and advice of the Council of Ministers,** as Chancellor he acts independently of the Council of Ministers and takes his own decisions on all University matters.

➢ **Case of Central Universities:**

○ Under the **Central Universities Act, 2009,** and other statutes, the President of India shall be the Visitor of a central university.

○ With their role limited to presiding over convocations, **Chancellors in central universities are titular heads**, who are appointed by the President in his capacity as Visitor.

○ The Vice Chancellor too are appointed by the **Visitor from panels of names picked by search and selection committees** formed by the Union government.

○ The Act adds that the President, as Visitor, shall have the r**ight to authorise inspections of academic and non-academic aspects** of the universities and also to institute inquiries.

➢ **Constitutional Provisions Related to Governor:**

○ Governor has a **dual role vis-s vis State Government:**

● He is the **constitutional head of the state**, bound by the advice of his council of ministers (CoM).

● He functions as a **vital link between the Union Government and the State Government.**

○ **Article 153** says that there shall be a Governor for each State. One person can be appointed as Governor for two or more States.

● A Governor is appointed by the President and is a nominee of the Central Government.

○ **Article 163:** There is a CoM with the CM at the head to aid and advise the Governor in the exercise of his functions, **except some conditions for discretion.**

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

○ **Article 213:** Governor may promulgate the **Ordinances** under certain circumstances.

➢ **Controversies Related to Governor's Role:**

○ **Abuse of Power by the Centre:** There are numerous examples of the Governor's position being abused, usually at the behest of the ruling party at the Centre.

● The process of appointment has generally been the cause behind it.

○ **Biased Ideology:** In several cases, politicians and former bureaucrats identifying with a particular political ideology have been appointed as the Governors by the central government.

● This goes against the constitutionally mandated neutral seat and has resulted in bias, as appears to have happened in Karnataka and Goa.

○ **Puppet Rulers:** Recently, the Governor of Rajasthan has been charged with the violation of the **model code of conduct.**

● His support of the central ruling party is against the spirit of non-partisanship that is expected from the person sitting on constitutional posts.

● Due to such incidents, negative terms like an agent of the Centre, Puppet and rubber stamps are used to describe a governor of the state.

○ **Favouring a Particular Political Party:** Governor's discretionary powers to invite the leader of the largest party/alliance, post-election, to form the government has often been misused to favour a particular political party.

Note:

- ❍ **Misuse of Power:** A Governor's recommendation for **President's Rule** (Article 356) in a state has not always been based on 'objective material', but on political whim or fancy.

➢ **Related Recommendations of Various Committees:**
  - ❍ **On Appointment and Removal of Governor:**
    - The **"Punchhi commission-2010"** recommended that there should be a provision for the impeachment of the governor by the state legislature.
    - The state chief minister should have a say in the governor's appointment.
  - ❍ **On the Use of Article 356:**
    - The **"Punchhi commission - 2010"** recommended that Articles 355 & 356 be amended.
    - The **Sarkaria Commission (1988)** recommended that Article 356 should be used in very rare cases when it becomes unavoidable to restore the breakdown of constitutional machinery in the State.

- **Recommendations** have also been given by the Administrative Reforms Commission (1968), Rajamannar Committee (1971) and Justice V.Chelliah Commission (2002).
- ❍ **On Dismissal of State Government under Article 356:**
  - **S.R. Bommai Judgment (1994):** The case put an end to the arbitrary dismissal of State governments by a hostile Central government.
    - The verdict ruled that the floor of the Assembly is the only forum that should test the majority of the government of the day, and not the subjective opinion of the Governor.
  - **On Discretionary Powers:**
    - The Supreme Court in the *Nabam Rebia judgment* (2016) ruled that the exercise of Governor's discretion Article 163 is limited and his choice of action should not be arbitrary or fanciful.

Note:
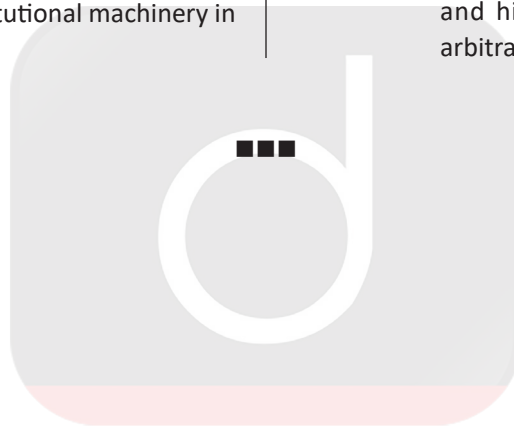
Economic Scenario

Highlights

- Black Money
- Bank-NBFC Co-lending
- Reforms in Handloom Sector
- Bank Deposit Insurance Programme
- Wage Rate Index (WRI)
- PM MITRA Parks
- Job Losses During 2020 Lockdown

- Demand for Reduction of Import Duty on Cotton
- Natural Farming
- Ship Acquisition, Financing and Leasing (SAFAL): IFSC Report
- ARCs for Agriculture Sector
- Monetary Policy Report: RBI
- Revised Coal Stocking Norms

Black Money

Why in News

Recently, the government has said in the **Parliament** that **Rs 2,476 crore has been collected as tax and penalty** under the one-time three months compliance window during 2015.

➢ It has also been said that there is **no official estimation how much worth of black money is lying in foreign accounts** over the last five years.

➢ Total undisclosed credits amounting to Rs 20,353 crore have been detected with respect to 930 India linked entities in the **Panama and Paradise Paper Leaks**.
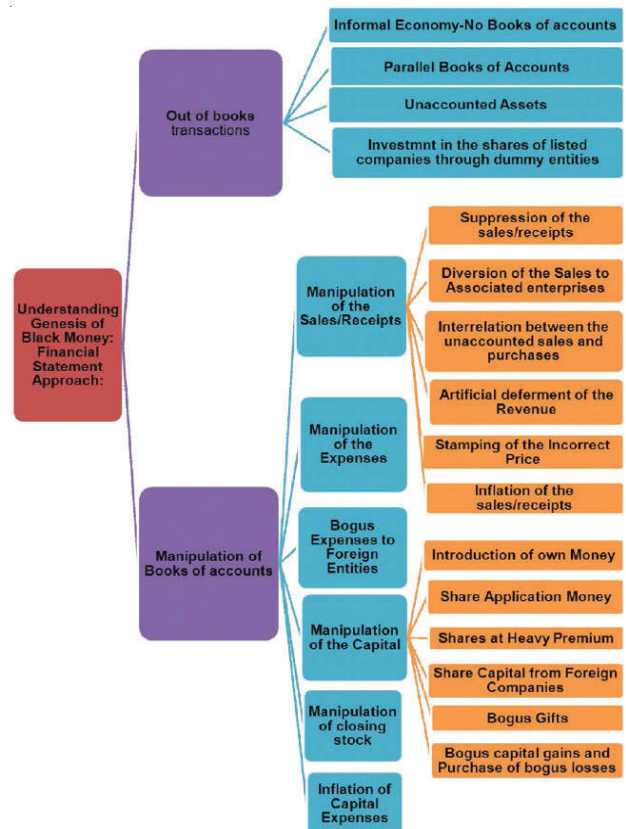
Key Points

➢ Black Money:
  ❍ There is **no official definition of black money in economic theory**, with several different terms such as parallel economy, black money, black incomes, unaccounted economy, illegal economy and irregular economy all being used more or less synonymously.
  ❍ The simplest definition of black money could possibly be **money that is hidden from tax authorities.**
  ❍ A study commissioned by the **Finance Ministry** concluded in 2014 that about **90% of unaccounted wealth, or black money, was lying within India** and not outside.

➢ **Source of Black Money:**
  ❍ It can come from two broad categories:

- **Illegal Activity:**
  ■ Money that is **earned through illegal activity** is obviously not reported to the tax authorities, and so is black.
- **Legal but Unreported Activity:**
  ■ The second category comprises income from legal activity that is **not reported to the tax authorities.**

Informal Economy-No Books of accounts
Parallel Books of Accounts
Unaccounted Assets
Investmnt in the shares of listed companies through dummy entities

Out of books transactions

Understanding Genesis of Black Money: Financial Statement Approach:

Manipulation of the Sales/Receipts
- Suppression of the sales/receipts
- Diversion of the Sales to Associated enterprises
- Interrelation between the unaccounted sales and purchases
- Artificial deferment of the Revenue
- Stamping of the Incorrect Price
- Inflation of the sales/receipts

Manipulation of the Expenses

Bogus Expenses to Foreign Entities
- Introduction of own Money
- Share Application Money
- Shares at Heavy Premium
- Share Capital from Foreign Companies
- Bogus Gifts
- Bogus capital gains and Purchase of bogus losses

Manipulation of Books of accounts

Manipulation of the Capital

Manipulation of closing stock

Inflation of Capital Expenses

Examples for Sources of Black Money

➢ **Multi-Level Marketing Scheme:**
  ○ International debit or credit cards issued by offshore banks are used to create black money.

➢ **Disguised Ownership:**
  ○ Increasingly, criminals want to own legitimate businesses. It could be to **earn a return or to convert black money into white.**

➢ **Mixed Sales:**
  ○ Mixing **illicit money sources with legit ones** is a popular method because it's hard to detect, especially if there is a large cash component in the legal business.

➢ **Smurfing:**
  ○ This type of transaction is **usually done to evade notice** by authorities monitoring transactions above a certain threshold.

➢ **Trade Mispricing:**
  ○ Traditionally, goods exported and imported were **either priced lower or higher to enable money laundering.**
  ○ With current technology, the **Organization for Economic Cooperation and Development (OECD)** says it's easy to modify invoices or produce fictitious invoices.

➢ **Money Transfers To Benami Entities:**
  ○ In a Benami transaction, **a property is transferred or held by one person** and the consideration for such property is paid by another person for whose benefit such property is held.

➢ **Impacts:**
  ○ **Loss of Revenue:**
    ● Black money **eats up a part of the tax** and, thus, the government's deficit increases.
    ● The government **has to balance this deficit by increasing taxes**, decreasing subsidies and increasing borrowings.
    ● Borrowing leads to a **further increase in the government's debt** due to interest burden. If the government is **unable to balance the deficit,** it has to decrease spending, which affects development.
  ○ **Money Circulation:**
    ● People generally **tend to keep black money** in the form of gold, immovable property and other secret manners.

    ● Such **money does not become part of the main economy** and, therefore, remains generally out of circulation.
    ● The black money **keeps circulating among the wealthy** and creates more opportunities for them.
  ○ **Higher Inflation:**
    ● The infusion of unaccounted black money in the **economy leads to higher inflation**, which obviously hits the poor the most.
    ● It also **increases the disparity between the rich and the poor.**

➢ **Government's Initiatives:**
  ○ **Legislative Action:**
    ● **The Fugitive Economic Offenders Act, 2018**
    ● **The Central Goods and Services Tax Act, 2017**
    ● **The Benami Transactions (Prohibition) Amendment Act, 2016**
    ● **The Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015**
    ● **Prevention of Money Laundering Act, 2002**
    ● **Gold Amnesty scheme:** This is similar to the **Voluntary Income Disclosure scheme** to tap black money in income taxes.
  ○ **International Cooperation:**
    ● **Double Taxation Avoidance Agreements (DTAAs):**
      ■ India is **proactively engaging with foreign governments** with a view to facilitate and enhance the exchange of information under Double Taxation Avoidance Agreements (DTAAs)/Tax Information Exchange Agreements (TIEAs)/Multilateral Conventions.
    ● **Automatic Exchange of Information:**
      ■ India has been a **leading force in the efforts** to forge a multilateral regime for proactive sharing of financial information known as **Automatic Exchange of Information** which will greatly assist the global efforts to combat tax evasion.
      ■ The **Automatic Exchange of Information** based on Common Reporting Standard has commenced from 2017 enabling India to receive financial account information of Indian residents in other countries.
    ● **Foreign Account Tax Compliance Act of USA:**
      ■ India has **entered into an information sharing agreement** with the USA under the act.

Note:

- **Financial Action Task Force (FATF):**
  - India is a member of the **FATF.**

Bank-NBFC Co-lending

Why in News

Recently, several banks have entered into **co-lending 'master agreements'** with registered **Non-Banking Financial Companies (NBFCs)**, and more are in the pipeline. In 2020, the **Reserve Bank of India (RBI)** allowed the co-lending model based on a **prior agreement.**

➢ However, there are **some criticisms** associated with the co-lending.

Key Points

➢ **About the Co-Lending Model:**
  ○ **Background:** In September 2018, the RBI had announced **co-origination of loans" by banks and NBFCs** for lending to the **priority sector.**
    ● The arrangement entailed joint contribution of credit and sharing of risks and rewards. **Co-lending or co-origination** is a set-up where banks and non-banks enter into an arrangement for the joint contribution of credit for priority sector lending.
    ● These guidelines were **later amended in 2020 and rechristened as co-lending models (CLM)** by including Housing Finance Companies and some changes in the framework.
    ● Under priority sector norms, banks are mandated to lend a particular portion of their funds to specified sectors, like weaker sections of the society, agriculture, MSME and social infrastructure.
  ○ **Objective:** The primary focus of the 'Co-Lending Model' (CLM) is to "improve the flow of credit to the unserved and underserved sector of the economy.
    ● It also envisages making available funds to the ultimate beneficiary at an affordable cost.
  ○ **Underlying Idea:** CLM seeks to better leverage the respective comparative advantages of the banks and NBFCs in a collaborative effort.
    ● The lower cost of funds from banks
    ● Greater reach of the NBFCs.

  ● For example, CLM will enhance last-mile finance and drive financial inclusion to MSMEs.
  ○ **Example of CLM:** SBI, the country's largest lender, signed a deal with Adani Capital, a small NBFC of a big corporate house, for co-lending to farmers to help them buy tractors and farm implements.
➢ **Risk in Co-lending:**
  ○ **Majority of Responsibility Lies with the Banks:** Under the CLM, NBFCs are required to retain at least a 20% share of individual loans on their books.
    ● This means 80% of the risk will be with the banks — who will take the big hit in case of a default.
    ● In effect, while the banks fund the major chunk of the loan, the NBFC decides the borrower.
  ○ **Corporates in Banking:** While the RBI hasn't officially allowed the entry of big corporate houses into the banking space, the NBFCs are mostly floated by corporate houses.
    ● This is risky, especially when four big private finance firms — IL&FS, DHFL, SREI and Reliance Capita have collapsed in the last three years despite tight monitoring by the RBI.
  ○ **Limited Reach of NBFCs:** While the RBI has referred to "the greater reach of the NBFCs", the small NBFCs with 100-branch networks will fall short in serving underserved and unserved segments.

Reforms in Handloom Sector

Why in News

Recently, the Government has taken several steps to **boost and also address the issues arising out of pandemic** in the **handloom sector.**

➢ A textile can simply be understood as a thread used for knitting or a cloth made out of it.
➢ Whereas, the handloom is the manufacturing part of textiles, it involves **workers and machines used for weaving.**

Key Points

➢ **Steps Taken By the Government:**
  ○ **Requesting States:** The Ministry of Textiles has requested the States and UTs for their State

Note:

Handloom Corporations/ Cooperatives/ Agencies to **make purchases of the finished inventory available with the handloom weavers/artisans.**

○ **Registering Weavers on GeM Portal:** Steps have been taken by the government for registering weavers on **Government e-Market** places.

- This will enable them to sell their products directly to various Government Departments and organizations.

- So far about **1.50 Lakh weavers have been on-boarded on the GeM portal.**

○ **Establishing Handloom Producer Companies:** To enhance productivity, marketing capabilities and ensure better incomes, **128 Handloom Producer companies have been formed in different States.**

○ **Easy Credit Policy:** Under Concessional Credit/ Weaver **MUDRA Scheme**, financial assistance, Interest subvention, Credit Guarantee are provided

○ **Design Resource Centers:** Design Resource Centers (DRCs) have been set up in Weavers' Service Centers at major cities like New Delhi, Mumbai, etc.

- The objective of these DRCs is to build and create design-oriented excellence in the Handloom Sector.

- It also envisages to facilitate weavers, exporters, manufacturers and designers access design repositories for sample/product improvisation and development.

○ **Establishing Handloom Export Promotion Council:** To promote marketing of handloom products, Handloom Export Promotion Council has been organizing International Fairs in virtual mode.

- To promote e-marketing of handloom products, **23 e-commerce entities have been engaged for online marketing** of handloom products.

○ **Raw Material Supply Scheme:** This scheme is being implemented throughout the country to make available Yarn to Handloom weavers.

- Under the Scheme, reimbursement and price subsidies are provided for the raw material in the Textile sector.

○ **Educating Weavers:** Many Chaupals were organized in various States to educate the weavers to avail benefits of various handloom schemes for their welfare and socio-economic development.

➢ **Significance of Textile Sector:**

○ The **sector accounts for 7% of India's manufacturing output**, **2% of GDP, 12% of exports** and employs directly and indirectly about 10 crore people.

○ Owing to the abundant supply of raw material and labour, India is:

- The largest producer of cotton, accounting for 25% of the global output.

- The world's second-largest producer of textiles and garments after China.

- The second-largest producer of man-made fibres — polyester and viscose.

○ Most importantly, in **India a strong domestic market is available**.

➢ **Challenges of the Textiles Sector:**

○ **Highly Fragmented:** The Indian textile industry is highly fragmented and is being dominated by the unorganized sector and small and medium industries.

○ **Outdated Technology:** The Indian textile industry has its limitations of access to the latest technology (especially in small-scale industries) and failures to meet global standards in the highly competitive market.

○ **Tax Structure Issues:** The tax structure **GST (Goods and Service Tax)** makes the garments expensive and uncompetitive in domestic as well as international markets. Another threat is rising labour wages and workers' salaries.

○ **Stagnant Exports:** The export from the sector has been stagnating and remained at the USD 40-billion level for the last six years.

○ **Lack of Scale:** The apparel units in India have an average size of 100 machines which is very less in comparison with Bangladesh, which has on an average of at least 500 machines per factory.

○ **Lack of Foreign Investment:** Due to challenges given above the foreign investors are not very enthusiastic about investing in the textile sector which is also one of the areas of concern.

- Though the sector has witnessed a spurt in investment during the last five years, the industry attracted **Foreign Direct Investment (FDI)** of only USD 3.41 billion from April 2000 to December 2019.

Note:

Bank Deposit Insurance Programme

Why in News

Recently, the Prime Minister said that **Rs 1,300 crore had been paid to over 1 lakh depositors** who could not access their money as their banks faced financial crises.

➤ The **deposits worth Rs 76 lakh crore** were insured under the **Deposit Insurance and Credit Guarantee Corporation (DICGC) Act** providing full coverage to around 98% of bank accounts.

➤ Earlier, the Union Cabinet cleared the **Deposit Insurance and Credit Guarantee Corporation (DICGC) Bill, 2021.**

> **Deposit Insurance:** It is a **protection cover against losses** accruing to bank deposits if a bank fails financially and has no money to pay its depositors and has to go in for liquidation.
>
> **Credit Guarantee:** It is the **guarantee that often provides for a specific remedy** to the creditor if his debtor does not return his debt.

Key Points

➤ **Limit for Deposit Insurance:**
  ○ Currently, a depositor has a **claim to a maximum of Rs 5 lakh per account** as insurance cover. This amount is termed **'deposit insurance'**
    ● The cover of Rs 5 lakh per depositor is provided by the **Deposit Insurance and Credit Guarantee Corporation (DICGC).**
  ○ Depositors **having more than Rs 5 lakh in their account have no legal recourse** to recover funds in case a bank collapses.
  ○ Premium for the insurance has been raised from **10 paise for every Rs 100 deposit, to 12 paise** and a limit of 15 paise has been imposed.
    ● The premium for this insurance is paid by banks to the DICGC, and not be passed on to depositors.
    ● The Insured banks **pay advance insurance premiums** to the corporation semi-annually within two months from the beginning of each financial half year, based on their deposits as at the end of previous half year.

➤ **Coverage:**
  ○ Banks, including regional rural banks, local area banks, foreign banks with branches in India, and cooperative banks, are mandated to take deposit insurance cover with the DICGC.

➤ **Types of Deposits Covered:**
  ○ DICGC insures all bank deposits, such as saving, fixed, current, recurring, etc. **except the following types of deposits:**
    ● Deposits of foreign Governments.
    ● Deposits of Central/State Governments.
    ● Inter-bank deposits.
    ● Deposits of the State Land Development Banks with the State co-operative banks.
    ● Any amount due on account of any deposit received outside India.
    ● Any amount which has been specifically exempted by the corporation with the previous approval of the RBI.

➤ **Need of Deposit Insurance:**
  ○ Troubles for depositors in getting immediate access to their funds in banks in recent cases such as **Punjab & Maharashtra Co-operative (PMC) Bank, Yes Bank** and **Lakshmi Vilas Bank** had put spotlight on the subject of deposit insurance.

> **DICGC**
> ➤ **About:**
>   ○ It came into **existence in 1978** after the merger of **Deposit Insurance Corporation (DIC) and Credit Guarantee Corporation of India Ltd. (CGCI)** after passing of the Deposit Insurance and Credit Guarantee Corporation Act, 1961 by the Parliament.
>   ○ It serves as a **deposit insurance and credit guarantee** for banks in India.
>   ○ It is a fully owned subsidiary of and is governed by the **Reserve Bank of India (RBI).**
> ➤ **Funds:**
>   ○ The Corporation maintains the following funds:
>   ○ Deposit Insurance Fund
>   ○ Credit Guarantee Fund
>   ○ General Fund
> ➤ The first two are **funded respectively by the insurance premia and guarantee fees received** and are utilized for settlement of the respective claims.
> ➤ The **General Fund is utilized for meeting the establishment and administrative expenses** of the Corporation.

Note:

Wage Rate Index (WRI)

Why in News

Recently, the government **has revised the base year for Wage Rate Index (WRI) to 2016** which will replace the old series with a base of 1963-65.

➤ The Wage Rate Index Number **measures the relative changes in wage rates over a period of time; high** or low Wage Rate Index in an industry does not necessarily indicate high or low wage rate in that industry as compared to other industries.

➤ A **base year** is the first of a series of years in an economic or financial index and is typically set to an arbitrary level of 100.

More inclusive

The new series seeks to cover 700 occupations and makes the wage rate index more representative, expanding the number of industries, sample size and the weightage of industries.

Wage rate index base revision to 2016

Sector	No.of industries		Weights (in %)		Sample units	
	1963-65	2016	1963-65	2016	1963-65	2016
Manufacturing	14	30	48.78	82.57	923	2,627
Mining	4	4	17.01	11.23	110	163
Plantation	3	3	34.21	6.2	223	91
Total	21	37	100	100	1,256	2,881

Source: Ministry of labour and employment

Key Points

➤ **About**:
- The **Ministry of Labour & Employment** has released a new series of Wage Rate Index (WRI) with base year 2016, being **compiled and maintained by the Labour Bureau**, an attached office of the ministry.
- It is based **on the recommendations of the International Labour Organization** and the **National Statistical Commission.**
- The new series on WRI **has been compiled on a half-year basis** (on the first of January and July every year) as against the annual in the existing series.
- The new WRI basket (2016=100) **has enhanced the scope and coverage in terms of occupations and industries** as compared to old WRI series (1963-65=100).
- Of the 37 industries covered in the new series, **16 new ones** - including textile garments, footwear and petroleum - have been added under the manufacturing sector.

- In the new series, the **oil mining industry has been introduced in the basket in place of mica mines industry, t**o make the mining sector more representative of the three different kinds of mining namely coal, metal and oil.
- **Total 3 plantation industries** namely tea, coffee and rubber have been retained in the new WRI basket with enhanced coverage.
- The **top five industries** - motor vehicles, coal mines, textile garments, iron & steel and cotton textiles **together account for 46% of the total weight.**

➤ **Expected Benefits:**
- The revised base will be more representative and **play a critical role in determining the minimum wages and national floor wages** along with other parameters.
- The government periodically revises the base year for major economic indicators **to reflect the changes in the economy and to capture the wage pattern of workers.**
- It **provides useful tips to employers** on deciding on the appropriate human resource strategy.

➤ **WRI 2020:**
- The All India Wage Rate Index Number for all the 37 industries **stood at 119.7 in 2020 (half yearly 2)** which shows an increment of 1.6% over the index in 2020 (half yearly 1).
- At sector level, the highest Wage Rate Index in 2020 (half yearly 2) **was reported in the Plantation Sector** followed by the Manufacturing Sector and Mining Sector.
- **Highest Wage Rate Index:**
  - The highest Wage Rate Index was recorded in Drugs & Medicines, followed by Sugar, Motor Cycles, Jute Textiles and Tea Plantation.
- **Lowest Wage Rate Index:**
  - The lowest Wage Rate Index was recorded in Rubber Plantation, followed by Paper, Castings & Forgings , Woollen Textiles and Synthetic Textiles.

PM MITRA Parks

Why in News

Recently, the Government has approved setting up of **7 PM Mega Integrated Textile Region and Apparel**

Note:

(PM MITRA) Parks in Greenfield/Brownfield sites with an outlay of Rs. 4445 cr for a period of **seven years upto 2027-28.**

➢ The Government of India is implementing the Scheme for **Integrated Textile Park (SITP)** which provides support for creation of world-class infrastructure facilities for setting up of textile units.

CABINET DECISION
06 OCTOBER, 2021

Mega Integrated Textile Region and Apparel (PM MITRA) Parks (1/2)
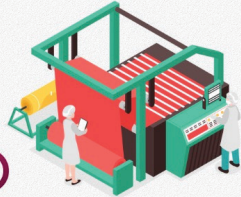
➤ Cabinet approves setting up of **7 PM MITRA parks**

➤ Total outlay of **Rs. 4,445 crore over 5 years**

➤ Inspired by 5F vision of PM Modi – **Farm to Fibre to Factory to Fashion to Foreign**

➤ To be developed by a Special Purpose Vehicle owned by **State Government and Government of India** in PPP mode

➤ **MITRA parks will have**
- Core Infrastructure – **incubation Centre & Plug & Play facility, Developed Factory Sites, Roads, Power, Water and Waste Water system etc**
- Support Infrastructure – **workers' hostels and housing, logistics park, warehousing, medical, training & skill development** facilities

Key Points

➢ **About:**
  - ○ It park will be developed by **a Special Purpose Vehicle** which will be owned by the Central and State Government and in a **Public Private Partnership (PPP) Mode.**
  - ○ Each Park will have an **incubation centre, common processing house and a common effluent treatment plant** and other textile related facilities such as **design centres and testing centres.**
    - ● **Incubation centre** is the institution that assists entrepreneurs in developing their business and solving problems associated with it, especially in the initial stages, by providing an array of business and technical services, initial seed funds, lab facilities, advisory, network and linkages.

○ The Master Developer will not only develop the Industrial Park but also maintain it during the concession period.

➢ **Funding:**
  - ○ The centre will provide **development capital support** for the development of common infrastructure of Rs 500 crore for each **greenfield MITRA park** and upto Rs 200 crore for **each brownfield park.**
    - ● **Greenfield** describes a completely new project that has to be executed from scratch, while a **brownfield** project is one that has been worked on by others.

➢ **Eligibility for Incentives:**
  - ○ An additional **Rs 300 crore will be provided as Competitiveness Incentive** Support for the early establishment of textiles manufacturing units in each of these parks.
  - ○ Investors who set up **"anchor plants" that employ at least 100 people will be eligible for incentives** of upto Rs 10 crore every year for upto three years.

➢ **Significance:**
  - ○ **Reduce Logistics Cost:**
    - ● It will r**educe logistics cost and strengthen the value chain** of the textile sector to make it globally competitive.
    - ● High logistics costs are considered a key hurdle to India's goal of boosting textile exports.
  - ○ **Employment Generation:**
    - ● Each park is expected to directly generate **1 lakh jobs and indirectly generate a further 2 lakh jobs.**
  - ○ **Attract FDI:**
    - ● The parks are crucial to attract **Foreign Direct Investment (FDI).**
    - ● From April 2000 to September 2020, India's textile sector received Rs 20,468.62 crore of FDI, which is just 0.69% of the total FDI inflows during the period.

➢ **Other Related Initiatives:**
  - ○ The **Production Linked Incentive Scheme** for man-made fibre segment (MMF) apparel, MMF fabrics and ten products of technical textiles for five years has been approved.
  - ○ A **National Technical Textiles Mission** has already been launched to promote research and development in that sector.

Note:

India's Textile Sector

➢ **About:**

○ It is one of the **oldest industries in the Indian economy**, and is a storehouse and **carrier of traditional skills, heritage and culture.**

○ It contributes 2.3% to Indian **Gross Domestic Product,** 7% of Industrial Output, 12% to the export earnings of India and employs more than 21% of total employment.

○ India is the 6th largest producer of **Technical Textiles** with 6% Global Share, largest producer of cotton & jute in the world.

● Technical textiles are functional fabrics that have applications across various industries including automobiles, civil engineering and construction, agriculture, healthcare, industrial safety, personal protection etc.

○ India is also the **second largest producer of silk** in the world and 95% of the world's hand woven fabric comes from India.

➢ **Major Initiatives:**

○ **Amended Technology Upgradation Fund Scheme (ATUFS)**

○ **Scheme for Integrated Textile Parks (SITP)**

○ **SAMARTH Scheme.**

○ **North East Region Textile Promotion Scheme (NERTPS)**

○ **Power-Tex India**

○ **Silk Samagra Scheme**

○ **Jute ICARE**

Job Losses During 2020 Lockdown

Why in News

Recently, the **Ministry of Labour and Employment** presented the data on job loss during the **2020 lockdown for Covid pandemic**.

➢ The data is based on the **All India Quarterly Establishment based Employment Survey (AQEES)**.

Key Points

➢ **About:**

○ **All-India Quarterly Establishment-based**

Employment Survey (AQEES): The AQEES has been taken up by the **Labour Bureau** to provide **frequent (quarterly) updates** about the employment and related variables of establishments, in both organised and unorganised segments of nine selected sectors.

● The 9 sectors are Manufacturing, Construction, Trade, Transport, Education, Health, Accommodation and Restaurants, **IT/BPO**, Financial Service Activities.

SECTORS	NUMBER OF EMPLOYEES (IN LAKH)			
	Prior to Lockdown (before March 25, 2020)		As on July 1, 2020	
	Male	Female	Male	Female
Manufacturing	98.7	26.7	87.9	23.3
Construction	5.8	1.8	5.1	1.5
Trade	16.1	4.5	14.8	4
Transport	11.3	1.9	11.1	1.9
Education	38.2	29.5	36.8	28.1
Health	15	10.6	14.8	10.1
Accommodation & Restaurants	7	1.9	6.2	1.7
IT/BPOs	13.6	6.3	12.8	6.1
Financial Services	11.5	5.9	11.3	5.7
Total*	217.8	90.0	201.5	83.3

○ **Components:**

● **Quarterly Employment Survey (QES)**: It provides the employment estimates for the establishments employing 10 or more workers.

■ The revamped **QES** was conducted during the first quarter (April-June 2021).

■ The **earlier version of QES was suspended in 2018,** citing a gap in numbers with the payroll data.

● **Area Frame Establishment Survey (AFES)**: It covers the unorganised segment (with less than 10 workers) through a sample survey.

➢ **Major Findings**:

○ **Manufacturing sector:** It recorded job losses of 14.2 lakh between the pre-**lockdown** (March 2020) and post-lockdown (July 2020) period.

● About **7.5 % job losses were seen during the lockdown for Covid pandemic in 2020.**

○ **Financial services sector:** It recorded a **job loss of 0.4 lakh and 1 lakh for the IT/BPOs sector** during the same period.

- ❍ **Other sectors**: **Construction sector** recorded a loss of 1 lakh, while **trade and education sectors** registered job losses of 1.8 lakh and 2.8 lakh, respectively.
- ❍ **Female workers:** **Females** registered a **job loss of 7.44 %** among the nine key sectors.
  - ● Female employment in the manufacturing sector reduced to 23.3 lakh (as on July 2020) from 26.7 lakh (as on March 2020).
  - ● Female workers in the construction sector were reduced to 1.5 lakh from 1.8 lakh.
  - ● Female employment in the trade sector reduced to 4 lakh (as on July 1, 2020) from 4.5 lakh (as on March 2020)
- ❍ **Male workers:** Males registered a **job loss of 7.48 %** between the pre-lockdown and post-lockdown period.
  - ● Male workers in manufacturing during the same period reduced to 87.9 lakh from 98.7 lakh.
  - ● Male workers in the construction sector were reduced to 5.1 lakh from 5.8 lakh during the lockdown.
  - ● Male employment in the trade sector reduced to 14.8 lakh (as on July 2020) from 16.1 lakh (as on March 2020).
- ➢ **Latest Findings:**
  - ❍ The **new quarterly employment survey** released in September had shown **employment** in key nine sectors **rising to 3.08 crore in April-June 2021 from 2.37 crore in 2013-14.**
    - ● The base year was chosen based on the **sixth economic census**.
  - ❍ Employment in the **organised non-farm segment** decreased in 27 % of the establishments due to the pandemic.
    - ● As much as 81 % of the workers received full wages during the lockdown period (March 2020-June 2020), 16 % received reduced wages and only 3 % were denied any wages.
- ➢ **Significance:**
  - ❍ Information gathered through these surveys would **enable the government** to understand significant issues and help **to frame evidence-based National Employment Policy.**
    - ● Other than this the ministry has launched two more surveys namely, **All-India Survey**

of **Migrant Workers** and **All-India Survey on Domestic Workers**.

- ➢ **Related Initiatives:**
  - ❍ **Mahatma Gandhi National Rural Employment Guarantee Scheme**
  - ❍ **Pt. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)**
  - ❍ **Deendayal Antyodaya Yojana-National Urban Livelihoods Mission**
  - ❍ **The Atma Nirbhar Bharat Rojgar Yojana as part of Atma Nirbhar Bharat package 3.0**

Demand for Reduction of Import Duty on Cotton

Why in News

Recently, the Tamil Nadu Chief Minister has requested the **Union Textiles Minister** to direct the concerned ministries to **remove import duty levied on cotton**.

- ➢ The **textile industry** is the second largest employment provider in the state and **Tamil Nadu accounts for 1/3rd size of the textile business of the country.**

Key Points

- ➢ **Major Demands:**
  - ❍ Removal of the 11% Import duty levied on cotton imports. Also **Yarn manufacturers may be given priority over traders** in cotton procurement.
  - ❍ Extension of **5% interest subvention to spinning mills for cotton procurement** during the peak season (December-March).
  - ❍ **Reducing the minimum lot size of e-auction of cotton to 500 bales**, which is sustainable for the **Micro, Small and Medium-sized Enterprises (MSMEs)**, has also been urged.
- ➢ **Reasons for the Demand:**
  - ❍ The demand is because of the **grave situation of cotton and yarn price volatility** and its impact on the prices of fabrics and garments.
    - ● The **present crisis has led to mass cancellation of export orders** and hardships in fulfilling long term export commitments.
  - ❍ One of the **major reasons for the cotton price volatility** is due to the imposition of 5% Basic Customs Duty (BCD), 5% Agriculture Infrastructure

Development Cess (AIDC) and 10% Social Welfare Cess in the Budget 2021-22 which amounts to an **overall import duty of 11%.**

➢ **Concerns related to the Import Duty:**
  ❍ The import duty on raw cotton would **erode the competitiveness of the value-added segments** that have a **business size of around Rs 50,000 crores** in exports and Rs 25,000 crores in the domestic market.
    ● These segments provide jobs to **around 12 lakh people.**

Cotton

➢ **About:**
  ❍ **Kharif Crop** which requires 6 to 8 months to mature.
  ❍ **Drought** – resistant crop ideal for arid climates.
  ❍ Occupies 2.1% of the world's arable land, meets 27% of the world's textiles needs.
  ❍ **Temperature:** Between 21-30°C.
  ❍ **Rainfall:** Around 50-100cm.
  ❍ **Soil Type:** Well-drained **black cotton soil (Regur Soil)** (E.g. Soil of Deccan Plateau)
  ❍ **Products:** fibre, oil and animal feed.
  ❍ **Top Cotton Producing Countries:** India > China > USA
  ❍ **Top Cotton Producing States in India:** Gujarat > Maharashtra > Telangana > Andhra Pradesh > Rajasthan.
  ❍ **Four cultivated species of cotton:** Gossypium arboreum, G.herbaceum, G.hirsutum and G.barbadense.
    ● Gossypium arboreum and G.herbaceum are known as old-world cotton or Asiatic cotton.
    ● G.hirsutum is also known as American cotton or upland cotton and G.barbadense as Egyptian cotton. These are both new world cotton species.
  ❍ **Hybrid Cotton:** Cotton made by crossing two parent strains that have different genetic characteristics. Hybrids are often spontaneously and randomly created in nature when open-pollinated plants naturally cross-pollinate with other related varieties.
  ❍ **Bt Cotton:** It is a genetically modified organism or genetically modified pest-resistant variety of cotton.

➢ **Cotton in India:**
  ❍ Cotton is an important fibre and cash crop which plays a dominant role in the industrial and agricultural economy of India.

❍ India is the **largest producer of cotton in the world** and the **third largest exporter.** It is also the largest consumer of cotton in the world.
❍ The pest-resistant **Genetically Modified (GM) Bt cotton hybrids** have captured the Indian market (covering over 95% of the area under cotton) since their introduction in 2002.
❍ India produces about **6 million tons of cotton every year** which is about 23% of the world's cotton.
❍ India produces about **51% of the total organic cotton production** of the world.

Major Cotton Growing Areas of India
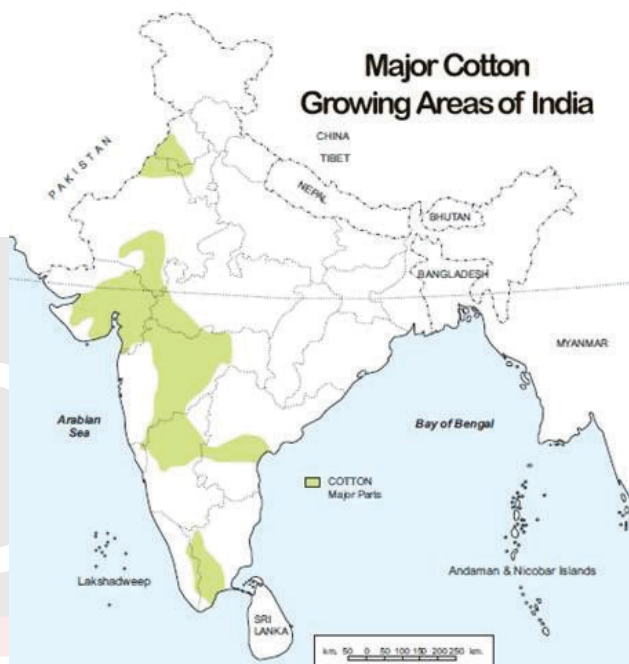
Natural Farming

Why in News

Recently, **NITI Aayog** has conducted a national workshop on **Natural Farming**.

➢ There are many working models of natural farming all over the world, the **Zero Budget Natural Farming (ZBNF)** is the most popular model in India. This comprehensive, natural, and spiritual farming system was developed **by Padma Shri** Subhash Palekar.
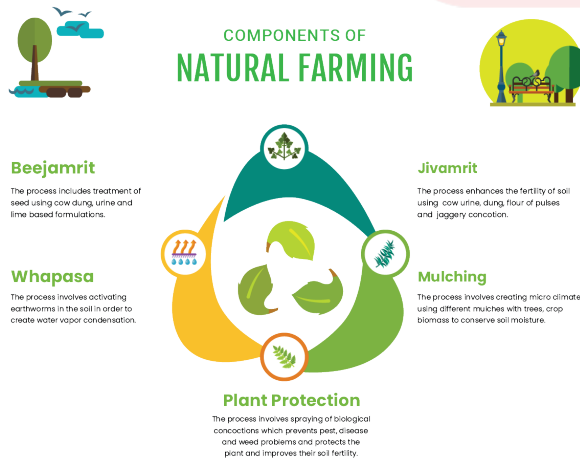
Key Points

➢ **About:**
  ❍ It can be defined as a **"chemical- free farming and livestock based "**. Soundly grounded in agro-ecology,

Note:

it is a diversified farming system that integrates crops, trees and livestock, allowing the optimum use of functional biodiversity.

○ It holds the **promise of enhancing farmers'** income while delivering many other benefits, such as **restoration of soil fertility and environmental health, and mitigating and/or reducing greenhouse gas emissions.**

- This farming approach was introduced by **Masanobu Fukuoka**, a Japanese farmer and philosopher, in his 1975 book The One-Straw Revolution.

○ It builds on natural or ecological processes that exist in or around farms. Internationally, Natural Farming is **considered a form of regenerative agriculture—a prominent strategy to save the planet.**

○ It has the **potential to manage land practices and sequester carbon from the atmosphere in soils and plants,** where it is actually useful instead of being detrimental.

○ In India, Natural farming is promoted as Bhartiya **Prakritik Krishi Paddhati Programme** (BPKP) under **Paramparagat Krishi Vikas Yojana (PKVY).**

- BPKP is aimed at promoting traditional indigenous practices which reduce externally purchased inputs.

○ Natural Farming, as the name suggests, is the art, practice and, increasingly, the science of **working with nature to achieve much more with less.**

COMPONENTS OF NATURAL FARMING

Beejamrit
The process includes treatment of seed using cow dung, urine and lime based formulations.

Jivamrit
The process enhances the fertility of soil using cow urine, dung, flour of pulses and jaggery concotion.

Whapasa
The process involves activating earthworms in the soil in order to create water vapor condensation.

Mulching
The process involves creating micro climate using different mulches with trees, crop biomass to conserve soil moisture.

Plant Protection
The process involves spraying of biological concoctions which prevents pest, disease and weed problems and protects the plant and improves their soil fertility.

➢ **Aim:**

○ To make farming **viable and aspirational by increasing net incomes of farmers** on account of cost reduction, reduced risks, similar yields, incomes from intercropping.

○ To drastically **cut down production costs by encouraging farmers to prepare essential biological inputs** using on-farm, natural and home-grown resources.

➢ **Significance:**

○ **Minimized Cost Of Production:**

- It is considered as a **cost-effective farming practice** with scope for raising employment and rural development.

○ **Ensures Better Health:**

- As Natural Farming **does not use any synthetic chemicals, health risks and hazards are eliminated.** The food has higher nutrition density and therefore offers better health benefits.

○ **Employment Generation:**

- It generates employment **on account of natural farming input enterprises, value addition, marketing in local areas**, etc. The surplus from natural farming is invested in the village itself.

- As it has the **potential to generate employment**, thereby stemming the migration of rural youth.

○ **Environment Conservation:**

- It ensures **better soil biology, improved agrobiodiversity** and a more judicious usage of water with much smaller carbon and nitrogen footprints.

○ **Reduced Water Consumption:**

- By working with diverse crops that help each other and cover the soil to prevent unnecessary water loss through evaporation, N**atural Farming optimizes the amount of 'crop per drop'.**

○ **Rejuvenates Soil Health:**

- The most immediate impact of Natural Farming is on the biology of soil—on microbes and other living organisms such as earthworms. Soil health depends entirely on the living organisms in it.

○ **Livestock Sustainability:**

- The integration of livestock in the farming system plays an important role in Natural farming and helps in restoring the ecosystem. **Eco Friendly bio-inputs, such as Jivamrit and Beejamrit, are prepared from cow dung and urine, and other natural products.**

○ **Resilience:**

- The changes in soil structure with the help of organic carbon, no/low tillage and plant

diversity are supporting **plant growth even under extreme situations like severe** droughts **and withstanding severe** flood **and wind damage during** cyclones.

- NF impacts many farmers positively **by imparting resilience to the crops against weather extremes.**

➢ **Related Initiatives:**

○ **Rainfed Area Development (RAD):** It focuses on the Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variabilities.

○ **Sub-mission on Agro Forestry (SMAF)**: It aims to encourage farmers to plant multi-purpose trees together with the agriculture crops for climate resilience and an additional source of income to the farmers, as well as enhanced feedstock to inter alia wood-based and herbal industries.

○ **National Mission on Sustainable Agriculture (NMSA)**, to develop, demonstrate and disseminate the techniques to make agriculture resilient to adverse impacts of climate change.

○ **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER):** It is a **Central Sector Scheme**, a sub-mission under NMSA, that aims to develop certified organic production in a value chain mode.

○ **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** It was launched in 2015 to address the issues of water resources and provide a permanent solution that envisages Per Drop More Crop.

○ **Green India Mission:** It was launched in 2014 under the umbrella of **National Action Plan on Climate Change (NAPCC)** with the primary objective of protecting, restoring and enhancing India's diminishing forest cover.

Differences between Natural Farming and Organic Farming	
Organic Farming	**Natural Farming**
In organic farming, **organic fertilizers and manures like compost, vermicompost, cow dung manure**, etc. are used and added to farmlands from external sources.	In natural farming, **neither chemical nor organic fertilizers are added to the soi**l. In fact, no external fertilizers are added to soil or given to plants whatsoever.
Organic farming still **requires basic agro practices** like plowing, tilting, mixing of manures, weeding, etc. to be performed.	In natural farming, **decomposition of organic matter by microbes and earthworms is encouraged** right on the soil surface itself, which gradually adds nutrition in the soil, over the period.
Organic farming is still **expensive due to the requirement of bulk manures**, and it has an ecological impact on surrounding environments; whereas, natural agriculture is an extremely low-cost farming method, completely molding with local biodiversity.	In natural farming there is **no plowing, no tilting of soil and no fertilizers, and no wedding** is done just the way it would be in natural ecosystems.

Ship Acquisition, Financing and Leasing (SAFAL): IFSC Report

Why in News

Recently, the report titled **Ship Acquisition, Financing and Leasing (SAFAL)** was submitted by the Committee for Development of Avenues for Ship Acquisition, Financing and Leasing to the **International Financial Services Centres Authority (IFSCA)**.

Key Points

➢ **About the Committee:**

○ **Formation**: It was constituted by IFSCA in June 2021 with representatives from the Government of India, Gujarat Maritime Board, industry and finance experts, and academicians.

○ **Objective**: Focus remained on enabling cost-effective and competitive delivery of shipping services on ships owned and leased from India-offshore IFSC which is on par with overseas competitors.

➢ **Observations of the Committee**:

○ **Net Importer of Shipping Services:** Despite having a large coastline, growing domestic market and international seaborne trade, deep-rooted maritime

Note:

traditions, and skilled seafarers, India **continues to have a smaller share in the international shipping sector**, thus becoming a net importer of shipping services especially ship finance.

○ **Required Changes:** It has presented the **critical and necessary changes required** to bring this greenfield venture to India IFSC.

● These cover **legal and regulatory domain**s, **direct and indirect taxes**, **ship finance**, and **ease of doing business** drawing upon global best practices.

○ **Imparting Brand Value:** It finds that the time is opportune for **imparting a brand value to Indian-flagged vessels.**

● This can be done by carving out a **share in global cross trades**, **securing gainful transactions** for India's marketplace, **promoting decarbonization** and **greening of the blue oceans**, and **leveraging India-IFSC Maritime** for achieving the **Maritime India Vision 2030** and beyond.

■ Maritime India Vision 2030 is a ten-year blueprint for the maritime sector which was released by the Prime Minister of India at the Maritime India Summit in November 2020.

■ It will supersede the **Sagarmala initiative** and aims to boost waterways, give a fillip to the shipbuilding industry and encourage cruise tourism in India.

➢ **Importance of the Shipping Sector for India**:

○ Nearly half of India's border is covered by sea, with a coastline of about 7,517 km, with 12 major and 205 minor ports.

● India is also **strategically located** on the world's shipping routes.

○ It is estimated that **about 95% of India's goods trade by volume** and **70% by value** is done through maritime transport.

○ India has significant exposure to maritime freight rate. Seaborne freight is estimated to be $85 billion annually.

● The **share of Indian ships in carrying India's export-import cargo** was about 6.53% in FY 2019-20.

● Each year India is estimated to pay about $75 billion seaborne freight to foreign shipping companies.

● India is thus well placed to step up its investment in the shipping industry.

➢ **Related Measures taken by the Governmen**t:

○ **Revision of the criteria for Right of First Refusal (ROFR)**: The criteria for granting the Right of First Refusal in chartering of vessels through tender process has been revised, for promoting tonnage under Indian flag and ship-building in India, so as to make India a **Atmanirbhar/self-reliant** in terms of tonnage and ship-building in India.

○ **Subsidy Support to Indian Shipping Companies**: A scheme for the promotion of flagging of merchant ships in India by providing Rs.1624 crore over a period of five years as subsidy support to Indian shipping companies in global tenders floated by Ministries and **CPSEs** has been approved by the Cabinet.

○ **Ship Building Financial Assistance Policy (2016-2026)**: Government of India approved the Financial Assistance Policy for Indian Shipyards in December 2015, for grant of financial assistance to Indian Shipyards.

International Financial Services Centre (IFSC)

➢ An IFSC **enables bringing back the financial services and transactions** that are currently carried out in offshore financial centres by Indian corporate entities and overseas branches/subsidiaries of Financial Institutions (such as banks, insurance companies, etc.) to India.

○ It offers a **business and regulatory environment** that is comparable to other leading international financial centres in the world like London and Singapore.

➢ IFSCs are **intended to provide Indian corporates with easier access to global financial markets**, and to complement and promote further development of financial markets in India.

➢ The first IFSC in India has been set up at the **Gujarat International Finance Tec-City (GIFT City)** in Gandhinagar.

➢ The central government has established the **International Financial Services Centres Authority** to regulate all financial services in International Financial Services Centres (IFSCs) with **headquarters in Gandhinagar (Gujarat)**.

Note:

ARCs for Agriculture Sector

Why in News

   To improve recovery of bad loans in the **agriculture sector,** leading banks have made a pitch for setting up an **Asset Reconstruction Company (ARC)** specifically to deal with collections and recovery of farm loans.

➢ With a **government-backed ARC** having been recently set up to deal with bank NPAs to the industry, this **idea has acceptability among banks.**

➢ Some member banks of the **Indian Banks' Association** suggested the need for the Central government to bring legislation on agriculture land somewhat like the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest **(SARFAESI) Act, 2002**.

Key Points

➢ **About the Asset Reconstruction Company (ARC)**:
   ○ **Objective**: It is a specialized financial institution that buys the **Non Performing Assets (NPAs)** from banks and financial institutions so that they can clean up their balance sheets.
      ● This **helps banks to concentrate in normal banking activities**. Banks, rather than going after the defaulters by wasting their time and effort, can sell the bad assets to the ARCs at a mutually agreed value.
   ○ **Legal Basis**: The **SARFAESI Act, 2002** provides the legal basis for the setting up of ARCs in India.
      ● The Act helps reconstruction of bad assets without the intervention of courts. Since then, a large number of ARCs were formed and were registered with the **Reserve Bank of India (RBI)** which has got the power to regulate the ARCs.
   ○ **Funding**: To meet its funding requirements, an **ARC can issue bonds, debentures and security receipts.**
   ○ **National Asset Reconstruction Company Limited (NARCL)**:
      ● In the **Budget 2021-22**, **ARC** has been proposed to be set up by state-owned and private sector banks, and there will be no equity contribution from the government.
      ● The ARC, which will have an **Asset Management Company (AMC)** to manage and sell bad assets,

will look to resolve stressed assets of Rs. 2-2.5 lakh crore that remain unresolved in around 70 large accounts.
      ● This is being considered as the government's version of a **bad bank**.

➢ **Need of ARC for Farm Loans:**
   ○ **NPAs of Banks:** As per the latest **Financial Stability Report, June 2021**, **banks' gross NPA ratio for the agriculture sector** was at 9.8%, whereas for industry and services it was at 11.3% and 7.5%, respectively, At March-end 2021.
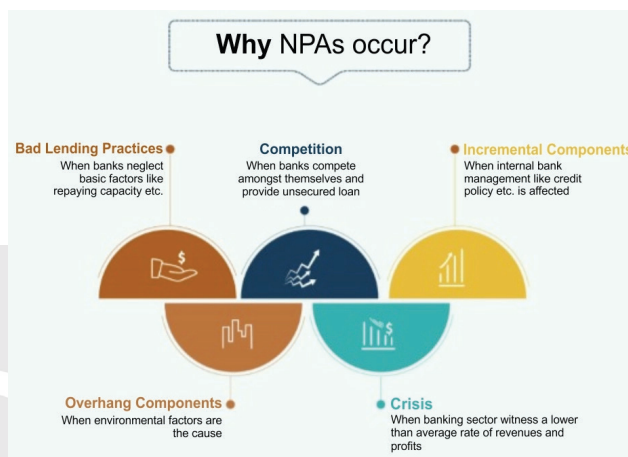
   ○ **Outstanding Loans**: As per data from the **'Situation Assessment of Agricultural Households and Land Holdings of Households in Rural India, 2019**, even as the percentage of **agricultural households indebted has come down from 52% in 2013 to 50.2% in 2019**, the average debt has jumped by more than 57% from Rs 47,000 in 2013 Rs 74,121 in 2019.
      ● The survey data shows that **69.6 % of the outstanding loans by agricultural households** were taken from institutional sources such as banks, cooperative societies, and other government agencies.
      ● The survey is conducted by the **National Statistical Office's (NSO)**.
   ○ **Farm Loan Waivers:** The **announcement of farm loan waivers** by states around elections leads to **"deteriorating credit culture".**
      ● **Since 2014, at least 11 states have announced farm loan waivers**. These include Rajasthan, Madhya Pradesh, Punjab, Chhattisgarh, Andhra Pradesh, Telangana, Maharashtra, Punjab and Uttar Pradesh.

Note:

- The **Uttar Pradesh government will provide additional incentives** such as subsided interest rates on farm loans, promotion of farm-based industries as well as development of farm infrastructure under the Centre's **Agriculture Infrastructure Fund**.
  - The **Agriculture Infrastructure Fund** aims to provide medium-long term debt financing facilities for investment in viable projects for post-harvest management Infrastructure and community farming assets.
- Ahead of Assembly elections in seven states in 2021, **there is a concern among banks that NPAs may rise in the farm sector.**
  - While genuine hardship could be one reason for delay in repayments, the possibility of waivers also leads to recovery challenges for the banks.
- ➢ **Challenges:**
  - ○ **Availability of Funds**: First and foremost, the requirement of the ARC is to have sufficient availability of funds to match the huge amount of the NPA market.
    - It will be welcomed if the government **establishes ARC with an equity contribution from the government itself** and the **Reserve Bank of India (RBI)** to strengthen its capital base.
    - Thus ARC will have sufficient funds to deal with the NPA problem.
  - ○ **Absence of a Vibrant Distressed Debt Market**: Even if sufficient funds are available with ARC, the price expectation mismatch between selling bank (s) and buying ARC and agreement on an acceptable valuation of the bad assets will also create a challenge for ARC.
    - It is the **absence of a vibrant distressed debt market in India**. It is also difficult to sell NPA assets in the market.
  - ○ **Absence of Professional Expertise**: The absence of professional expertise for a turnaround in ARC is very common.
    - The professionals such as bankers, lawyers and chartered accountants who join ARCs usually expect some extra return.
    - But due to regulatory issues, this is not possible easily and ARC is deprived of professionals' service of experts which may help it tremendously.

- ○ **Absence of Mature Secondary Market**: There is the absence of a mature secondary market for security receipts (SR) issued by ARC to Qualified Institutional Buyers.
  - This further leads the Banks to buy SRs backed by their own stressed assets.
  - It is observed that currently, over 80% of SRs are held by seller banks themselves only.
- ○ **Regulatory Constraints**: Currently, **all ARCs are subject to the regulation and scrutiny of the regulator** i.e. the RBI and it is observed that some stringent regulations have hampered their growth and viability. Thus, the ARC is not being able to function with all its potentials.

Current Mechanism to tackle NPAs of Agri-Sector:
- ➢ At present, there is **neither a unified mechanism** to tackle NPAs in the farm sector nor a single law that deals with enforcement of mortgages created on agricultural land.
- ➢ Agriculture being a state subject, the recovery laws, wherever agricultural land is offered as collateral – varies from state to state.
- ➢ Enforcement of provisions on mortgaged farm land is generally done through the **Revenue Recovery Act of states**, **Recovery of Debt and Bankruptcy Act, 1993**, among other state-specific regulations.
  - ○ These are often time consuming and in some states revenue recovery laws covering bank loans have not been enacted.

Monetary Policy Report: RBI

Why in News

The **Reserve Bank of India (RBI)** has released the **Monetary Policy Report** **(MPR)** for the month of December 2021.
- ➢ It kept the policy rate unchanged for the Ninth time in a row maintaining an **accommodative stance**.

Key Points

- ➢ **Unchanged Policy Rates:**
  - ○ **Repo Rate** - 4%.
  - ○ **Reverse Repo Rat**e - 3.35%.
  - ○ **Marginal Standing Facility (MSF)** - 4.25%.
  - ○ **Bank Rate**- 4.25%.

Note:

RBI leaves repo rate unchanged for 9th straight time

The Reserve Bank has slashed the repo rate by a total of 115 basis points (bps) since March 2020 to soften the blow from the pandemic.

TOI Source: RBI

- ➤ **GDP Projection:**
  - ○ Real **Gross Domestic Product (GDP)** growth for 2021-22 has been retained at 9.5%.
- ➤ **Inflation:**
  - ○ RBI has retained the projection for **Consumer Price Index (CPI)** inflation at 5.3%.
- ➤ **Variable Reverse Rate Repo (VRRR):**
  - ○ It increased the amount of money it will absorb VRRR to Rs 7.5 lakh crore by the end of December 2021.
    - ● In order to absorb additional liquidity in the system, the RBI announced conducting a VRRR program in August 2021 because it has higher yield prospects as compared to the fixed rate overnight reverse repo.
- ➤ **Accommodative Stance:**
  - ○ RBI decided to continue with **an accommodative stance until there is sustainable recovery in the economy.**
    - ● An accommodative stance means the MPC is willing to either lower rates or keep them unchanged.
  - ○ **Significance:**
    - ● It encourages **more spending from consumers and businesses by making money less expensive** to borrow through the lowering of short-term interest rates.
    - ● When money is easily accessible through banks, the **money supply in the economy increases.** This leads to increased spending.

- ● It allows the **fiscal reserve to increase in relation to national income** and the positive function of money demand.
- ● It helps energize the national money stock and prevent a weak aggregate demand obviating an **economic recession.**
- ● Therefore it can be said that an accommodative stance will **help improve India's growth.**
- ➤ **No Permission for Infusing Capital:**
  - ○ The RBI allowed **banks to infuse capital in their overseas branches** as well as repatriate profits without seeking its prior approval, subject to fulfilling certain regulatory capital requirements.
    - ● **At present**, banks incorporated in India can infuse capital in their overseas branches and subsidiaries, retain profits in these centres and repatriate/ transfer the profits with prior approval of the RBI.
  - ○ With a view to **providing operational flexibility to banks,** it has been decided that banks need not seek prior approval of the RBI **if they meet the regulatory capital requirements.**

Monetary Policy Report

- ➤ It is **published by the Monetary Policy Committee (MPC) of RBI**. It is a statutory and institutionalized framework under the **RBI Act, 1934,** for maintaining price stability, while keeping in mind the objective of growth.
- ➤ It **determines the policy interest rate (repo rate) required to achieve the inflation target of 4% with a leeway of 2% points on either side**. The Governor of RBI is ex-officio Chairman of the MPC.

Key Terms

- ➤ **Repo and Reverse Repo Rate:**
  - ○ **Repo rate** is the rate at which the central bank of a country (RBI in case of India) lends money to commercial banks in the event of any shortfall of funds. Here, the central bank purchases the security.
  - ○ **Reverse repo rate** is the rate at which the RBI borrows money from commercial banks within the country.
- ➤ **Bank Rate**:
  - ○ It is the **rate charged by the RBI for lending funds to commercial banks.**

Note:

> **Marginal Standing Facility (MSF):**
> ○ MSF is a window for **scheduled banks** to borrow overnight from the RBI in an emergency situation when interbank liquidity dries up completely.
> **Open Market Operations:**
> ○ These are **market operations conducted by RBI by way of sale/purchase of government securities** to/from the market with an objective to adjust the rupee **liquidity conditions in the market on a durable basis.**
> **Government Security:**
> ○ A G-Sec is a tradable instrument issued by the Central Government or the State Governments. It acknowledges the government's debt obligation.
> **Consumer Price Index:**
> ○ It measures price changes from the perspective of a retail buyer. It is released by the **National Statistical Office (NSO).**
> ○ The CPI **calculates the difference in the price of commodities and services such as food, medical care, education, electronics etc,** which Indian consumers buy for use.

Revised Coal Stocking Norms

Why in News

Recently, the **Central Electricity Authority (CEA)** has revised **Coal Stocking Norms at thermal power generation plants** with an aim to prevent a repeat of the **low coal stock situation** at various plants.

> CEA is an organization under the **Electricity Act, 2003.** Its objective is **to formulate a National Electricity Plan every five years** for optimum utilization of available resources for power generation.

Key Points

> **Background:**
> ○ In October 2021, India's thermal power plants faced a severe coal shortage, whereby coal stocks had come down **to an average of four days of fuel across an increasing number of thermal stations.**
> ○ A sharp uptick in demand, a rise in the price of imported coal, and low coal procurement by power stations prior to the monsoon contributed to the low stock situation.

○ This was **one of the biggest coal crises in India**, impacting the slowdown of economic reopening and some businesses' downscale production.

○ The **low coal stock situation had forced a number of states to purchase power on the energy exchange**, bidding up the average market clearing price of power to Rs 16.4 per unit in October, prompting the government **to revise Coal Stocking Norms.**

Secure Future
India to simplify coal stocking norms | Ensure **power** plants stock adequate coal, avert coal crisis
Officials say present norms are flawed
To calculate daily coal stock requirement on plant load factor
Presently, calculated as avg of last 7 days

> **Previous Norms:**
> ○ It mandated 15-30 days of coal stock based on the distance of the plant from the source of coal.
> ○ Earlier, power plants located at pit head plants were **required to keep 15 days of coal stock**, while **the requirement increased to 20 days for plants located within 200 km** from the mines, **25 days for those within 1,000 km** and **30 days for plants situated further away** from the mines.

> **Revised Norms:**
> ○ It mandates the **coal stock of 17 days at pit head stations and 26 days at non-pit head stations** to be maintained by power plants from February to June every year.
>   ● Non-pit head plants are power plants where the coal mine is more than 1,500 km away.
> ○ The daily coal requirement at the power plant at any given day will be calculated **based on 85% Plant Load Factor (PLF).**
>   ● The previous norms determined coal stock volumes according to the average consumption pattern of the plant over the last seven days at a **minimum 55% PLF.**
>   ● PLF is the **ratio between the actual energy generated by the plant to the maximum possible energy** that can be generated with the plant working at its rated power and for a duration of an entire year.
> ○ The new methodology implies power plants which have lower utilisation rates will need to stock more coal than they did earlier.
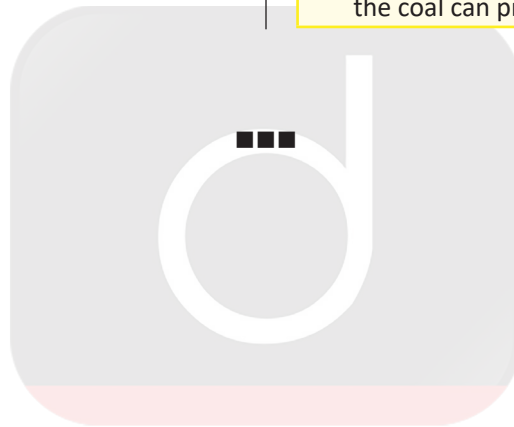
Note:

○ Power plants will have to strictly follow these parameters, failing which penalties will be levied — an aspect that was not present in CEA regulations so far.

➢ **Significance:**

○ It will **prevent a situation like the one that faced the country** recently when post monsoons, several of the 135 coal-based power plants in the country were found to be sitting with critical coal stock levels sufficient to meet just three to four days of supply.

○ Relaxed coal stocking norms will also **better distribution the fuel amongst generating stations**.

● This will **prevent shortages and ensure uninterrupted power supply irrespective of the demand situation** in the country.

○ It will also **lower the fuel requirement for each power plant and enable better distribution** amongst all stations.

Coal

➢ It is one of the most abundantly found fossil fuels. It is used a**s a domestic fuel, in industries such as iron and steel, steam engines and to generate electricity. Electricity** from coal is called thermal power.

➢ The coal which we are using today **was formed millions of years ago** when giant ferns and swamps got buried under the layers of earth. Coal is therefore **referred to as Buried Sunshine.**

➢ The **leading coal producers of the world include** China, US, Australia, Indonesia, India.

➢ The coal producing areas of **India include Raniganj, Jharia, Dhanbad and Bokaro** in Jharkhand.

➢ **Coal is also classified into four ranks:** anthracite, bituminous, subbituminous, and lignite. The ranking depends on the types and amounts of carbon the coal contains and on the amount of heat energy the coal can produce.

Note:

International Relations

Highlights

- *Protectionism vs Globalization*
- *Protests in Balochistan*
- *India joins G20's Troika*
- *Four Pronged Strategy on Srilanka Crisis*
- *Barbados: World's Newest Republic*

- *Global Gateway Plan: EU*
- *Russia-Ukraine Conflict*
- *RATS-SCO*
- *No US Sanctions on Chabahar Port*
- *UNCLOS*

Protectionism vs Globalization

Why in News

The External Affairs Minister of India (EAM), at the recent **Global Technology summit,** has asserted that the **Covid-19 pandemic** has brought India's capabilities and need for more domestic production rather than **unchecked globalization.**

➢ He further held that, to foster tech growth, nations must seek more start-ups, supply chains and jobs to be created internally.

➢ This speech of EAM has sparked a debate between **protectionism vs globalization.**

Key Points

➢ **Globalization:**
  ○ **About:** Globalization envisages a borderless world or seeks a world as a global village.
  ○ **Origin of Modern Globalization:** What today is referred to as globalization, started with the **end of the Cold war and the disintegration of the Soviet Union in 1991.**
  ○ **Driving Factors:** Globalization was the offshoot of two systems — democracy and capitalism — that emerged victorious at the end of the Cold War.
  ○ **Dimensions of Globalization:** It may be attributed to accelerated flow of goods, people, capital, information, and energy across borders, often enabled by technological developments.
  ○ **Manifestation of Globalization:** Trade without tariffs, international travel with easy or no visas, capital flows with few impediments, cross-border pipelines and energy grids, and seamless global communication in real-time appeared to be the goals towards which the world was moving.

➢ **Pros of Globalization:**
  ○ **Access to Goods and Services:** Globalization results in increased trade and standard of living.
    ● It heightens competition within the domestic product, capital, and labour markets, as well as among countries adopting different trade and investment strategies.
  ○ **Vehicle of Social Justice:** The proponents say globalization represents free trade which promotes global economic growth, creates jobs, makes companies more competitive, and lowers prices for consumers.
  ○ **Increases Cultural Awareness:** By reducing cross-border distances, globalization has increased cross-cultural understanding and sharing.
  ○ **Sharing Technology and Values:** It also provides poor countries, through infusions of foreign capital and technology, with the chance to develop economically and by spreading prosperity.

➢ **Cons of Globalization:**
  ○ **Rise of Global Problems:** Globalization has been criticised on account of exacerbating global disparities, spread of international terrorism and cross-border organised crime, and allow for the rapid spread of disease.
  ○ **Backlash of Nationalism:** Despite the economic aspect of globalization, it has resulted in National competition, advancement of national ambitions.
  ○ **Moving Towards Cultural Homogeneity:** Globalization promotes people's tastes to converge which may lead to more cultural homogeneity.

Note:

- Due to this, there is a danger of losing precious cultural practices and languages.
- Also, there are threats of cultural invasion of one country over another.

De-Globalisation or Protectionism

➢ **Meaning:**
  ○ Protectionism refers to government policies that restrict international trade to help domestic industries.
  ○ Tariffs, import quotas, product standards, and subsidies are some of the primary policy tools a government can use in enacting protectionist policies.

➢ **Protectionism in the Global Arena:**
  ○ Globalization had already begun to plateau or stagnate since the **2008-09 global financial crisis (GFC).**
  ○ This is reflected in **Brexit** and **US' America First Policy.**
  ○ Further, **trade wars** and the **halting of WTO talks** is another recognition of the retreat of globalization.
  ○ These trends pave the way for an anti-globalization or protectionism sentiment, which may further amplify due to the spread of the Covid-19 pandemic.

➢ **Protectionism in India:**
  ○ In the past few years, many countries have criticized the Indian economy for becoming protectionist. This can be depicted in the following instances:
    - Not opening up for imports, particularly after the Indian Government failed to agree on terms for a mini trade deal with the US.
    - India walked out of the 15-nation **Regional Comprehensive Economic Partnership** of Asian countries.
    - The "**Aatmanirbhar Bharat (Self-Reliance) initiative**", launched in May 2020, after the beginning of the pandemic, was also perceived internationally as a protectionist move.

Protests in Balochistan

Why in News

Over the last few weeks,there have been continuous protests in **Gwadar, Balochistan** against mega development

plans of the port city as part of the **China-Pakistan Economic Corridor.**

➢ The protesters have sought to draw attention to the **marginalisation of the local people in the development of the port.**

➢ Pakistan claims that India has been supporting these protests.

Key Points

➢ **About Balochistan:**
  ○ Balochistan is one of the **four provinces of Pakistan.**
  ○ It is least populated even though it is the **largest province** in terms of land size.
  ○ It is populated in **ethnic Baloch people** which can be found in modern day Iran and Afghanistan though the majority of Baloch can be found in Balochistan.
  ○ Balochistan is rich in **natural gas and oil** and is one of the most important regions of Pakistan.

➢ **Uprising in Balochistan:**
  ○ During the **withdrawal of the British** from the Indian subcontinent, the Kingdom of Balochistan was offered the same offer, either to join India, join Pakistan or remain independent.
  ○ The **king of Balochistan chose to remain independent** and it did remain independent for nearly a year.
  ○ In the year 1948, the Pakistan government, with a c**ombination of military and diplomacy,** took control of the region and made it into a part of Pakistan.
  ○ Due to lack of **development and human rights violations** in the region done by the Pakistan military and terror groups, the **insurgency in Balochistan** has been active since 1948.
  ○ Pakistan claims that India has been **supporting these rebel fighters** with arms and intelligence.

➢ **India's Stand on Balochistan:**

○ India has long **maintained a political stance of not interfering** in the internal matters of Pakistan or any other country.

○ Despite Pakistan repeatedly bringing up the **Kashmir issue** over the years, India had maintained silence on Balochistan.

○ However, in 2016, remarks on Balochistan came in the immediate aftermath of the Independence Day celebration in Pakistan that was dedicated to the independence of Kashmir.

○ India's response was quick with **India's Prime Minister referring to atrocities of Baloch people** in his Independence speech in 2016.

CPEC & India's Concerns

➢ **About CPEC:**

○ The CPEC is a **bilateral project between Pakistan and China.**

○ It aims to link the **Western part of China (Xinjiang province) to the Gwadar Port in Balochistan,** Pakistan via Khunjerab Pass in the Northern Parts of Pakistan.

○ It is intended to promote connectivity across Pakistan with a **network of highways, railways, and pipelines** accompanied by energy, industrial, and other infrastructure development projects.

○ It will pave the way for China to access the **Middle East and Africa from Gwadar Port**, enabling China to access the Indian Ocean.

○ CPEC is a part of the **Belt and Road Initiative.**

● The BRI, launched in 2013, aims to link Southeast Asia, Central Asia, the Gulf region, Africa and Europe with a network of land and sea routes.

➢ **India's Concerns:**

○ **Sovereignty Issue:** Some of the proposed infrastructure that the Chinese have been developing for Pakistan are passing through the disputed region of **Pakistan Occupied Kashmir (POK).**

● India considers it to be a part of its own territory.

○ **Dual Purpose of Gwadar Port:** India has been concerned about Gwadar, which gives **China strategic access to the Arabian Sea and the Indian Ocean.**

● It is not just being developed as a trade entrepot but as a dual purpose port for use by the Chinese Navy.

● It is part of **String of pearls theory,** under which China is building state of the art gigantic modern ports all along the Indian Ocean and to the south of it, in **Gwadar (Pakistan), Chittagong (Bangladesh, Kyauk Phru (Myanmar) and Hambantota (Sri Lanka).**

■ The string of pearls is a strategic threat to India, as it aims to **encircle India to establish Chinese dominance** in the Indian Ocean.

India joins G20's Troika

Why in News

Recently, India joined the **G20 'Troika'** and with this **India has started the procedure** for taking over the **G20** presidency next year.

Key Points

➢ **About 'Troika':**

○ It refers to the **top grouping within the G20** that consists of the current, previous and the incoming presidencies — **Indonesia, Italy and India.**

○ As a Troika member, **India will work closely with Indonesia and Italy** to ensure consistency and continuity of the G20's agenda.

● India will **assume the G20 presidency** on **1st December 2022** from Indonesia, and will convene the **G20 Leaders' Summit for the first time** in India in **2023.**

- Italy hosted the **G20 summit during October 30-31, 2021** where India had raised the issue of **Afghanistan's future** following the takeover by the Taliban.
- Indonesia took over the **G20 presidency from 1st December, 2021** and in the coming months, **Indonesia will hold rounds of discussion at various levels** among the members of the G20 before convening the G20 Leaders' Summit scheduled for October 30-31, 2022.
- **Next year's summit** will be organised along the overall theme of **"Recover Together, Recover Stronger".**

➢ **G20:**
  ○ **About:**
    - It is an informal group of 19 countries and the **European Union (EU),** with representatives of the **International Monetary Fund** and the **World Bank.**
      ■ It does not have a **permanent secretariat or Headquarters.**
    - The membership comprises a mix of the world's largest advanced and emerging economies, representing about two-thirds of the world's population, 85% of global **Gross Domestic Product (GDP)**, 80% of global investment and over 75% of global trade.
  ○ **Members:**
    - Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the EU.
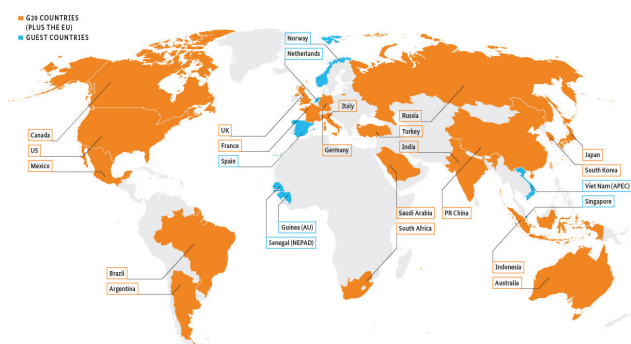
  ○ **Mandate of the Grouping:**
    - The **G20 is the premier forum for international economic cooperation**, which reflects a recognition that global prosperity is interdependent and the economic opportunities and challenges are interlinked.
- G20 countries have **come together to better prepare** for the future.
- The primary mandate of the grouping is for **International Economic cooperation** with particular emphasis to prevent future financial crises across the world.
- It plays a significant role in **shaping the global economic agenda.**
- **From 1999-2008** the forum exalted from a grouping of Central bank governors and finance ministers to **Heads of states.**

➢ **India and G20:**
  ○ **As a founding member of the G20**, India has **used the platform to raise issues** of vital importance and those that impact on the most vulnerable around the world..
  ○ The global economic agenda making forum is to be presided over by India in 2022, it's a **challenge as well as an opportunity for India** to foster its presence in the international arena.
  ○ But due to the **rising toll of unemployment rates and poverty** in the domestic portion, it's hard to take the lead effectively.

Four Pronged Strategy on Srilanka Crisis

Why in News

Recently, **India and Sri Lanka agreed to a four-pronged approach** to discuss initiatives on food and energy security to help mitigate **Sri Lanka's economic crisis.**

➢ Earlier this year, Sri Lanka **declared an economic emergency** amid **rising food prices,** a depreciating currency, and rapidly depleting **forex reserves.**

Key Points

➢ **Four-Pillar Initiative Comprises:**
  ○ **Lines of credit:** Lines of credit for food, medicines and fuel purchases granted by India.
    - **Lines of credit** is a credit facility extended by a bank or any other financial institution to a government, business or an individual customer, that enables the customer to draw the maximum loan amount.

Note:

Sri Lanka

- ❍ **Currency Swap:** A **currency swap** agreement to deal with Sri Lanka's **balance of payment** issues.
  - The word swap **means exchange**. A currency swap between the two countries is an **agreement or contract to exchange currencies** with predetermined terms and conditions.
- ❍ **Modernisation Project:** An **early modernisation project** of the **Trinco oil farms** that India has been pursuing for several years.
  - The Trincomalee Harbour, one of the **deepest natural harbours** in the world, was developed by the **British during World War II.**
  - In particular, the **projects to develop oil infrastructure in Trincomalee** have been hanging fire since 2017.
- ❍ **Indian Investments:** A Sri Lankan **commitment to facilitate Indian investments** in various sectors.
- ➢ **Recent Issues in India-Sri Lanka Relations:**
  - ❍ **Killing of Fisherman:**
    - Killing of Indian fishermen by the Sri Lankan Navy is a **lingering issue** between these two nations.
      - In 2019 and 2020, a total of **284 Indian fishermen were arrested** and a total of 53 Indian boats were confiscated by the Sri Lankan authorities.
  - ❍ **East Coast Terminal project:**
    - This year (2021) **Sri Lanka cancelled an MoU** signed with India and Japan for the **East Coast Terminal project.**
      - India protested the cancellation though it later agreed to the West Coast Terminal being developed by the Adani group.
  - ❍ **Influence of China:**
    - China's rapidly growing economic footprint (and political clout as a corollary) in Sri Lanka is **straining India-Sri Lanka relations**.

- China is **already the largest investor in Sri Lanka**, accounting for 23.6% of the total **Foreign Direct Investment (FDI)** during 2010-2019 as against 10.4% from India.
- China is also **one of the largest export destinations for Sri Lankan** goods and holds over 10% of its external debt.
- ❍ **13th Amendment of the Sri Lankan Constitution:**
  - It envisages **devolution of necessary powers to the provincial councils** to address the just **demand of the Tamil people** for equality, justice, peace, and respect within a united Sri Lanka.

India-Sri Lanka Relations

- ➢ **Background:** **India-Sri Lanka relationship** is more than 2,500 years old and both sides have built upon a legacy of intellectual, cultural, religious and linguistic intercourse.
- ➢ **Support Against Terrorism:** During the course of the civil war, India supported the right of the Government of Sri Lanka to act against terrorist forces.
- ➢ **Support For Rehabilitation:** The Indian Housing Project is Government of India's flagship project of developmental assistance to Sri Lanka. Its initial commitment is to build 50,000 houses for those affected by the civil war as well as for the estate workers in the plantation areas.
- ➢ **Assistance during Covid-19**: **The Reserve Bank of India (RBI)** had signed an agreement for extending a **USD 400 million currency swap** facility to Sri Lanka to boost the foreign reserves and ensure financial stability of the country, which was badly hit by **Covid 19 pandemic.** Recently, India has also supplied **Covid-19 Vaccines** to Sri Lanka.
- ➢ **Joint Exercises:** India and Sri Lanka conduct joint Military **(Mitra Shakti)** and Naval exercise **(SLINEX).**
- ➢ **Participation in Groupings:** Sri Lanka is also a member of groupings like **BIMSTEC** (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) and **SAARC** in which India plays a leading role.

Barbados: World's Newest Republic

Why in News

Recently, Barbados has officially removed **Queen**

Elizabeth II as its head of state and become the **world's newest republic** nearly 400 years after the country became a British colony.

➢ The **Caribbean island nation**, 55 years after its independence, got rid of the remnants of colonial rule by separating from Britain.

➢ Barbados, however, will continue to be one of the 54 **Commonwealth nations**.

Key Points

➢ **About**:
  ○ **Barbados**:
    ● **Location**: It is a small island country in the **south-eastern Caribbean Sea**.
    ● **Neighbours**: Its neighbours include Saint Lucia, to the north, Saint Vincent and the Grenadines, to the west, and Trinidad and Tobago to the south.
    ● **Capital**: Bridgetown
    ● **Independence**: On November 30, 1966, Barbados gained its independence.

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    ● **Leadership:**
      ■ **Dame Sandra Prunella Mason** is the current President of Barbados.
      ■ **Mia Amor Mottley** is the current Prime Minister of Barbados.
    ● **Part of CARICOM**: Barbados is part of **Caribbean Community (CARICOM)** which was formed in 1973.
  ○ **History of Barbados:**

● Barbados **first became an English colony in 1625**. It was a **part of the British Empire for over 400 years**, a link in the lines of trade, commerce and oppression that English mercantilism and colonialism fostered for centuries.

○ **Slaves, indentured labour, a lack of democracy** — the Caribbean was home to some of the most institutionalised and invisibilised horrors in history.

➢ **India and Barbados Relations:**

○ **Shared Platforms**: India and Barbados enjoy close and cordial relations and interact actively in the **United Nations (UN)**, **Commonwealth** and **Non-Aligned Movement (NAM)** and other international fora.
  ● Barbados is also a signatory to **International Solar Alliance** and has ratified it in January, 2021

○ **Air Services Agreement**: India and Barbados have **signed the Air Services Agreement in 2015,** for facilitation of travel arrangements for the citizens and the possibility of direct air connectivity and chartered flight operations between the two countries.
  ● The first ever **Foreign Office Consultations (FOC)** between India and Barbados was held in Bridgetown, Barbados in 2015.

○ **UNSC Reform**: Barbados supported the G-4 resolution on expanding the UN Security Council in 2007.
  ● The country also **voted for India's candidature for Non-Permanent seat** on the UN Security Council in 2011–12, and supports India's candidature for a permanent seat on the Security Council.

○ **Bilateral Trade**:
  ● **Export (USD 12.76 million 2019-20)**: Indian exports include vehicles, pharmaceuticals, textiles, iron & steel, organic chemicals, etc.
  ● **Import (USD 1.48 million 2019-20)**: Indian imports include electrical machinery, optical photography, cinematographic equipment.

○ **Sports and Culture:**
  ● Cricket being a great connection in India, Barbadian cricketers of yore and modern times are household names among Indian sport lovers.
  ● Many Barbadian cricketers are members of Indian Premier League teams.

○ **Indian Community:**

Note:

● Approximately 2500 people of Indian origin have settled in Barbados and most of them have since acquired local nationality.

Commonwealth of Nations

➤ It is an international intergovernmental organization of countries that were **mostly former territories of the British Empire and dependencies**.

➤ It was established by the **London Declaration** in 1949.

➤ **Queen Elizabeth II** is the head of the Commonwealth.

➤ The current membership includes 54 Countries. The membership is based on **free and equal voluntary co-operation**.

❍ It is home to 2.5 billion people, and includes both advanced economies and developing countries.

➤ The last country to join the Commonwealth was **Rwanda** in 2009.

➤ The **Commonwealth Heads of Government Meeting** is a **biennial summit** meeting of the heads of government from all Commonwealth nations.

Global Gateway Plan: EU

Why in News

Recently, the European Commission has announced a plan, called **Global Gateway**, to mobilise **EURO 300 billion by 2027** in **public and private infrastructure investment around the world.**

➤ Although the plan doesn't mention China, it is seen as a response to **China's Belt and Road strategy.**

Key Points

➤ **About Global Gateway Plan:**

❍ **Developmental Dimensions:** With Global Gateway, the EU, in a **Team Europe approach**, will offer its partners a response to the urgent needs:

● To develop **sustainable and high quality digital, climate and energy and transport infrastructures.**

● Strengthen **health, education and research systems** across the world.

❍ **Funding:** To finance the project, the EU will use its **European Fund for Sustainable Development Plus.**

● Under this, 40 billion euros are made available in guarantee capacity, and will offer grants of up to 18 billion euros from **external assistance programs.**

● The plan will need funding from **international institutions** and from the private sector if it is to get anywhere near its target.

● The financing will be done under fair and favorable terms in order to limit the risk of debt distress.

❍ **Offshoot of B3W Project:** The EU strategy is an offshoot of the **Build Back Better World (B3W) Initiative.**

● B3W is an international infrastructure investment initiative announced by the **Group of Seven (G-7) richest democracies** in June 2021.

➤ **About China's Belt And Road Initiative:**

❍ **About:** The BRI project was **launched in 2013,** it broadly aims to facilitate cross-border transportation of goods, access to energy, creating demand for existing excess capacity in Chinese industries.

● Officially, it aims to **develop land and sea infrastructure to better connect China to Asia, Europe and Africa f**or trade and development, and it has found many partners around the world.

● China had an overall exposure of investment of around **USD 750 billion between 2013 to mid-2020.**

● China argues that it respects its **partners' sovereignty while providing loans that benefit joint projects**, while critics say Beijing's contractual terms ignore abuses of **human, labour and environmental rights.**

❍ **BRI's Criticism:** BRI project has been heavily criticized by the western world for the following reasons:

● **China's Debt Trap Policy:** BRI is being seen as a part of China's debt trap policy, wherein **China intentionally extends excessive credit to another country** with the intention of extracting economic or political concessions from the debtor country.

■ The western countries see it as a **tool for China to influence poorer countries.**

■ They criticise China for inciting emerging economies to take on too much debt, and a**llege the secretive tender process is prone to corruption.**

Note:

- **New Colonialism:** They have attacked the initiative as new colonialism, or the **Marshall Plan** for the 21st century.
- **Dual Nature of Product:** Also, projects like **China-Pakistan Economic Corridor (CPEC),** building of **Colombo Port City** Project in Sri Lanka are not only commercial in nature but have strategic implications too.
  - ○ **India's Stand:**
    - India has repeatedly said it will not join BRI because it's key component – the **China-Pakistan Economic Corridor (CPEC)** – passes through PoK, which is disputed territory between India and Pakistan.
    - Further, in order to counter China's aggressiveness, India has initiated **Act East Policy**, **SAGAR vision** and is part of multilateral projects like **Asia-Africa Growth Corridor (AAGC)**,and **"Free and Open Indo Pacific" initiative.**

Russia-Ukraine Conflict

Why in News

Recently, the US intelligence reports said the tension on the **Russia-Ukraine** border represents a **major security crisis for the region**, with the potential to snowball into a broader conflict.

➢ Ukraine says that **Russia has amassed around 90,000 troops at the border.**

Key Points

➢ **Background:**
  - ○ Ukraine and Russia share hundreds of years of **cultural, linguistic and familial links**.
    - For many in Russia and in the ethnically Russian parts of Ukraine, the **shared heritage of the countries** is an emotional issue that has been exploited for electoral and military purposes.
  - ○ As part of the Soviet Union, Ukraine was the **second-most powerful Soviet republic after Russia**, and was **crucial strategically, economically and culturally.**
➢ **Cause of Conflict**:
  - ○ **Balance of Power**: Ever since Ukraine split from the Soviet Union, both Russia and the West have vied for greater influence in the country in order

to keep the balance of power in the region in their favour.
  - ○ **Buffer Zone for Western Countries**: For the US and the **European Union**, Ukraine is a crucial buffer between Russia and the West.
    - As tensions with Russia rise, the US and the EU are increasingly determined to keep Ukraine away from Russian control.
  - ○ **Russian Interest in Black Sea**: The **unique geography of the Black Sea region** confers several geopolitical advantages to Russia.
    - Firstly, it is an **important crossroads and strategic intersection** for the entire region.
    - Access to the Black Sea is v**ital for all littoral and neighboring states,** and greatly enhances the projection of power into several adjacent regions.
    - Secondly, the region is an **important transit corridor for goods and energy.**
  - ○ **Protests in Ukraine**:
    - **Euromaidan Movement**: Euromaidan (European Square) was a wave of demonstrations and civil unrest in Ukraine, which began in November 2013 with public protests in Maidan Nezalezhnosti ("Independence Square") in Kyiv, Ukraine.
      - The protests were sparked by the Ukrainian government's decision to suspend the signing of an association agreement with the European Union, instead choosing closer ties to Russia and the Eurasian Economic Union.
    - **Separatist Movemen**t: The Donbass region (the Donetsk and Luhansk regions) of eastern Ukraine has been facing **a pro-Russian separatist movement since 2014.**
      - According to the Ukrainian government, the movement is actively supported by the Russian

Note:

government and Russian paramilitaries make up between 15% to 80% of the separatists fighting against the Ukraine government.

○ **Invasion of Crimea**:
- Russia seized Crimea from Ukraine in what was the **first time a European country annexed territory from another country since World War-2.**
- The annexation of Crimea from Ukraine followed a **Russian military intervention in Crimea** that took place in the aftermath of the 2014 Ukrainian revolution and was part of wider unrest across southern and eastern Ukraine.
- The invasion and subsequent annexation of Crimea have given Russia a **maritime upperhand in the region**.

○ **Ukrain's NATO Membership**: Ukraine has urged the **North Atlantic Treaty Organization (NATO)** to speed up his country's membership in the alliance.
- Russia has declared such a move a **"red line"**, and worried about the consequences of the US-led military alliances expanding right up to its doorstep.
- The Black Sea is bordered by Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine. All these countries are NATO countries.
- Due to this faceoff between NATO countries and Russia, the Balck sea is a region of strategic importance & a potential maritime flashpoint.

➢ **Minsk Agreements**:
○ **Minsk I**: Ukraine and the Russian-backed separatists agreed a **12-point ceasefire deal in the capital of Belarus** in September 2014.
- Its provisions included prisoner exchanges, deliveries of humanitarian aid and the withdrawal of heavy weapons.
- The agreement quickly broke down, with violations by both sides.

○ **Minsk II**: In 2015, an open conflict was averted after the 'Minsk II' peace agreement was signed, under the mediation of France and Germany.
- It was **designed to end the fighting in the rebel regions** and hand over the border to Ukraine's national troops.
- It was signed by Representatives of Russia, Ukraine, the **Organisation for Security and Cooperation in Europe (OSCE)** and the leaders of two pro-Russian separatist regions.
  - OSCE is the world's largest security-oriented intergovernmental organisation. Its mandate includes issues such as arms control, promotion of human rights, freedom of the press, and fair elections.

➢ **Current Situation**:
○ Russia is **seeking assurances** from the US that Ukraine will **not be inducted into NATO**. However, the US is not prepared to give any such assurance.
- This has left the countries in a stand-off, with tens of thousands of Russian troops ready to invade Ukraine.
○ Russia is **keeping the tensions high at the Ukraine border** in order to get **sanctions relief and other concessions from the West**.
○ Any kind of military action by the US or EU against Russia would **precipitate a major crisis for the whole world**, and has so far not been mooted by any of the parties involved.

➢ **India's Stand**:
○ India **did not join the Western powers' condemnation of Russia's intervention** in Crimea and kept a low profile on the issue.
○ In November 2020, **India voted against a Ukraine-sponsored resolution in the United Nations (UN)** that condemned alleged human rights violations in Crimea thereby backing old ally Russia on the issue.

Black Sea
➢ The Black Sea is located between Eastern Europe and Western Asia.
➢ It is surrounded by the Pontic, Caucasus, and Crimean Mountains in the south, east and north respectively.
➢ The Black Sea is also connected to the **Sea of Azov** by the **Strait of Kerch**.
➢ The **Turkish straits system** - the Dardanelles, Bosporus and Marmara Sea - forms a transitional zone between the Mediterranean and the Black Sea.
➢ **Bordering countries of Black Sea are**: Russia, Ukraine, Georgia, Turkey, Bulgaria and Romania.
➢ There is a significant **absence of oxygen** in the water (anoxic waters).

RATS-SCO

Why in News

Recently, India assumed the Chairmanship of Council of **Regional Anti-Terrorist Structure of Shanghai Co-operation Organization** (RATS-SCO) in 2021 for a **period of one year.**

➤ In pursuance of this, the **National Security Council Secretariat (NSCS)** in association with **Data Security Council of India (DSCI),** organized a Seminar on **Securing Cyberspace in the Contemporary Threat Environment.**

Member states of the Shanghai Cooperation Organisation

Key Points

➤ **About RATS-SCO:**
- ○ SCO-RATS is a permanent body of the SCO and is intended to **facilitate coordination and interaction** between the SCO member states in the fight **against terrorism, extremism and separatism.**
- ○ The main functions of SCO-RATS are **coordination and information sharing.**
- ○ As a member, India has actively participated in the activities of SCO-RATS.
- ○ **India's permanent membership** would enable it to generate greater understanding among members for its perspective.

➤ **About Shanghai Cooperation Organization(SCO):**
- ○ The **Shanghai Cooperation Organization (SCO)** was established as a multilateral association to ensure security and **maintain stability across the vast Eurasian region.**
- ○ It envisages joining forces to counteract emerging challenges and threats, and enhance trade, as well as cultural and humanitarian cooperation. It was **created in 2001.**

- ○ Prior to the creation of SCO in 2001, **Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the Shanghai Five.**
  - ● **Shanghai Five** (1996) emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders.
- ○ Following the accession of Uzbekistan to the organisation in **2001, the Shanghai Five was renamed the SCO.**
- ○ The SCO Charter was signed in 2002, and entered into force in 2003. The SCO's **official languages are Russian** and **Chinese.**
- ○ SCO has two Permanent Bodies:
  - ● **SCO Secretariat in Beijing,**
  - ● Executive Committee of the **Regional Anti-Terrorist Structure (RATS) in Tashkent.**
- ○ The Chairmanship of SCO is by rotation for a year by Member States.
- ○ India and Pakistan became members in 2017.
- ○ **Member countries:** Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India, Pakistan.

India & SCO

➤ **Advantages for India:**
- ○ **Regional Security:** SCO will enable India, as an integral part of the Eurasian security grouping, to neutralise centrifugal forces arising from religious extremism and terrorism in the region.
- ○ **Embracing Regionalism:** The SCO is one of the few regional structures India is a part of now, given a decline in its engagement with **SAARC, Bangladesh, Bhutan, India, Nepal (BBIN) Initiative**.
  - ● More importantly, cooperation in three critical areas— energy, building trade and transportation links, and dealing with traditional and non-traditional security threats.
- ○ **Connect With Central Asia:** The SCO provides India with a convenient channel for its outreach — trade and strategic ties — to Central Asian countries.
  - ● SCO is also a potential platform to advance India's **Connect Central Asia policy.**
  - ● The foundation of India's economic outreach to Central Asia is based on its 2012 Connect Central

Asia Policy with its focus on the **4 C's - Commerce, Connectivity, Consular and Community.**

○ **Foundational Dimensions of SECURE:** Acknowledging the strategic importance emanating from the region and SCO, the Indian Prime Minister had articulated the foundational dimension of Eurasia being 'SECURE'. The letters in the word SECURE are:

- **S** for Security of our citizens,
- **E** for Economic development for all,
- **C** for Connecting the region,
- **U** for Unite our people,
- **R** for Respect for Sovereignty and Integrity, and
- **E** for Environment protection.

○ **Dealing With Pakistan & China:** SCO provides India with a forum where it can constructively engage both China and Pakistan in a regional context and project India's security interests.

➤ **Challenges That India Needs to Navigate:**

○ **Absence of Direct Land Connectivity:** A major impediment in India's expanded engagement with Eurasia remains the **strategic denial of direct land connectivity between India and Afghanistan and beyond by Pakistan**.

- The lack of connectivity has also hampered the development of energy ties between the hydrocarbon-rich region and India

○ **Growing Russia-China Convergence:** One of the major factors for Russia pushing India's inclusion into the SCO was to **balance China's power**.

○ **Difference Over BRI:** While India has made its opposition to **Belt and Road Initiative(BRI)** clear, all other SCO members have embraced the Chinese project.

○ **India-Pakistan Rivalry:** SCO members have, in the past, expressed fears of the organisation being held hostage to India's and Pakistan's adversarial relationship, and their fears would likely have worsened in recent times.
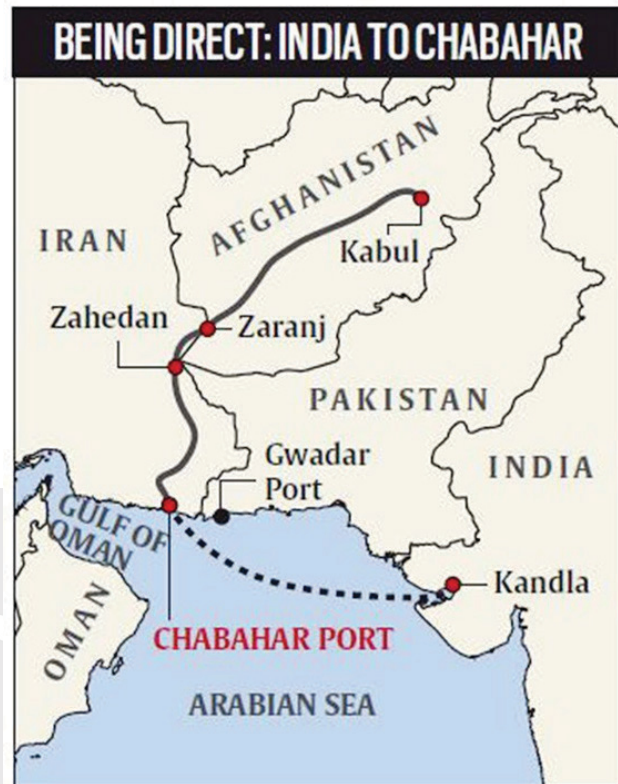
No US Sanctions on Chabahar Port

Why in News

Recently, the External Minister of India replied in the **Parliament** that the **US sanctions on Iran** have no bearing on **India's Chabahar port project** and the port is functioning well.

➤ The **US has given separate exceptions** for the strategic Chabahar port project.

BEING DIRECT: INDIA TO CHABAHAR

Key Points

➤ **About Chabahar Port:**

○ It is located in the **Indian Ocean in the Sistan province of Iran.**

○ The Chabahar port is considered a **gateway to golden opportunities for trade by India, Iran and Afghanistan with central Asian countries**.

○ The port, which is easily accessible from India's western coast, is increasingly seen as a counter to **Pakistan's Gwadar Port** which is being developed with Chinese investment.

➤ **Importance of Chabahar Port for India:**

○ **Alternate Route:** Chabahar Port provides an option of alternate supply route to everyone, thus **reducing the importance of Pakistan** with respect to trade.

○ **Strategic Requirements:** It is **located on the Gulf of Oman** and is only 72 km away from the **Gwadar port** in Pakistan which has been developed by China.

Note:

- China is aggressively pursuing its own **Belt and Road Initiative** (BRI) under the **One Belt One Road (OBOR) project.**
  - **Connectivity:** In future, the Chabahar project and the **International North South Transport Corridor** (INSTC) will complement each other by optimising Indian connectivity with Russia and Eurasia.
    - Also, it gives India direct access to Afghanistan and other Central Asian Republics
- **Reasons for Exception in US Sanctions:**
  - **In Interest of Afghanistan**: The US acknowledges that the Chabahar port project is not just only in India's or Iran's strategic interest but also **in Afghanistan's strategic interest.**
    - **Afghanistan** is a landlocked country which **depends on Pakistan for trade**. All its trade goes largely through the Pakistani ports.
    - **Pakistan denies transit to India** for trade with Afghanistan and Central Asia.
    - This project **provides Afghanistan a strategic alternative** and helps it to escape being landlocked in a sense.
  - **Bypassing Pakistan:** If in future, issues between America and Iran get resolved, then Chabahar Port **will enable America to bypass Pakistan.**
    - Pakistan still controls all the administrative routes by which Afghanistan can be supplied.
    - US has always remained hesitant to act on terrorists, specifically Afghan Talibans, due to that. **Chabahar Port gives an option to America to take action against such terrorists.**

UNCLOS

Why in News

Recently, India **reiterated its support for the United Nations Convention on the Law of the Sea (UNCLOS).**

- India also **supported freedom of navigation and overflight, and unimpeded commerce,** based on the principles of international law, reflected notably in the UNCLOS 1982.
- India is **a state party to the UNCLOS.**

Key Points

- The **United Nations Convention on the Law of the Sea (UNCLOS), 1982** is an international agreement that establishes the legal framework for marine and maritime activities.
- It is also known as **Law of the Sea.** It divides marine areas into **five main zones** namely- **Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ)** and the **High Seas.**
- It is the only international convention whic**h stipulates a framework for state jurisdiction in maritime spaces**. It provides a different legal status to different maritime zones.
- It provides **the backbone for offshore governance by coastal states and those navigating the oceans.**
- It not only zones coastal states' offshore areas but also **provides specific guidance for states' rights and responsibilities** in the five concentric zones.
- While UNCLOS has been signed and ratified by nearly all the coastal countries in the **South China Sea**, its interpretation is still hotly disputed.
  - There is a maritime dispute in the **East China Sea** as well.

Maritime Zones

- **Baseline:**
  - It is the low-water line along the coast as officially recognized by the coastal state.
- **Internal Waters:**
  - Internal waters are **waters on the landward side of the baseline** from which the breadth of the territorial sea is measured.
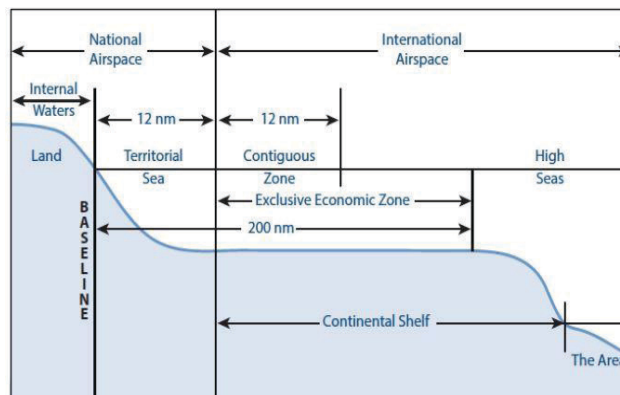
- **Each coastal state has full sovereignty over its internal waters** as like its land territory. **Examples** of internal waters include bays, ports, inlets, rivers and even lakes that are connected to the sea.
- There is **no right of innocent passage** through internal waters.

Note:

- The innocent passage refers to the passing through the waters which are not prejudicial to peace and security. However, the nations have the right to suspend the same.

➢ **Territorial Sea:**
  ○ The territorial sea **extends seaward up to 12 nautical miles (nm) from its baselines.**
    • A nautical mile is based on the circumference of the earth and is equal to one minute of latitude. It is slightly more than a land measured mile (1 nautical mile = 1.1508 land miles or 1.85 km).
  ○ The coastal states have **sovereignty and jurisdiction over the territorial sea.** These rights extend not only on the surface but also to the seabed, subsoil, and even airspace.
  ○ But the coastal states' rights are **limited by the innocent passage t**hrough the territorial sea.

➢ **Contiguous Zone:**
  ○ The contiguous zone **extends seaward up to 24 nm from its baselines.**
  ○ It is **an intermediary zone between the territorial sea and the high seas.**
  ○ The coastal state has the right to both prevent and punish infringement of fiscal, immigration, sanitary, and customs laws within its territory and territorial sea.
  ○ Unlike the territorial sea, the contiguous zone **only gives jurisdiction to a state on the ocean's surface and floor.** It does not provide air and space rights.

➢ **Exclusive Economic Zone (EEZ):**
  ○ Each coastal State may claim an EEZ beyond and adjacent to its territorial sea that extends seaward **up to 200 nm from its baselines.**
  ○ Within its EEZ, **a coastal state has:**
    • Sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, whether living or nonliving, of the seabed and subsoil.
    • Rights to carry out activities like the production of energy from the water, currents and wind.
  ○ Unlike the territorial sea and the contiguous zone, the EEZ only allows for the above-mentioned resource rights. It **does not give a coastal state the right to prohibit or limit freedom of navigation or overflight,** subject to very limited exceptions.

➢ **High Seas:**
  ○ The ocean surface and the water column beyond the EEZ are referred to as the high seas.
  ○ It is **considered as "the common heritage of all mankind"** and is beyond any national jurisdiction.
  ○ States can conduct activities in these areas as long as they are for peaceful purposes, such as transit, marine science, and undersea exploration.

■■■

Note:

Science and Technology

Highlights

- *NASA's New Communications System: LCRD*
- *James Webb Space Telescope*
- *Gaganyaan Mission*
- *Facial Recognition Technology*
- *Nuclear Energy & Climate*
- *Abundance of Lithium in Stars*
- *Observer Status to International Solar Alliance: UN*
- *Log4Shell Vulnerability*

NASA's New Communications System: LCRD

Why in News

Recently, **NASA (National Aeronautics and Space Administration)** has launched its new **Laser Communications Relay Demonstration (LCRD).**

Key Points

➢ **About:**
- ○ It is the **first-ever laser communications system** that will **pave the way for future optical communications missions.**
  - ● Currently, most NASA spacecraft use radio frequency communications to send data.
- ○ The **LCRD payload is hosted onboard the US Department of Defense's Space Test Program Satellite 6 (STPSat-6)**. It will be **in a geosynchronous orbit**, over 35,000km above Earth.
- ○ It will be controlled by engineers at the **LCRD mission's ground stations in California and Hawaii.**
- ○ The team will send test data through radio frequency signals and the LCRD will reply using optical signals.

➢ **Features:**
- ○ It has **two optical terminals.** One to receive data from a user spacecraft, and the other to transmit data to ground stations.
- ○ The modems will **translate the digital data into laser signals.** This will then be transmitted via encoded beams of light.
- ○ These capabilities make **LCRD NASA's first two-way, end-to-end optical relay**.

➢ **Significance:**
- ○ Laser uses infrared light and has a shorter wavelength than radio waves. This will **help the transmission of more data in a short time.**
  - ● Using infrared lasers, LCRD will send data to Earth at 1.2 gigabits-per-second (Gbps). At this speed, it will take less than a minute to download a movie.
  - ● It takes roughly nine weeks to transmit a completed map of Mars back to Earth with current radio frequency systems. **With lasers, we can accelerate that to about nine days.**
- ○ Optical communications **will help increase the bandwidth 10 to 100 times more** than radio frequency systems.
- ○ Optical communications systems are smaller in size, weight, and require less power compared with radio instruments.
- ○ A smaller size means **more room for science instruments.**
- ○ **Less weight means a less expensive launch**.
- ○ Less power means **less drain on the spacecraft's batteries.**
- ○ With optical communications supplementing radio, missions will have **unparalleled communications capabilities.**

James Webb Space Telescope

Why in News

The **James Webb Space Telescope (JWST)** is scheduled to be rocketed into orbit later this year (2021).
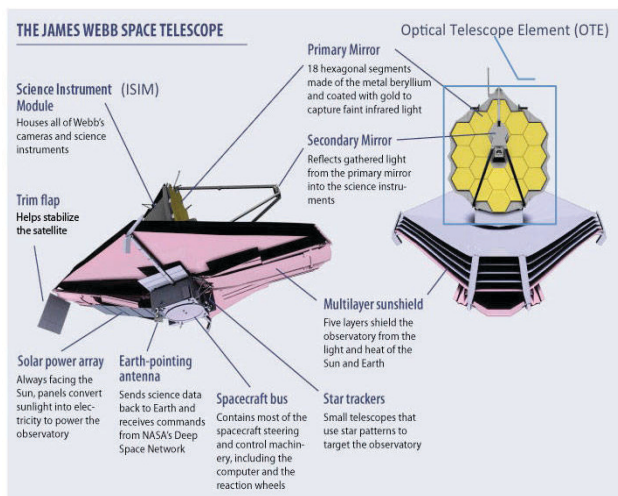
Note:

Key Points

➢ **About:**

○ It is the **most powerful infrared telescope** of **National Aeronautics and Space Administration (NASA)**.

○ It is also considered a successor of the **Hubble Telescope** and will extend and complement its discoveries.

- Launched into **low Earth orbit in 1990**, the Hubble Space Telescope has made more than 1.4 million observations, including tracking interstellar objects, capturing a comet colliding with Jupiter, and discovering moons around Pluto.

- Hubble has **captured galaxies merging, probed supermassive black holes** and has helped us understand the history of our universe.

○ The telescope is the r**esult of an international collaboration** between NASA, the European Space Agency (ESA) and the Canadian Space Agency.

○ Webb will **reveal new and unexpected discoveries**, and help humanity understand the origins of the universe and our place in it.

○ The telescope will study the atmospheres of a **wide diversity of exoplanets**.

○ It will **also search for atmospheres similar to Earth's**, and for the signatures of key substances such as methane, water, oxygen, carbon dioxide, and complex organic molecules, in hopes of finding the building blocks of life.

➢ **Launch:**

○ It will be launched on an **Ariane 5 ECA rocket** from French Guiana in South America.

THE JAMES WEBB SPACE TELESCOPE

Optical Telescope Element (OTE)

Science Instrument (ISIM) Module
Houses all of Webb's cameras and science instruments

Primary Mirror
18 hexagonal segments made of the metal beryllium and coated with gold to capture faint infrared light

Secondary Mirror
Reflects gathered light from the primary mirror into the science instruments

Trim flap
Helps stabilize the satellite

Multilayer sunshield
Five layers shield the observatory from the light and heat of the Sun and Earth

Solar power array
Always facing the Sun, panels convert sunlight into electricity to power the observatory

Earth-pointing antenna
Sends science data back to Earth and receives commands from NASA's Deep Space Network

Spacecraft bus
Contains most of the spacecraft steering and control machinery, including the computer and the reaction wheels

Star trackers
Small telescopes that use star patterns to target the observatory

- The **Ariane 5** is believed to be **one of the most reliable launch vehicles**.

➢ **Goal:**

○ To **search for the first galaxies** that formed after the Big Bang.

○ To **determine how galaxies evolved** from their earlier formation until now.

○ To **observe the formation of stars** from the first stages to the formation of planetary systems.

○ To **measure the physical and chemical properties** of planetary systems and investigate the potential for life in such systems.

➢ **Webb Vs Hubble Telescope:**

○ **Wavelength:**

- The JWST will **observe primarily in the infrared range** and provide coverage from 0.6 to 28 microns.

- The instruments on **Hubble see mainly in the ultraviolet and visible part of the spectrum.** It could observe only a small range in the infrared from 0.8 to 2.5 microns.

  ▪ The **infrared region of the electromagnetic spectrum** covers the wavelength range from approximately 0.7 to a few 100 microns.

○ **Size:**

- Webb's primary mirror has a **diameter of 6.5 metres while** Hubble's mirror was much **smaller – 2.4 metres in diameter.**

  ▪ So, Webb will have a **larger field of view compared to the camera on Hubble.**

- Webb also **carries a large sun shield**.

○ **Distance:**

- Webb's near- and mid-infrared instruments will **help study the first formed galaxies, exoplanets and birth of stars.**

  ▪ Hubble can see the equivalent of **"toddler galaxies"** while Webb Telescope will be able to see "**baby galaxies".**

➢ **Other Major Infrared Telescope:**

○ **Herschel Space Observatory Telescope**: It is an **infrared telescope,** launched in **2009** by the European Space Agency.

- It also **orbits the Sun similar to how Webb would.** The **primary difference between Webb and Herschel** is the **wavelength** range: Webb

Note:

goes from 0.6 to 28 microns, while Herschel covers 60 to 500 microns.

- Herschel's mirror is **smaller than Webb's.** It is 3.5 metres in diameter, while Webb's primary mirror has a diameter of 6.5 metres.

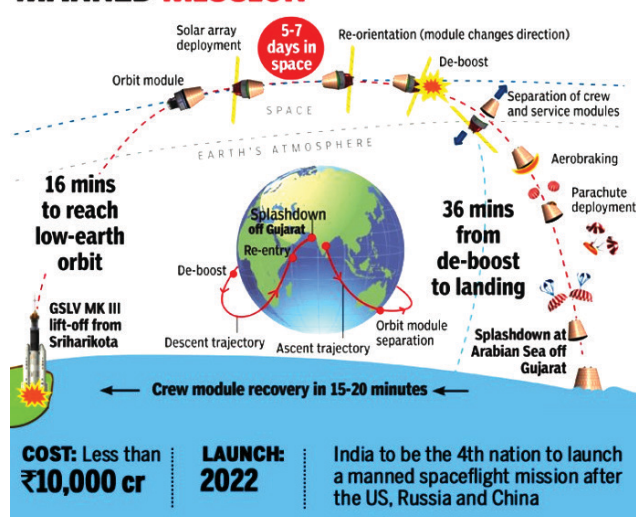# Gaganyaan Mission

Why in News

Recently, the **Union Minister of Atomic Energy and Space** informed that the crewed **Gaganyaan mission** will finally be launched in 2023.

➢ The **country's first space station** is likely to come up by 2030.

Key Points

➢ **About:**
  ○ Gaganyaan is a mission by the **Indian Space Research Organisation (ISRO).**
  ○ Under the Gaganyaan schedule:
    - Three flights will be **sent into orbit.**
    - There will be **two unmanned flights and one human spaceflight.**
  ○ The Gaganyaan system module, called the **Orbital Module, will** have three Indian astronauts, including a woman.
  ○ It will circle Earth at a **low-earth-orbit** at an altitude of 300-400 km from earth for 5-7 days.
  ○ With that launch, India will be in the **elite club of nations (America, China and Russia).**

MANNED MISSION

Solar array deployment · 5-7 days in space · Re-orientation (module changes direction) · Orbit module · De-boost · SPACE · Separation of crew and service modules · EARTH'S ATMOSPHERE · Aerobraking · 16 mins to reach low-earth orbit · Splashdown off Gujarat Re-entry · 36 mins from de-boost to landing · Parachute deployment · GSLV MK III lift-off from Sriharikota · De-boost · Descent trajectory · Ascent trajectory · Orbit module separation · Splashdown at Arabian Sea off Gujarat · Crew module recovery in 15-20 minutes

COST: Less than ₹10,000 cr · **LAUNCH:** 2022 · India to be the 4th nation to launch a manned spaceflight mission after the US, Russia and China

➢ **Payloads:**
  ○ The payload will consist of:
    - **Crew module** - spacecraft carrying human beings.
    - **Service module -** powered by two liquid propellant engines.
  ○ It will be equipped with **emergency escape and emergency mission abort.**

➢ **Launch:**
  ○ **GSLV Mk III,** also called the **LVM-3 (Launch Vehicle Mark-3,)** the three-stage heavy lift launch vehicle, will be used to launch Gaganyaan as it has the necessary payload capability.
    - Gaganyaan's major missions like the **test vehicle flight** for the validation of crew escape system performance and first uncrewed mission of Gaganyaan (G1) are scheduled during the beginning of the **second half of next year (2022).**
    - This will be followed by the **second uncrewed mission at the end of 2022** carrying **'Vyommitra'**, a spacefaring human robot developed by Isro, and finally the **first crewed Gaganyaan mission in 2023.**

➢ **Significance:**
  - It will **help in enhancement of science and technology levels** in the country and help inspire youth.
  - Gaganyaan will **involve numerous agencies, laboratories, disciplines, industries and departments.**
  ○ It will **help in the improvement of industrial growth.**
    - A new organisation, **IN-SPACe**, part of reforms to increase **private participation in the space sector** was announced last year (2021).
  ○ It will **help in the development of technology for social benefits.**
  ○ It will **help in improving international collaboration.**
    - One **International Space Station (ISS)** put up by multiple countries may not be enough. Regional ecosystems will be needed and Gaganyaan will focus on regional needs: food, water and energy security.

➢ **Other Upcoming Mission:**
  ○ **Shukrayaan Venus Mission (For 2023):**
    - The **Shukrayaan orbiter** will be the **first mission to Venus** by the **ISRO** and will study the planet for four years

Note:

- **L-1 Aditya Solar** (For 2022-23):
  - It is **India's first scientific expedition to study the Sun**.
  - It will be **ISRO's** **second space-based astronomy mission** after **AstroSat,** which was launched in 2015.
- **Chandrayaan-3 Missions (For 2022-23):**
  - **The Chandrayaan-3, a follow-up of the Chandrayaan-2 mission,** involves "various processes, including finalisation of configuration, subsystems realisation, integration, spacecraft level detailed testing and a number of special tests to evaluate the system performance on earth.

Facial Recognition Technology

Why in News

After a delay of three years, passengers will be able to use a face scan as their boarding pass at four airports **(Varanasi, Pune, Kolkata and Vijayawada)** in the country from 2022.

Key Points

➢ **Facial Recognition:**
  ❍ It is a **biometric technology** that uses distinctive features of the face to identify and distinguish an individual.
    - Over a period of almost 6 decades, it has **evolved in many ways- from looking at 3D contours of a face** to recognizing skin patterns.
  ❍ In the **Automated Facial Recognition System (AFRS)**, the large database (containing photos and videos of peoples' faces) is used to **match and identify the person.**
  ❍ Image of an unidentified person, taken from CCTV footage, is compared to the existing database using **Artificial Intelligence** technology, for pattern-finding and matching.
➢ **Working:**
  ❍ The facial recognition system **works primarily by capturing the face & its features** through the camera and then using various kinds of software to reconstruct those features.
  ❍ The **captured face along with its features is stored into a database**, which can be integrated with any

kind of software that may be used for security purposes, banking services, etc.

How Facial Recognition Systems Work

❶ Capturing and scanning
❷ Extracting Facial Data
❸ Comparing database
❹ Matching and Identifying
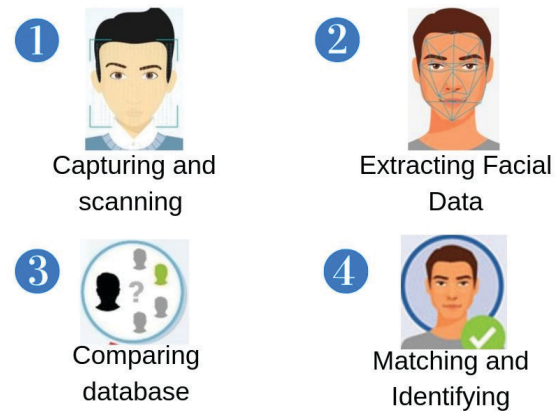
➢ **Need:**
  ❍ **Authentication:**
    - It is **used for identification and authentication purposes** with a success rate of almost 75%.
  ❍ **Force Multiplier:**
    - In India, where **there are just 144 constables per 1 lakh citizens**, this can act as a force multiplier. It neither requires too much manpower nor regular upgradation.
    - Hence, **this technology coupled with the present manpower** in place can act as a game-changer.
➢ **Challenges:**
  ❍ **Infrastructural Costs:**
    - Technologies like **Artificial Intelligence and Big Data are costly** to implement.
    - The size of stored information is extremely large and requires huge network & data storage facilities, which are currently not available in India.
  ❍ **Violation to Privacy:**
    - Government although **plans to address the question of privacy through the legal framework** like data privacy regime, but keeping in mind the objectives it **aims to achieve with the use of such technology**, it comes into conflict with one another.
  ❍ **Reliability & Authenticity:**
    - **As the data collected may be used in the court of law** during the course of a criminal trial, the

reliability and the admissibility of the data along with standards and procedure followed would be taken into consideration.

○ **Absence of Data Protection Law:**

  ● FRT systems in the **absence of data protection laws** that would mandate necessary safeguards in the collection and storage of user data is also a point of concern.

○ **Inherent Challenges:**

  ● Over time, the face may have **different-different facets** is also a point of concern.

Nuclear Energy & Climate

Why in News

According to a recent study published by the **Global Carbon Project (GCP),** the **global carbon dioxide (CO_2)** emissions are set to soar **4.9% in 2021,** compared with the previous year. This calls into **question the world's efforts to tackle the climate crisis**.

➢ The energy sector continues to be the largest emitter of **greenhouse gases,** with a **share of 40% — and rising.** In this context, nuclear energy is touted as a non-polluting option.

➢ However, the scientific community is divided on the opinion of **replacing nuclear energy with fossil fuel to tackle climate change.**

Key Points

➢ **Pros of Nuclear Energy:**

○ **Non-Intermittent Power Supply:** The consistent criticism of renewable energy like wind and solar is that they only **produce power when the wind is blowing or the sun is shining.**

  ● Nuclear power, however, is **not intermittent**, as nuclear power plants can run without any interruptions for a year and more without interruptions or maintenance, making it a more reliable source of energy.

○ **Cheaper to Run:** Nuclear power plants are cheaper to run than their coal or gas rivals.

  ● It has been estimated that even factoring in costs such as managing radioactive fuel and disposal nuclear plants cost between **33 to 50% of a coal plant and 20 to 25% of a gas combined-cycle plant.**

○ **Achieving Target of Paris Agreement:** With the adoption of the **Paris Agreement in 2015,** it is essential for all countries to control GHG emissions and limit the increase of global mean surface temperature by the end of the century to below 2°C relative to pre-industrial levels.

  ● Nuclear power can play an important part in meeting climate pledges.

➢ **Cons of Nuclear Energy:**

○ **Nuclear power is Not Emissions-Free:** Depending on the process of electricity generation, or take into account the entire life cycle of a nuclear power plant, the nuclear energy also produces CO_2 emissions.

  ● A report released in 2014 by the **UN's Intergovernmental Panel on Climate Change (IPCC),** for example, estimated a range of 3.7 to 110 grams of CO_2 equivalent per kilowatt-hour (kWh).

  ● Further, new nuclear power plants generate more CO_2 during construction than those built in previous decades, due to stricter safety regulations.

○ **Poor than Other Renewable Alternatives:** If the entire life cycle of a nuclear plant is included in the **calculation, nuclear energy certainly comes out ahead of fossil fuels like coal or natural gas.**

  ● However, the picture is drastically different when compared with renewable energy.

  ● According to several data sources, **nuclear power releases many times more CO_2 per kilowatt-hour** than photovoltaic solar panel systems, wind and hydro power.

○ **High Initial Cost:** Nuclear power plants are **about four times as expensive as wind or solar**, and take five times as long to build.

  ● Further, it takes too **long for nuclear energy** to become available (time taken to reach criticality).

  ● Thus, nuclear energy requires high inputs to have a noticeable effect on climate change.

○ **Effect of Climate Change on Nuclear Energy:** Nuclear energy itself has been affected by climate change.

  ● During the world's increasingly hot summers, several nuclear power plants have already had to be temporarily shut down or taken off the grid.

  ● Further, **nuclear power plants depend on nearby water sources** to cool their reactors, and with

many rivers drying up, those sources of water are no longer guaranteed.

○ **Threat of Nuclear Accident:** Anti-nuclear campaigners will cite the three major nuclear meltdowns of recent times, **Three Mile Island in 1979, Chernobyl in 1986 and most recently Fukushima in 2011.**

  ● Despite all the safety measures in place for these nuclear plants, different factors caused them to go into meltdown, which was devastating for the environment and for local inhabitants who had to flee the affected areas.

○ **Nuclear Waste:** One side effect of nuclear power is the amount of nuclear waste it produces.

  ● Nuclear waste can have **drastically bad effects on life**, causing cancerous growths, for instance, or causing genetic problems for many generations of animals and plants.

Nuclear Power plants in Operation	Nuclear Power Plants under Construction	Planned Nuclear Power Plants
▪ Rawatbhata (Rajasthan)	▪ Kakrapar 3&4 (Gujarat)	▪ Jaitapur (Maharashtra)
▪ Tarapur (Maharashtra)	▪ Rawatbhata (Rajasthan)	▪ Kovvada (Andhra Pradesh)
▪ Kudankulam (Tamil Nadu)	▪ Kudankulam 3&4 (Tamil Nadu)	▪ Mithi Virdi (Gujarat)
▪ Kakrapar (Gujarat)	▪ Kalpakkam PFBR (Tamil Nadu)	▪ Haripur (West Bengal)
▪ Kalpakkam (Tamil Nadu)		▪ Gorakhpur (Haryana)
▪ Narora (Uttar Pradesh)		▪ Bhimpur (Madhya Pradesh)
▪ Kaiga (Karnataka)		▪ Mahi Banswara (Rajasthan)
		▪ Kaiga (Karnataka)
		▪ Chutka (Madhya Pradesh)
		▪ Tarapur (Maharashtra)

Status of Nuclear Energy in India

➢ India has consciously proceeded to explore the possibility of tapping nuclear energy for the purpose of power generation.

➢ In this direction a **three-stage nuclear power programme** was formulated by **Homi Bhabha in the 1950s.**

➢ The **Atomic Energy Act, 1962** was framed and implemented with the set objectives of using two naturally occurring elements **Uranium** and **Thorium**

having good potential to be utilized as nuclear fuel in Indian Nuclear Power Reactors.

Abundance of Lithium in Stars

Why in News

Recently, Scientists have found a clue to the **mystery behind the high abundance of Lithium** in some evolved stars.

➢ The mystery is the reason behind the high abundance of Lithium in stars, which according to predicted models **must get destroyed in the hot plasma of the star.**

➢ Lithium is a **trace element on Earth,** and a key **component of rechargeable batteries.**

Key Points

➢ **Sample for Research:** The research involved the investigation of lithium among red giants showed that just about **1% of sun-like red giants** had a lithium-enriched surface.

➢ **Research Methodology:** The research surveyed (called **GALAH - named after a common Australian bird**) a collection of about **500,000 stars with well-determined physical and chemical properties**, including lithium abundances.

➢ **Findings of Research:** Regarding the reason for Lithium production, scientists have for the first time confirmed that all the **lithium-rich stars are burning helium in their core.**

○ They speculated that lithium production is linked to the **violent helium-core flash.**

○ It is proposed to be a simple and short sequence of **nuclear reactions involving a collision between the two stable helium isotopes which led to a stable lithium isotope.**
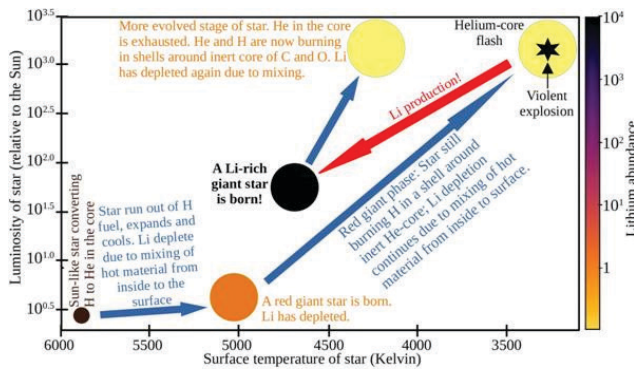
Note:

Figure 1: A cartoon illustration of the evolution of lithium (Li) in a Sun-like star. Color of the star symbol (filled circle) is proportional to star's Li abundance as shown in the color bar. Here, H is hydrogen, He is helium, C is carbon and O is oxygen.

❍ The survey revealed the rare presence of lithium-rich giants in all the **Sun-like low-mass stars.**

About Lithium

➢ **Properties of Lithium:**
  ❍ It is a **chemical element** with the symbol Li.
  ❍ It is a **soft, silvery-white metal.**
  ❍ Under standard conditions, it is the **lightest metal and the lightest solid element.**
  ❍ It is **highly reactive and flammable**, and must be stored in mineral oil.
  ❍ Lithium has become the **new 'white gold'** as the demand for high performing **rechargeable batteries** is rising.
  ❍ Rising global lithium demand and surging prices have drawn increased interest in the so-called **'lithium triangle' that spans parts of Argentina, Bolivia and Chile.**

➢ **Uses:**
  ❍ Lithium metal is used to make **useful alloys**.
    ● **For example,** with lead to make 'white metal' bearings for motor engines, with aluminium to make aircraft parts, and with magnesium to make armour plates.

  ❍ In Thermonuclear reactions.
  ❍ To make electrochemical cells. Lithium is an important component in **Electric Vehicles,** Laptops etc.

➢ **Countries with Largest Reserves:**
  ❍ Chile > Australia > Argentina

➢ **Lithium in India:**
  ● Researchers at the Atomic Minerals Directorate (under India's Atomic Energy Commission) have estimated lithium reserves of 14,100 tonnes in a small patch of land surveyed in **Southern Karnataka's Mandya district** recently.
  ● Also to be India's first ever Lithium deposit site found.

➢ **Other Potential Sites in India:**
  ❍ The major **mica belts in Rajasthan, Bihar, and Andhra Pradesh.**
  ❍ **Pegmatite** (igneous rocks) belts in Odisha and Chhattisgarh.
  ❍ **Brines of Sambhar and Pachpadra in Rajasthan, and Rann of Kachchh in Gujarat.**

➢ **Related Government Initiative:**
  ❍ India, through a newly state-owned company **Khanij Bidesh India Ltd**, had signed an agreement with an Argentinian firm to jointly prospect lithium in Argentina.
    ● **Khanij Bidesh India** Ltd has a specific mandate to acquire strategic mineral assets such as lithium and cobalt abroad.

Observer Status to International Solar Alliance: UN

Why in News

Recently, the **United Nations General Assembly (UNGA)** has granted Observer Status to the **International Solar Alliance (ISA).**

➢ It will help provide **for regular and well-defined cooperation between the Alliance and the United Nations** that would benefit global energy growth and development.

➢ Earlier, the **fourth general assembly of the ISA** was held, where a total of 108 countries participated in the assembly, including 74 member countries, 34 observer and prospective countries, 23 partner organisations and 33 special invitee organisations.

Note:

United Nation General Assembly
➢ **About**:
  ○ UNGA is the **main deliberative, policymaking and representative organ** of the UN.
  ○ All **193 Member States** of the UN are **represented in the General Assembly,** making it the only UN body with universal representation.
  ○ The President of the General Assembly is **elected each year by assembly to serve a one-year term** of office.
➢ **Meetings**:
  ○ Each year, in September, the full UN membership meets in the General Assembly Hall in New York for the annual General Assembly session, and general debate, which many heads of state attend and address.
    ● **Decisions** on important questions, such as those on peace and security, admission of new members and budgetary matters, require a two-thirds majority of the General Assembly.
    ● **Decisions** on other questions are by simple majority.

Key Points

➢ **About ISA:**
  ○ The ISA is an intergovernmental treaty-based organisation with a global mandate to catalyse solar growth by helping to reduce the cost of financing and technology.
  ○ ISA is the nodal agency for implementing **One Sun One World One Grid (OSOWOG),** which seeks to transfer solar power generated in one region to feed the electricity demands of others.
➢ **Launch:**
  ○ It is an **Indian initiative that was launched by the Prime Minister of India and the President of France on 30ᵗʰ November 2015 in Paris**, France on the side-lines of the UNFCCC **Conference of the Parties (COP-21),** with 121 solar resource rich countries lying fully or partially between the tropic of Cancer and tropic of Capricorn as prospective members.
➢ **Members:**
  ○ **101 members,** after being joined by the US.
➢ **Headquarters:**
  ○ The Headquarters is in India with its Interim Secretariat being set up in **Gurugram**.
➢ **Objectives:**
  ○ To collectively **address key common challenges to the scaling up of solar energy** in ISA member countries.
➢ **New ISA Programmes**:
  ○ New ISA programmes have been launched on **management of solar PV panels & battery usage waste and solar hydrogen programme.**
    ● The new Hydrogen initiative is aimed at enabling the use of solar electricity to produce hydrogen at a more affordable rate than what is available currently (USD 5 per KG), by bringing it down to USD 2 per KG.
➢ **Some Solar Energy Initiatives of India:**
  ○ **National Solar Mission** (a part of National Action Plan on Climate Change): **To establish India as a global leader in solar energy**, by creating the policy conditions for its diffusion across the country as quickly as possible.
  ○ **INDC's target:** It targets installing **100 GW grid-connected solar power plants by the year 2022.**
    ● This is in line with India's Intended Nationally Determined Contributions (INDCs) target to achieve about 40% cumulative electric power installed capacity from non-fossil fuel based energy resources and to reduce the emission intensity of its GDP by 33 to 35% from 2005 level by 2030.
  ○ International Solar Alliance (ISA) and One Sun One World One Grid (OSOWOG):
  ○ **Government Schemes:** Such as Solar Park Scheme, Canal bank & Canal top Scheme, Bundling Scheme, Grid Connected **Solar Rooftop Scheme** etc.
  ○ **First Green Hydrogen Mobility project:** National Thermal Power Corporation Limited (NTPC) Renewable Energy Ltd (REL) signed a Memorandum of Understanding with the Union Territory of Ladakh to set up the country's first Green Hydrogen Mobility project.
    ● **Green hydrogen** is produced by electrolysis of water using renewable energy (like Solar, Wind) and has a lower carbon footprint.

Note:

Solar Energy

➢ **About:**
  ❍ It is radiation from the Sun **capable of producing heat, causing chemical reactions, or generating electricity.**
  ❍ The total amount of solar energy incident on Earth is **vastly in excess of the world's current and anticipated energy requirements**. If suitably harnessed, this highly diffused source has the potential to satisfy all future energy needs.

➢ **Significance:**
  ● Solar Energy is available throughout the day **which is the peak load demand time.**
  ● Solar energy **conversion equipment have longer life and need lesser maintenance** and hence provide higher energy infrastructure security.
  ● **Low running costs** & grid tie-up capital returns (Net Metering).
  ● Unlike conventional thermal power generation from coal, **they do not cause pollution and generate clean power**.
  ● **Abundance of free solar energy** in almost all parts of the country.
  ● No overhead wires- **no transmission loss.**

Log4Shell Vulnerability

Why in News

A critical vulnerability called **Log4Shell**, detected last week in widely used **open-source logging software Apache Log4J**, is now being exploited by attackers to target organizations all over the world, including India.

➢ The vulnerability is **based on an open-source logging library** used in most applications by enterprises and even government agencies.

Key Points

➢ **Name**:
  ❍ The vulnerability is dubbed **Log4Shell** and is officially called **CVE-2021-44228.**
  ❍ CVE number is the unique number given to each vulnerability discovered across the world.
  ❍ The vulnerability was first detected on websites that were hosting servers of a Microsoft-owned game called **Minecraft**.

Vulnerability

➢ In computer security, a **vulnerability is a weakness which can be exploited** by a threat actor, such as an attacker, to cross privilege boundaries (i.e. perform unauthorized actions) within a computer system.

➢ To exploit a vulnerability, an attacker must have at least one applicable tool or technique that can connect to a system weakness. The vulnerabilities are **also known as the attack surface.**

Application Logging

➢ Application Logging is the process of **saving application events**. It varies from other event logs within IT systems in that the information collected by an application event log is dictated by each individual application, instead of the operating system.

➢ They help **provide visibility into how our applications are running** on each of the various infrastructure components.

➢ **Log data** contains information such as out of memory exceptions or hard disk errors.

➢ **Log4j library:**
  ❍ Log4j is open-source software maintained by a group of **volunteer programmers** as part of the nonprofit **Apache Software Foundation** and is a key **Java-logging framework**.
  ❍ The **Log4j library** is embedded in every **Java-based web service** or **application** and is used by a wide number of companies to enable **logging in on applications**.
    ● **Java** is one of the most commonly used programming languages in the world.
  ❍ The **problem impacts Log4j 2 versions** which is a very **common logging library** used by applications across the world.
    ● Logging lets developers see all the activity of an application.
  ❍ Tech companies such as Apple, Microsoft, Google all rely on this open-source library, as do enterprise applications from CISCO, Netapp, CloudFare, Amazon and others.

➢ **Severe Rating**:
  ❍ Log4Shell has been assigned a **severity rating of 10** by security experts, the highest level possible.
  ❍ The vulnerability could allow a hacker to take control of a system.

Note:

- Data supplied by an untrusted outsider – data that you are merely printing out for later reference, or logging into a file – **can take over the server on which you are doing the logging.**
- This **could turn** what should be a basic "**print**" **instruction into a leak-some-secret-data-out-onto-the-internet situation,** or even into a download-and-run-my-malware-at-once command.
- Simply put, a log entry that you intended to make for completeness, perhaps even for legal or security reasons, **could turn into a malware implantation event.**

➢ **Remote Code Execution:**
- ❍ The vulnerability can be **exploited by using a single line of code** and **allows attackers to execute remote commands** on a victim's system.
- ❍ It can be exploited by attackers to take control of any Java-based web server and carry out **Remote Code Execution (RCE) attacks**.
- ❍ In an RCE attack, attackers take control over the targeted system and can perform any function they want.
- ❍ The exploits for this vulnerability are already being tested by hackers, according to several reports, and it grants them access to an application, and could potentially let them run malicious software on a device or servers.

➢ **Impact of Log4Shell Vulnerability**:
- ❍ **Cryptocurrency Mining:** Most of the attacks they have observed appear to **focus on the use of cryptocurrency mining** at the expense of the victims. However, new variations of the original exploit are being introduced rapidly.
  - Successful exploitation of this vulnerability could **lead to disclosure of sensitive information**, addition or modification of data, or **Denial of Service (DoS).**
- ❍ **Global**: The **Australia-New Zealand (ANZ) area** was the most impacted region with **46% of corporate networks facing an attempted exploit.**
  - While North America was the least impacted with 36.4% of organizations facing such an attempt.
- ❍ **India**: About 41% of corporate networks in India have already faced an attempted exploit.
  - Indian companies are not more vulnerable than their western counterparts because **they use Java-based application**s.
  - **Indian companies are at high risk** because of their weak security posture, especially the smaller companies that may not have the know-how or resources to detect and fix the issue quickly.

■■■

Note:

Environment and Ecology

Climate Change & Infectious Diseases

Why in News

According to a recent study published in the journal **'Science of the Total Environment',** scientists have found that climate change parameters accounted for **9-18%** of the total infectious disease cases.

➢ Climate change driven by **anthropogenic activities** may challenge the gains in public health over the past many years, particularly in a country like India that ranks high in the list of **climate-vulnerable countries** in the world.

Key Points

➢ **Highlights of the Report:**
   ❍ **Vulnerability of Children:** Globally, it is estimated that children are to bear most of the burden of disease due to climate change, with the poorest disproportionately affected.
      ● The higher risk associated with children is due to the combination of physiological vulnerability as well as the risk of exposure.
   ❍ **Affecting Factors:** Climate parameters like temperature, humidity, rainfall, solar radiation, and wind speed were significantly associated with the infectious diseases-- gastrointestinal diseases, respiratory diseases, vector-borne diseases, and skin diseases.
   ❍ **Impact:** Socio-economic conditions and child anthropometry (study of the measurements and proportions of the human body) modified the climate-disease association with a high proportion

of children found suffering from stunting, wasting, and underweight conditions.

➢ **Example of Climate Change and Infectious Diseases Linkage:**
   ❍ Malaria is of great public health concern, and seems likely to be the vector-borne disease most sensitive to long-term climate change.
      ● Malaria varies seasonally in highly endemic areas. The link between malaria and extreme climatic events has long been studied in India, for example.
      ● Early last century, the river-irrigated Punjab region experienced periodic malaria epidemics.
      ● Excessive monsoon rainfall and high humidity was identified early on as a major influence, enhancing mosquito breeding and survival.
      ● Recent analyses have shown that the malaria epidemic risk increases around five-fold in the year after an **El Niño event.**

Environmental changes	Example diseases	Pathway of effect
Dams, canals, irrigation	Schistosomiasis	▲ Snail host habitat, human contact
	Malaria	▲ Breeding sites for mosquitoes
	Helminthiasies	▲ Larval contact due to moist soil
	River blindness	▼ Blackfly breeding, ▼disease
Agricultural intensification	Malaria	Crop insecticides and ▲vector resistance
	Venezuelan haemorraghic fever	▲ rodent abundance, contact
Urbanization, urban crowding	Cholera	▼ sanitation, hygiene; ▲water contamination
	Dengue	Water-collecting trash, ▲ Aedes aegypti mosquito breeding sites
	Cutaneous leishmaniasis	▲ proximity, sandfly vectors
Deforestation and new habitation	Malaria	▲ Breeding sites and vectors, immigration of susceptible people
	Oropouche	▲ contact, breeding of vectors
	Visceral leishmaniasis	▲ contact with sandfly vectors
Reforestation	Lyme disease	▲ tick hosts, outdoor exposure
Ocean warming	Red tide	▲ Toxic algal blooms
Elevated precipitation	Rift valley fever	▲ Pools for mosquito breeding
	Hantavirus pulmonary syndrome	▲ Rodent food, habitat, abundance

▲ increase   ▼ reduction

Note:

Great Indian Bustard (GIB)

Why in News

Recently, the Centre has approached the **Supreme Court** seeking **modification of its order directing** that all transmission cables in the habitat of the **Great Indian Bustard (GIB)** be laid underground.

Key Points

➢ **Background:**
  ❍ Earlier this year (2021), in a **bid to check the dwindling numbers** of the **endangered Great Indian Bustard and Lesser Florican**, a Supreme Court bench directed that **overhead power lines be laid underground**, wherever feasible, passing along the habitat of the birds in Rajasthan and Gujarat.

➢ **Concerns Raised:**
  ❍ **Implications for the Power Sector in India:**
    ● The area falling in Rajasthan and Gujarat **contains a large proportion of the country's total solar and wind energy potential.**
    ● Laying power lines underground will **escalate the cost of renewable energy production** and hurt **India's renewable energy** cause.
      ▪ **Energy transition is essential for reducing emission** and controlling climate change and India has made international commitments including under the agreement signed in Paris in 2015 under the **United Nations Framework Convention on Climate Change (UNFCCC)** for transition to non-fossil fuels and for emission reduction.
      ▪ India has set a **target to achieve installed renewable energy capacity** (excluding large Hydro) of 175 GW by 2022 and 450 GW by 2030.
  ❍ **Chances of Renewable Energy to Remain Untapped:**
    ● So far, **only a miniscule 3%** of the estimated potential of around 263 GW renewable energy in this area has been tapped.
    ● If the remaining potential stays untapped, an additional **93,000 MW of coal fired capacity** will be **needed to replace the unutilised renewable energy in the future** which would cause an adverse direct impact on the environment.

Great Indian Bustard (GIB)

➢ **About:**
  ❍ It is the **State bird of Rajasthan** and is considered India's most critically endangered bird.
  ❍ It is considered the **flagship grassland species**, representing the health of the grassland ecology.
  ❍ Its population is **confined mostly to Rajasthan and Gujarat.** Small populations occur in Maharashtra, Karnataka and Andhra Pradesh.
  ❍ The bird is **under constant threats due to collision/electrocution** with power transmission lines, hunting (still prevalent in Pakistan), habitat loss and alteration as a result of widespread agricultural expansion, etc.

➢ **Protection Status:**
  ❍ **International Union for Conservation of Nature Red List:** Critically Endangered
  ❍ **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix 1
  ❍ **Convention on Migratory Species (CMS):** Appendix I
  ❍ **Wildlife (Protection) Act, 1972:** Schedule 1

➢ **Measures taken to protect GIB:**
  ❍ **Species Recovery Programme:**
    ● It is kept under the **species recovery programme** under the **Integrated Development of Wildlife Habitats** of the Ministry of Environment, Forests and Climate Change (MoEFCC).
  ❍ **National Bustard Recovery Plans:**
    ● It is currently being implemented by conservation agencies.

Note:

○ **Conservation Breeding Facility:**

- MoEF&CC, Rajasthan government and Wildlife Institute of India (WII) have also established a **conservation breeding facility** in **Desert National Park** at Jaisalmer in June 2019.
- The objective of the programme is to build up a captive population of Great Indian Bustards and to release the chicks in the wild for increasing the population.

○ **Project Great Indian Bustard:**

- It has been launched by the Rajasthan government with an **aim of constructing breeding enclosures** for the species and developing infrastructure to reduce human pressure on its habitats.

○ **Eco-Friendly Measures:**

- **Task Force for suggesting eco-friendly measures** to mitigate impacts of power transmission lines and **other power transmission infrastructures** on wildlife including the Great Indian Bustard.

Ken-Betwa Inter-Linking Project

Why in News

Recently, the Union Cabinet has approved the funding and implementation of **Ken-Betwa inter-linking of rivers project.**

➢ The project envisages transferring water from the Ken river to the Betwa river, **both tributaries of the Yamuna**. The project will be completed in **eight years.**

Key Points

➢ **About:** It is the first project under the **National Perspective Plan** for interlinking of rivers. The Ken-Betwa Link Canal will be 221 km long, including a 2-km long tunnel.

Ken and Betwa Rivers

➢ The Ken and Betwa rivers **originate in MP** and are the **tributaries of Yamuna.**

➢ **Ken meets with Yamuna in Banda** district of UP and with **Betwa in Hamirpur** district of UP.

➢ Rajghat, Paricha and Matatila dams are over the Betwa river.

➢ Ken River passes through the **Panna tiger reserve.**

➢ **Background:** The idea of linking Ken with Betwa got a major push in August 2005, when a tripartite

memorandum of understanding for the preparation of a **Detailed Project Report (DPR)** was signed among the Centre and governments of Madhya Pradesh and Uttar Pradesh.

TWO STATES, TWO RIVERS AND A LINK
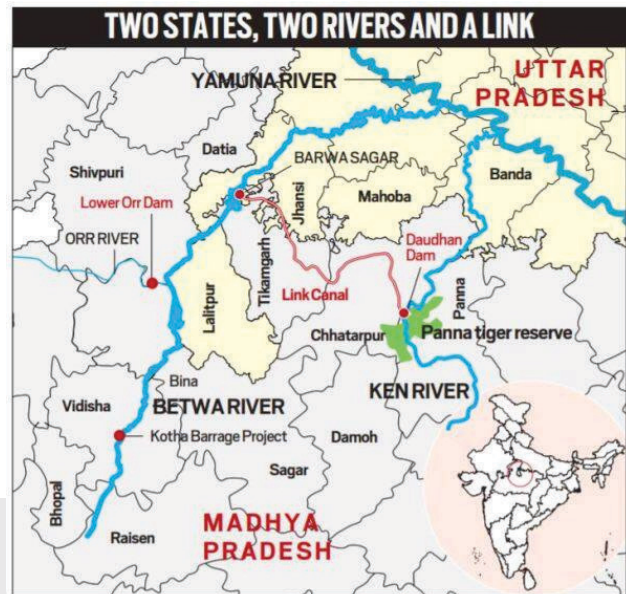
○ In **2008, the Centre declared KBLP a National Project**. Later, it was included as part of the **Prime Minister's package** for development of the drought-prone Bundelkhand region.

○ In 2021, a memorandum of agreement was signed for implementation of this project among the Ministry of Jal Shakti and the two states.

➢ **Implementing Agency:**

○ A Special Purpose Vehicle (SPV) called **Ken-Betwa Link Project Authority** (KBLPA) will be set up to implement the project.

○ The **National Interlinking of Rivers Authority (NIRA)** has the power to set up SPV for individual link projects.

➢ **Phases of the Project:** The project has two phases, with mainly four components.

○ **Phase-I** will involve one of the components — **Daudhan Dam complex** and its subsidiary units such as Low Level Tunnel, High Level Tunnel, Ken-Betwa Link Canal and power houses.

○ **Phase-II** will involve three components — **Lower Orr Dam, Bina Complex Project and Kotha Barrage.**

➢ **Benefits:** The project lies in Bundelkhand, a drought-prone region, which spreads across **13 districts of Uttar Pradesh and Madhya Pradesh.**

Note:

○ According to the Jal Shakti Ministry, the project will be of immense benefit to this **water-starved region.**

○ Further, **it will pave the way for more interlinking of river projects** to ensure that scarcity of water does not become an inhibitor for development in the country.

○ According to the Jal Shakti Ministry, the project is expected to provide **annual irrigation** of 10.62 lakh hectares, **supply drinking water** to about 62 lakh people, and generate 103 MW of **hydropower** and 27 MW of **solar power.**

➢ **Associated Challenges:**

○ **Submergence of Panna Tiger Reserve:** According to the National Water Development Agency, the reservoir of Daudhan dam will involve "a submergence of 9000 ha area, out of which 5803 ha comes under **Panna Tiger Reserve (PTR).**

● To mitigate this, three WildLife Sanctuaries (WLS), viz. **Nauradehi, Rani Durgawati** of MP and **Ranipur WLS** of UP are planned to be **integrated with PTR.**

○ **Several Clearances Required:** Various types of clearances are required, such as:

● **Techno-economic clearance:** To be given by the Central Water Commission;

● **Forest clearance and environmental clearance:** To be given Ministry of Environment, Forests & Climate Change

● **Resettlement and rehabilitation plan of tribal population:** to be given by the Ministry of Tribal Affairs.

History of Interlinking of Rivers in India

➢ **Colonial Idea:**

○ The idea was first mooted during the British Raj when **Sir Arthur Cotton,** a British general and irrigation engineer suggested **linking the Ganga and the Cauvery for navigational purposes.**

➢ **Projects undertaken by the British:**

○ In the past, several river linking projects have been taken up. For instance, **the Periyar Project,** under which transfer of water from **Periyar basin to Vaigai basin** was envisaged, was commissioned in 1895.

● **Other projects** such as Parambikulam Aliyar, Kurnool Cuddapah Canal, Telugu Ganga Project, and Ravi-Beas-Sutlej too were undertaken.

➢ **National water Grid:**

○ In the **1970s**, the **idea of transferring surplus water from a river to a water-deficit area was mooted** by the then Union Irrigation Minister **Dr K L Rao.**

○ He suggested construction of a National Water Grid for transferring water from water-rich areas to water-deficit areas.

➢ **Garland Canal:**

○ Later, **Captain Dinshaw J Dastoor** proposed a **Garland Canal to redistribute the water from one area to another**. However, the government did not pursue these two ideas further.

➢ **National Perspective Plan:**

○ It was not until August 1980 that the **Ministry of Irrigation prepared a National Perspective Plan for water resources development** envisaging inter-basin water transfer.

○ The NPP comprised two components: **Himalayan Rivers Development;** and **Peninsular Rivers Development.**

○ Based on the NPP, the **National Water Development Agency (NWDA)** identified 30 river links– 16 under the Peninsular component and 14 under Himalayan Component.

○ The **Ken-Betwa Link Project is one of the 16 projects** under the peninsular component.

Perform, Achieve and Trade Scheme

Why in News

A recent report released by the **Centre for Science and Environment (CSE)** mentions that the **Perform, Achieve and Trade (PAT) scheme** introduced in 2008 is not effective.

➢ The PAT scheme was introduced to improve energy efficiency in Indian industries and consequently reduce greenhouse gas.

➢ The report attributed the inefficiency of the scheme to **non-transparency**, **unfastened targets** and **neglected deadlines**.

Note:

Centre for Science and Environment (CSE)
➤ CSE is a **public interest research** and **advocacy organisation** based in New Delhi.
➤ It researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable.
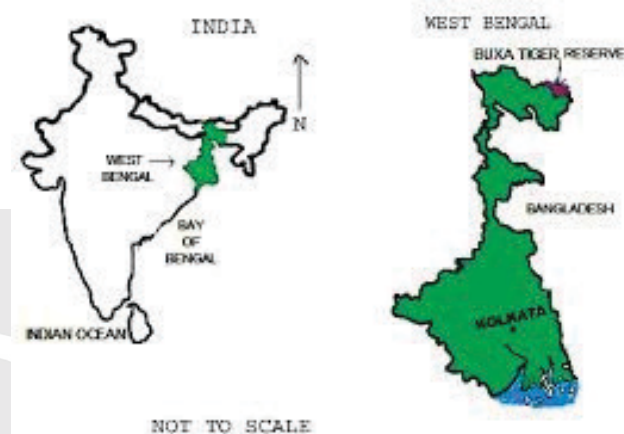
Key Points

➤ **About**:
  ❍ It is a **market-based mechanism** to further accelerate as well as incentivize energy efficiency in the large energy-intensive industries.
  ❍ The **Energy Savings Certificates (ESCerts)** were introduced in India in 2011 under the PAT by the **Bureau of Energy Efficiency (BEE)** under the **National Mission of Energy Efficiency**.
    ● NMEEE is one of the eight national missions under the **National Action Plan on Climate Change (NAPCC)** launched by the Government of India in the year 2008.
➤ **Energy Savings Certificates (ESCerts):**
  ❍ This market- based mechanism is facilitated through the **trading of Energy Savings Certificates (ESCerts)** which are issued to those plants who have overachieved their targets.
  ❍ The **underachievers are entitled to purchase ESCerts** through two power exchanges - **Indian Energy Exchange (IEX)** and Power Exchange India Limited (PXIL).
  ❍ Industries that take part in this scheme are referred to as **designated shoppers (DC)**.
➤ **Sectors Covered**:
  ❍ PAT covered about **13 energy-intensive sectors**: Thermal power plants (TPP), cement, aluminium, iron and steel, pulp and paper, fertiliser, chlor-alkali, petroleum refineries, petrochemicals, distribution companies, railways, textile and commercial buildings (hotels and airports).
➤ **Other initiatives to Promote Energy Conservation and Energy Efficiency**:
  ❍ **Standards and Labeling**
  ❍ **Energy Conservation Building Code (ECBC)**
  ❍ **Demand Side Management**
  ❍ **SAATHEE Portal**

Buxa Tiger Reserve: West Bengal

Why in News

Recently, a Royal Bengal tiger was sighted at the Buxa reserve - the first such sighting in 23 years.
➤ Historically, tigers were distributed throughout the reserve including the southernmost ranges and fringe areas. However, **the reserve has a low tiger density at present**.

NOT TO SCALE

Key Points

➤ **About**:
  ❍ Buxa Tiger Reserve is **situated in the Alipurduar Sub-division of Jalpaiguri District, West Bengal.** It was **created in 1983** as the **15th tiger reserve of India.**
    ● It was **declared as a National Park in January 1992.**
  ❍ The northern boundary of Buxa Tiger Reserve runs along the **international border with Bhutan.** The **Sinchula hill range** lies all along the northern side of Buxa National Park and the Eastern boundary touches that of Assam State.
  ❍ The **main rivers** flowing across the Tiger Reserve are **Sankosh, Raidak, Jayanti, Churnia, Turturi, Phashkhawa, Dima** and **Nonani.**
➤ **Tiger Corridor**:
  ❍ The reserve has **corridor connectivity across the border** with the forests of Bhutan in the North, on the East it has linkages with the Kochugaon forests, Manas Tiger Reserve and on the West

Note:

with the Jaldapara National Park. The following corridor links are important:

- **Buxa-Titi (via Torsa):** Connecting Rangamati Reserve Forest area of Buxa Tiger Reserve with Titi Reserve Forest.
- **Buxa-Titi (via Beech and Bharnabari Tea estate):** Connecting Bharnabari Reserve Forest of Buxa Tiger Reserve and Titi Reserve Forest situated south of Dalsingpara tea estate by passing through Bharnabari tea estate and Beech tea estate.
- **Nimati-Chilapata (Buxa-Chilapata):** Facilitating elephant movement between Nimati Range of Buxa Tiger Reserve and Chilapata Reserve Forest, thereby maintaining elephant movement between Buxa Tiger Reserve and Jaldapara Wildlife Sanctuary (West Bengal).
- **Buxa-Ripu at Sankosh (Sankosh):** This corridor is a contiguous forest that connects Buxa Tiger Reserve of West Bengal with the Ripu Reserve Forest of Kachugaon Forest Division, Assam.

- The **corridors mentioned above form part of North East and Brahmaputra Valley tiger landscape**, providing **crucial linkages** for the dispersal of tigers to various protected areas like, Buxa, **Manas Tiger Reserve** (Assam), Phipsoo Wildlife Sanctuary in Bhutan and Jaldapara National Park.

➢ **Flora**:
- The forests of the reserve can be broadly classified as the '**Moist Tropical Forest'.**

➢ **Fauna**:
- Some important species found in the reserve are **Indian Tiger** (*Panthera tigris tigris*), **Leopard** (*Panthera pardus*), **Clouded Leopard** (*Neofelis nebulosa*), **Hog badger** (*Arctonyx collaris)*, **Jungle Cat** (*Felis chaus*) etc.

➢ **Other Protected Areas in West Bengal:**
- Gorumara National Park
- **Sundarbans National Park**
- Neora Valley National Park
- Singalila National Park
- Jaldapara National Park

Tiger
➢ **Conservation Status:**
- **Indian Wildlife (Protection) Act, 1972:** Schedule I

- **International Union for Conservation of Nature (IUCN) Red List:** Endangered.
  - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix I.

➢ **Tigers in India:**
- India is home to over **70% of the tiger population globally.**
- India is home to **53 tiger reserves spread across 18 states** and the last **tiger census** of 2018 showed a rise in the tiger population.
- India **achieved the target of doubling the tiger population four years** ahead of schedule (2022) of the St. **Petersburg Declaration** on tiger conservation.
- India's strategy of tiger conservation attaches **topmost importance to involving local communities.**

➢ **Tiger Conservation Projects in India:**
- **Project Tiger 1973:** Project Tiger is a **Centrally Sponsored Scheme** of the Ministry of Environment, Forests and Climate Change (MoEFCC) launched in 1973. It provides havens for tigers in the country's national parks.
  - Recently, the **National Tiger Conservation Authority (NTCA)** has designated the combined areas of the **Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary** as the **53rd Tiger Reserve in India.**
- **National Tiger Conservation Authority:** It is a statutory body under the MoEFCC and was established in 2006 following the recommendations of the Tiger Task Force.

Radioactive Pollution in Water

Why in News

Recently, radioactive pollution in water and associated health impacts have been reported in many parts of the globe.

Key Points

➢ **About:**
- Radioactivity is the **phenomenon of spontaneous emission of particles** or waves from the unstable

nuclei of some elements. There are **three types of radioactive emissions: Alpha, Beta and Gamma.**

- Alpha particles are positively charged He (Helium) atoms, beta particles are negatively charged electrons and gamma rays are neutral electromagnetic radiations.

○ Radioactive elements are naturally found in the earth's crust. **Uranium, thorium and actinium are three NORM (Naturally Occurring Radioactive Materials)** series that contaminate water resources.

○ A small amount of radiation is found in all types of water **but the extended amount of radiation is harmful to human health**. Radioactivity in drinking water **can be determined by a gross alpha test.**

○ Radioactivity **is measured in Becquerel (SI unit) or in Curie.** The **unit Sievert** measures the quantity of radiation absorbed by human tissues.

➢ **Sources:**
○ **Natural:**
- **Radiotoxic Elements in Aquatic System: Radium**, a descendant of the NORM series, is one of the radiotoxic elements found in aquatic systems and can be penetrated into groundwater via (i) aquifer rock dissolution (ii) decaying of 238U and 232Th, or (iii) desorption processes.
  - Radium is a radionuclide formed by the decay of uranium (U) and thorium (Th) in the environment.
- **Magma:** Sometimes, magma also releases radioactive gases into the environment.
- **Soil Sediments:** Percolation of NORM from the soil sediments to the aquifer **causes groundwater contamination.**
○ **Anthropogenic:**
- **Atmospheric Deposition of Cosmogenic Radionuclides:**
  - Atmospheric deposition (both dry and wet) of cosmogenic radionuclides add radioactive nuclei in the surface water.
  - Cosmogenic radionuclides are radioactive isotopes which are produced by natural processes and distributed within the Earth system.
- **Nuclear Reactors and Warheads:**
  - Nuclear reactors and nuclear warhead experiments are the key sources of human-

induced radionuclides discharge. Nuclear reactors produce radioisotopes (Cobalt-60, Iridium-192, etc) that hand out as sources of gamma radiation in radiotherapy and numerous industrial appliances.
  - Nuclear power plants placed at the coastal regions add to the radiological contaminants in the marine water by releasing atomic wastes. Water is also used as coolants in these powerhouses, which also get contaminated.
- **Dumping of Radioactive Waste:**
  - The application of radioactive elements in **nuclear weapons, X-rays, MRI and other medical equipment causes their exposure to human beings**. Dumping of these radioactive **wastes in surface water bodies causes water pollution.**
- **Mining:**
  - Mining activities of radioactive elements like uranium and thorium also pollute surface and groundwater.
- **Nuclear Accidents:**
  - Radioactive pollution due to nuclear submarine accidents and sinking have been reported.
  - The Rocky Flats plant in Colorado, Fukushima and the Chernobyl nuclear disaster are some examples of such nuclear accidents.

➢ **Health Impacts:**
○ **Radiation Syndrome:**
- Human tissues absorb radiation through polluted water and foodstuff, which can cause serious health risks. High doses of radiation can cause acute radiation syndrome or dermal radiation injury.
○ **Disorders in Human Physiology:**
- Exposure to radiation causes various disorders in human physiology, including cancer, leukaemia, genetic mutations, cataracts, etc.
○ **Mutation and Structural Alteration:**
- Genetic effects ionizing r**adiation induces mutations in germ cells** (male sperm cells and female egg cells), resulting in **structural alteration in germ cell DNA** that are passed on to offsprings.
- Hereditary disorders can lead to **premature death and severe mental illness.**

Note:

Cyclone Management Framework

Why in News

Recently, **Cyclone** Jawad has hit the east coast of India particularly the **State of Odisha and Andhra Pradesh.**

➢ Although the cyclone weakened and didn't cause much damage, it highlighted that India's cyclone management approach was **largely based on evacuation.**

➢ Thus, India's cyclone management must incorporate **Mitigation and Preparedness measures.** Mitigation means measures taken prior to the impact of a disaster to minimize its effects.

Key Points

➢ **About Cyclone:** Cyclones are rapid inward air circulation around a low-pressure area. The air circulates in an **anticlockwise direction** in the Northern hemisphere and **clockwise** in the Southern hemisphere.

  ❍ Cyclones are usually accompanied by violent storms and bad weather.

  ❍ The word Cyclone is derived from the **Greek word Cyclos meaning the coils of a snake.**

  ❍ It was coined by **Henry Piddington** because the tropical storms in the Bay of Bengal and the Arabian Sea appear like coiled serpents of the sea.

Fig. 3: Vertical structure of a mature Tropical Cyclone
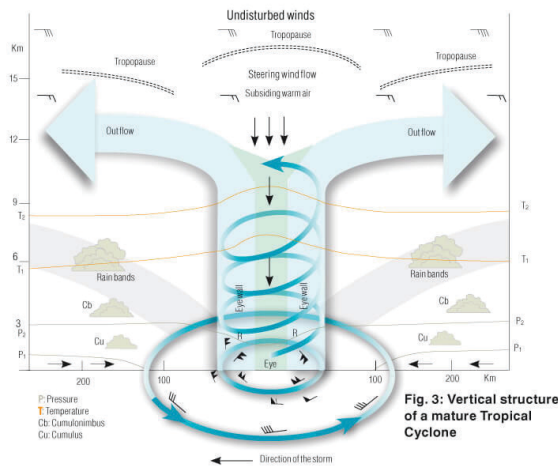
➢ **Classification of Cyclone:** There are two types of cyclones:

  ❍ **Tropical cyclones:** Tropical cyclones develop in the region between the **Tropics of Capricorn and Cancer.**

  ● They are large-scale weather systems developing **over tropical or** subtropical waters, where they get organized into surface wind circulation.

  ● The **World Meteorological Organization** uses the term 'Tropical Cyclone' to cover weather systems in which winds exceed 'Gale Force' (minimum of 63 km per hour)

  ❍ **Extra Tropical cyclones:** They are also called Temperate cyclones or middle latitude cyclones or Frontal cyclones or Wave Cyclones.

  ● Extra tropical cyclones occur in temperate zones and high latitude regions, though they are **known to originate in the Polar Regions.**

Case Study of India's Cyclone Management

➢ **Cyclone Phailin & Fani:** India has gained much recognition globally for its swift action during some of the major cyclones in the recent past such as **Cyclone Phailin (2012), Fani (2019), etc.**

  ❍ The state government of Odisha has started undertaking **mega evacuation drives in the aftermath of the Super Cyclone in 1999.**

  ● For example, more than a million people were evacuated for both these events.

  ❍ The evacuations were considered to be the **primary reason for the limited human deaths reported.**

  ❍ However, **there is an inadequate focus on response aspects** other than evacuation, such as measures to minimize crop damage, assistance for quick harvest, adequate relief and timely distribution of post-cyclone assistance such as for damaged houses, etc.

➢ **Cyclone Jawad:** Too little attention being given to key disaster response functions other than evacuation.

  ❍ The current threat from Cyclone Jawad, which comes at a time when crops in most parts are nearing harvest.

  ❍ There was **distress selling and premature harvesting because of the cyclone.**

Mitigation and Preparedness Measures for Cyclone

➢ **Hazard Mapping:** Hazard mapping for cyclones represents the results of cyclone hazard assessment on a map**, showing the frequency/probability of occurrences of various intensities or durations.**

Note:

- ➢ **Land Use Planning:** Policies should be in place to regulate land use and enforcement of building codes.
  - ❍ Vulnerable areas should be kept for parks, grazing grounds or flood diversion instead of human settlements.
- ➢ **Engineered Structures:** Some examples of **general good construction practice** include:
  - ❍ Constructing buildings on stilts or on earthen mounds.
  - ❍ Buildings should be wind and water resistant.
  - ❍ Buildings storing food supplies should be protected against the winds and water.
- ➢ **Cyclone Shelters:** Cyclone Shelters are necessary for areas vulnerable to recurrent cyclones.
  - ❍ The construction of cyclone shelters **requires substantial funding, therefore, generally linked to support from government or external donors.**
  - ❍ For construction of cyclone shelters, the most appropriate sites should be selected, using the **Geographical Information System**.
- ➢ **Flood Management:** Flooding will result from a cyclonic storm. Storm surges will **flood** the coastal areas. Heavy rains will bring in **flash floods.**
  - ❍ **Embankments** along the rivers, sea walls along the coasts may keep water away from the flood plains.
  - ❍ Water flow can be regulated through **construction of reservoirs, check dams and alternate drainage channels/routes.**
- ➢ **Mangrove Plantation:** **Mangroves** protect the coastal area from storm surge and wind accompanied with cyclones.
  - ❍ Communities should participate in the mangrove plantation which could be organized by the local authorities, NGOs or the community itself.
  - ❍ Mangroves also help in erosion-control and coastal conservation.
- ➢ **Public Awareness Generation:** Public awareness through education is the key to saving many lives. It has been proved that most of the damage to lives and livelihoods are due to lack of public education and awareness.
- ➢ **End to End Warning System:** There is a need for an end to end early warning which will **enable people at all levels to respond quickly and effectively.**
  - ❍ The community should be well aware of the warning system, the warning signals and the source where they can get the early warning of cyclones.

- ➢ **Community Participation:** Since the local people are the persons best aware of the **strengths and weaknesses** of their area, location, culture and customs, some mitigation measures should be developed by the community themselves.
  - ❍ These community mitigation activities can be achieved with the support from government and other civil society organizations.

Governmental Initiatives for Cyclone Management in India:

- ➢ **National Cyclone Risk Mitigation Project:**
  - ❍ India initiated this project to undertake structural and non-structural measures to mitigate the cyclone's effects.
  - ❍ The aim of the project is **to protect the vulnerable local communities from the impact of cyclones** and other hydro-meteorological calamities.
  - ❍ After the formation of **National Disaster Management Authority (NDMA)**, the management of the Project was transferred to NDMA in September, 2006.
- ➢ **Integrated Coastal Zone Management (ICZM) Project:**
  - ❍ The Ministry of Environment, Forest and Climate Change (MoEFCC) has unveiled the **draft Environmental and Social Management Framework (ESMF)** for Integrated coastal management.
  - ❍ The draft plan will dictate how prospective infrastructure projects would be assessed for clearance by laying out guidelines for coastal States.
- ➢ **Coastal Regulation Zones (CRZ)**: The coastal areas of seas, bays, creeks, rivers, and backwaters which get influenced by tides up to **500 m from the high tide line (HTL)** and the land between the low tide line (LTL) and the high tide line have been declared as **coastal regulation zone (CRZ)** in 1991.
  - ❍ The coastal regulation zones have been declared by the Ministry of Environment, Forest and Climate change under the **Environment Protection Act 1986.**
- ➢ **Color Coding of Cyclones:**
  - ❍ It is a weather warning that is issued by the **India Meteorological Department** (IMD) to alert people ahead of natural hazards.
  - ❍ The four colors used by IMD are **Green, Yellow, Orange, and Red.**

Note:

Wildlife Conservation in India

Why in News

According to the recent data by the **Wildlife Crime Control Bureau (WCCB)** and **State Forest and Police Authorities**, in the past three years (2018-2020), about 2054 cases were registered for killing or illegal trafficking of wild animals in India.

➢ In order to control this, the WCCB has conducted a number of **species-specific enforcement operations** with coordination of State Enforcement Agencies.

➢ WCCB is a **statutory multi-disciplinary body** established by the Government of India under the Ministry of Environment and Forests, to combat organized wildlife crime in the country. It has its **headquarter in New Delhi**.

Key Points

➢ **Impact of Illegal Wildlife Trade:**
   ○ **Species face extinction** because of demands arising out of illegal wildlife trade.
   ○ **Overexploitation of the wildlife resources** due to its illegal trade creates imbalances in the ecosystem.
   ○ Illegal wildlife trade as part of the illegal trade syndicates **undermines the economy of the country** and thereby creates social insecurity.
   ○ Wild plants that provide **genetic variation for crops** (natural source for many medicines) are threatened by the illegal trade.

➢ **Various Species-Specific Enforcement Operations:**
   ○ **Operation Save Kurma:** To focus on the poaching, transportation and illegal trade of live **turtles and tortoises.**
   ○ **Operation Turtshield:** It was taken up to tackle the illegal trade of live **turtles.**
   ○ **Operation Lesknow:** To gain attention of enforcement agencies towards the illegal wildlife trade **in lesser-known species of wildlife.**
   ○ **Operation Clean Art:** To drag attention of enforcement agencies towards illegal wildlife trade **in Mongoose hair brushes.**
   ○ **Operation Softgold:** To tackle **Shahtoosh Shawl** (made from Chiru wool) illegal trade and to spread awareness among the weavers and traders engaged in this trade.

○ **Operation Birbil:** To curb illegal trade **in wild cat and wild bird species.**

○ **Operation Wildnet:** It was aimed to draw the attention of the enforcement agencies within the country to focus their attention on the **ever increasing illegal wildlife trade over the internet** using social media platforms.

○ **Operation Freefly:** To check illegal trade of **live birds.**

○ **Operation Wetmark:** To ensure **prohibition of sale of meat of wild animals** in wet markets across the country.

➢ **India's Domestic Legal Framework for Wildlife Conservation:**
   ○ **Constitutional Provisions for Wildlife:**
      ● The **42nd Amendment Act, 1976,** Forests and Protection of Wild Animals and Birds was transferred from State to **Concurrent List.**
      ● **Article 51 A (g)** of the Constitution states that it shall be the **fundamental duty** of every citizen to protect and improve the natural environment including forests and Wildlife.
      ● **Article 48 A** in the **Directive Principles of State policy**, mandates that the State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country.
   ○ **Legal Framework:**
      ● **Wildlife (Protection) Act, 1972**
      ● **Environment Protection Act, 1986**
      ● **The Biological Diversity Act, 2002**

➢ **India's Collaboration With Global Wildlife Conservation Efforts:**
   ○ **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**
   ○ **Convention on the Conservation of Migratory Species of Wild Animals (CMS)**
   ○ **Convention on Biological Diversity (CBD)**
   ○ **World Heritage Convention**
   ○ **Ramsar Convention**
   ○ **The Wildlife Trade Monitoring Network (TRAFFIC)**
   ○ **United Nations Forum on Forests (UNFF)**
   ○ **International Whaling Commission (IWC)**
   ○ **International Union for Conservation of Nature (IUCN)**
   ○ **Global Tiger Forum (GTF)**

■■■

History

Highlights

- Guru Tegh Bahadur
- Chhatrapati Shivaji Maharaj
- Paika Rebellion: 1817
- C Rajagopalachari
- 65th Mahaparinirvan Diwas
- Indo-Pak War: 1971
- 1857 Uprising

Guru Tegh Bahadur

Why in News

Recently, the Prime Minister of India has paid tribute to **Sri Guru Teg Bahadur Ji** on his martyrdom day.

Key Points

➢ **About Guru Teg Bahadur (1621-1675):**
  ○ Guru Teg Bahadur was the **ninth Sikh Guru**, often venerated as the **'Protector of Humanity' (Srisht-di-Chadar)** by the Sikhs.
  ○ He is **known as a great teacher,** Guru Tegh Bahadur was also an **excellent warrior, thinker, and poet,** who wrote detailed descriptions of the nature of God, mind, body, and physical attachments among other spiritual things.
  ○ His writings are housed in the sacred text, **'Guru Granth Sahib,'** in the form of 116 poetic hymns.
  ○ He was also an avid traveler and played a key role in setting up preaching centers throughout the Indian subcontinent.
  ○ During one such mission, he founded the **town of Chak-Nanki** in Punjab, which **later became a part of Punjab's Anandpur Sahib**.
  ○ In the year 1675, Guru Tegh Bahadur was executed in Delhi under the **orders of the Mughal Emperor Aurangzeb.**

➢ **About Sikhism:**
  ○ The word 'Sikh' in the Punjabi language **means 'disciple'**. Sikhs are the disciples of God who follow the writings and teachings of the Ten Sikh Gurus.
  ○ Sikhs believe in **one God (Ek Onkar)**. They believe they should remember God in everything they do. This is called **simran**.
  ○ The Sikhs call their faith **Gurmat** (Punjabi: **"the Way of the Guru"**).
  ○ According to Sikh tradition, **Sikhism** was established by **Guru Nanak** (1469–1539) and subsequently led by a succession of nine other Gurus.
  ○ The development of Sikhism was influenced by the **Bhakti movement** and **Vaishnava Hinduism.**
  ○ The **Khalsa** upholds the highest Sikh virtues of commitment, dedication and a social conscience.
  ○ The Khalsa are men and women who have undergone the Sikh baptism ceremony and who strictly follow the **Sikh Code of Conduct and Conventions.**
  ○ They wear the prescribed physical articles of the faith (**5K's**: **Kesh** (uncut hair), **Kangha** (a wooden comb), **Kara** (a iron bracelet), **Kachera** (cotton underpants) and **Kirpan** (an iron dagger).
  ○ Sikhism condemns blind rituals such as fasting, visiting places of pilgrimage, superstitions, worship of the dead, idol worship etc.
  ○ It preaches that people of different races, religions, or sex are all equal in the eyes of God.
  ○ **Sikh Literature:** The Adi Granth is believed by Sikhs to be the abode of the eternal Guru, and for that reason it is known to all Sikhs as the Guru Granth Sahib.

Ten Gurus of Sikh Religion	
Guru Nanak Dev (1469-1539)	➢ He was the first guru of Sikh and the founder of Sikh religion. ➢ He started the GURU KA LANGAR.

Note:

	➢ He was the contemporary of Babur.
	➢ Kartarpur corridor was commemorated on the 550th birth anniversary of Guru Nanak Dev.
Guru Angad (1504-1552)	➢ He invented the new script called Guru-Mukhi and popularized and expanded the system of Guru ka Langar.
Guru Amar Das (1479-1574)	➢ He introduced the ceremony of the Anand Karaj Marriage. ➢ He abolished the custom of Sati and Purdah system among the Sikhs. ➢ He was a contemporary of Akbar.
Guru Ram Das (1534-1581)	➢ He founded Amritsar in 1577 on the land granted by Akbar. ➢ He started the construction of Golden Temple/Swarna mandir at Amritsar.
Guru Arjun Dev (1563-1606)	➢ He composed the Adi Granth in 1604. ➢ He led to the completion of construction of the Golden temple. ➢ He was acclaimed as Shaheeden-de-Sartaj. ➢ He was executed by Jahangir on charges of helping prince Khusrau.
Guru Hargobind (1594-1644)	➢ He led to the transformation of the Sikh Community into a Military community. He is known as "Soldier Saint". ➢ He led to the establishment of Akal Takht and fortified the Amritsar City. ➢ He waged wars against Jahangir and Shah Jahan.
Guru HarRai (1630-1661)	➢ He was a man of peace thus devoted most of his life in maintaining peace with Aurangzeb and doing missionary work.
Guru Har Krishan (1656-1664)	➢ He was the youngest guru of all and was given the title of Guru at a very early age of 5. ➢ He was summoned by Aurangzeb against anti-islamic blasphemy.

Guru Teg Bahadur (1621-1675)	➢ He founded Anandpur Sahib.
Guru Gobind Singh (1666-1708)	➢ He founded a warrior community known as Khalsa in 1699. ➢ He introduced a new rite "Pahul". ➢ He joined Bahadur Shah's as a noble. ➢ He was the last Sikh Guru in human form and he passed the Guruship of Sikhs to the Guru Granth Sahib.

Chhatrapati Shivaji Maharaj

Why in News

Recently, the President of India paid tributes to **Chhatrapati Shivaji Maharaj.**

➢ Earlier this year, the **Goa government released a short film on Chhatrapati Shivaji** on the occasion of the anniversary of **Maratha king's coronation day (6th June).**

Key Points

➢ **Birth:**
  ○ He was **born on 19th February, 1630** at **Shivneri Fort in District Pune** in the present-day state of Maharashtra.
  ○ He was born to **Shahaji Bhonsle**, **a Maratha general** who held the jagirs of Pune and Supe under the Bijapur Sultanate and Jijabai, a pious woman whose religious qualities had a profound influence on him.

➢ **Early Life:**
  ○ He displayed his **military zeal for the first time in 1645** when as a teenager, he successfully got control of the Torna Fort which was under Bijapur.
  ○ He also **acquired the Kondana Fort**. Both these forts were under Adil Shah of Bijapur.

➢ **Important Battle:**

Battle of Pratapgad, 1659	Fought at the fort of Pratapgad near the town of Satara, Maharashtra, between the forces of the **Maratha king Chhatrapati Shivaji Maharaj and the Adilshahi general Afzal Khan.**

Note:

Battle of Pavan Khind, 1660	Fought at a mountain pass in the vicinity of fort Vishalgad, near the city of Kolhapur, Maharashtra, **between the Maratha Sardar Baji Prabhu Deshpande and Siddi Masud of Adilshahi.**
Sacking of Surat, 1664	Fought near the city of Surat, Gujarat, between **Chhatrapati Shivaji Maharaj and Inayat Khan, a Mughal captain.**
Battle of Purandar, 1665	Fought between the **Mughal Empire and Maratha Empire.**
Battle of Sinhagad, 1670	Fought on the fort of Sinhagad near the city of Pune, Maharashtra between **Tanaji Malusare, a commander of Maratha ruler Shivaji Maharaj and Udaybhan Rathod**, fortkeeper under Jai Singh I who was a Mughal Army Chief.
Battle of Kalyan, 1682-83	**Bahadur Khan of the Mughal Empire defeated the Maratha army** and took over Kalyan.
Battle of Sangamner, 1679	Fought between the **Mughal Empire and Maratha Empire.** This was the **last battle in which the Maratha King Shivaji fought.**

➢ **Conflict with Mughals:**
  ○ He raided **Mughal territory near Ahmednagar** and in Junnar, 1657.
  ○ Aurangzeb responded to the raids by sending Nasiri Khan, who defeated the forces of Shivaji at Ahmednagar.
  ○ Shivaji **defeated a large force of Shaista Khan** (Aurangzeb's maternal uncle) and the Bijapur army in Pune,1659.
  ○ In 1664, the wealthy Mughal trading port of Surat was sacked by Shivaji.
  ○ In June 1665, the **Treaty of Purandar** was signed between **Shivaji and Raja Jai Singh I (representing Aurangzeb)**.
    ● As per this treaty, **many forts were relinquished to the Mughals** and it was agreed that Shivaji would meet Aurangzeb at Agra. Shivaji also agreed to send his son Sambhaji as well.

➢ **Arrest of Shivaji:**
  ○ When Shivaji went to meet the Mughal emperor at Agra in 1666, the Maratha warrior felt he was insulted by Aurangzeb and stormed out of the court.
  ○ He was arrested and kept prisoner. The clever **escape of Shivaji** and his son from imprisonment in disguise out of Agra is legendary today.
  ○ After that there was peace between the Marathas and the Mughals until 1670.
  ○ The **jagir of Berar** which was granted to Sambhaji by the Mughals was taken back from him.
  ○ Shivaji in response **attacked and recovered many territories** from the Mughals in a short span of four months.
  ○ Through his military tactics, Shivaji acquired a large part of the land in the Deccan and western India.

➢ **Granted Title:**
  ○ He took on the titles of **Chhatrapati, Shakakarta, Kshatriya Kulavantas and Haindava Dharmodhhaarak.**
  ○ The Maratha Kingdom **founded by Shivaji** grew larger over time and became the dominant Indian power in the early 18th century.

➢ **Death:**
  ○ Shivaji **passed away in Raigad in 1680** and cas cremated at the Raigad Fort.

Administration under Shivaji

➢ **Central Administration:**
  ○ It was **founded by Shivaji** for the sound system of administration which was greatly inspired from the **Deccan style of administration.**
  ○ Most of the administrative reforms were inspired from **Malik Amber reforms in Ahmednagar.**
  ○ The **King was the supreme head of state** who was assisted by a group of eight ministers known as the **'Ashtapradhan'.**
  ○ The peshwa, also known as the **mukhya pradhan**, originally headed the advisory council of the raja Shivaji.

➢ **Revenue Administration:**
  ○ Shivaji abolished the **Jagirdari System** and replaced it with **Ryotwari System**, and changes in the position of hereditary revenue officials which was popularly known as **Deshmukhs, Deshpande, Patils and Kulkarnis.**

Note:

○ Shivaji strictly supervised the **Mirasdars who had hereditary rights in land.**

○ The revenue system was patterned on the **Kathi system of Malik Amber** in which every piece of land was measured by Rod or Kathi.

○ **Chauth and Sardeshmukhi** were other sources of income.

● **Chauth** amounted to 1/4th of the standard which was paid to Marathas as a safeguard against Shivaji's forces raiding Non-Maratha territories.

● **Sardeshmukhi** was an additional levy of 10% demanded from areas outside of the kingdom.

➢ **Military Administration:**

○ Shivaji organised a **disciplined and efficient army.**

○ The ordinary soldiers were paid in cash, but the chief and military commander were paid through **jagir grants (Saranjam or Mokasa).**

○ The army consists of Infantry i.e. Mavali foot soldiers, Cavalry i.e. Horse riders and equipment holders, Navy.

Raigad Fort

➢ The fort, which was earlier called Rairi, was the **seat of the Maratha clan Shirke in the 12th century.**

○ The **British Gazette states the fort** was known to early Europeans as the **Gibraltar of the East.**

➢ In 1956, **Chhatrapati Shivaji captured it from the More's of Javli** who were under the suzerainty of the Adilshahi Sultanate.

➢ In 1662, Shivaji formally changed the **fort's name to Raigad** and added a number of structures to it.

➢ By 1664, the fort had **emerged as the seat of Shivaji's government.**

➢ The **fort not only helped Shivaji challenge the supremacy of the Adilshahi dynasty** but also opened up the routes towards Konkan for the extension of his power.

➢ As the **Marathas under the leadership of Shivaji gained strength in their struggle against the Mughals**, the announcement of a sovereign, independent state was made.

Paika Rebellion: 1817

Why in News

Recently, the Centre has said that the **Paika rebellion cannot be called the first War of Independence.**

➢ It has also been suggested that it would be included as a **case study in the Class 8 National Council of Educational Research and Training (NCERT)** history textbook.

➢ For the first time in 2017, the **Odisha state cabinet had passed a proposal** to formally urge the centre to **declare the Paika rebellion as the first war of Independence.**

➢ In 2018 the Government released the **commemorative coin and postage stamp** in memory of the Paika Rebellion.

Key Points

➢ **About:**

○ The Paikas (pronounced "**paiko**", literally **'foot soldiers'**), were a class of military retainers had been **recruited since the 16th century by kings in Odisha** from a variety of social groups to render martial services in return for hereditary rent-free land **(nish-kar jagirs)** and titles.

○ When the British arrived they were **peasant militias of the Gajapati ruler Mukund Dev II, of Odisha**.

➢ **British Oppression:**

○ The Paikas **lost their estates when the new colonial establishments and land revenue settlements of the British came into force**.

● **Establishment of British rule in Odisha** was followed by a policy of repression against the Paikas. They lost their traditional position in the society and their lands were taken away.

○ The **continuous interference in the economy and revenue systems** led to exploitation and oppression of the peasants and farmers eventually triggering a rebellion against the British.

● Before and after the revolt of the Paikas in Khurda came risings in **Paralakhemundi** (1799-1814), **Ghumusar** (1835-36) and **Angul** (1846-47); the rebellion of Kondhs in **Kalahandi** (1855); and the **Sabara** Rebellion of 1856-57, again in **Paralakhemundi**.

- These rebellions were **led by propertied sections** whose position was undermined by colonial interventions

➤ **Paika Rebellion\Revolt:**

  ○ The Paika Bidroha (Paika Rebellion) of 1817 **took place nearly 40 years before the first sepoy mutiny.**

  ○ **Bakshi Jagabandhu Bidyadhar Mohapatra Bharamarbar Rai**, the **highest-ranking military general of Mukund Dev II**, and erstwhile holder of the lucrative Rodanga estate, **led an army of Paikas** to join the uprising of the Kondhs.They confronted the British on **2nd April 1817.**

    - The Paikas were **supported by the rajas, zamindars, village heads and ordinary peasants.** The rebellion quickly spread to different parts of the province.

  ○ Government buildings in **Banapur were set on fire**, policemen killed and the British treasury looted.

  ○ Over the next few months, the **revolt continued but was eventually overpowered by the British arm**y. Bidyadhar was imprisoned in 1825 and died while still in jail four years later.

C Rajagopalachari

Why in News

Recently, **C. Rajagopalachari** is remembered on his **143rd birth anniversary**.

➤ He is remembered for his contributions to the freedom struggle, administrative and intellectual prowess.

Remembering
Bharat Ratna
Shri C Rajagopalachari
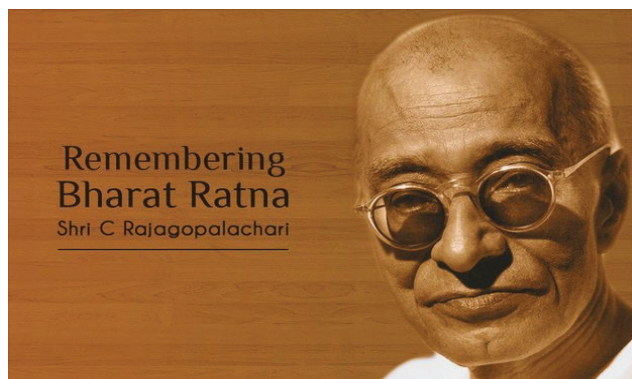
Key Points

➤ **About:**

  ○ **Chakravarti Rajagopalachari**, popularly known as **Rajaji**, was born on **December 10th in 1878.**

○ He studied law from the **Presidency College in Madras (now Chennai)**, and began practice in Salem in the year 1900.

○ In 1916, he formed the **Tamil Scientific Terms Society**, an organisation that translated scientific terms of chemistry, physics, mathematics, astronomy and biology into simple Tamil words.

○ He became the **chairperson of the municipality of Salem** in 1917 and served there for two years.

○ In 1955, he was honoured with **India's highest civilian award Bharat Ratna**.

○ He died on **25th December, 1972.**

➤ **Political Career:**

○ **Pre-independence**:

  - He **joined the Indian National Congress** and acted as a **legal advisor.**

  - He defended Indian Independence activist, **P. Varadarajulu Naidu** against charges of **sedition** in 1917.

  - He was elected as the first **premier of the Madras Presidency** in 1937.

  - In **1939**, Rajagopalachari took a **step to abolish untouchability and caste prejudice** and issued the **Madras Temple Entry Authorisation** and **Indemnity Act**.

    ■ After the Madras Temple Entry Authorisation **Dalits were allowed to enter inside temples.**

  - At the time of Partition, he was appointed as the **Governor of West Bengal**.

  - In 1947, during the absence of Lord Mountbatten, the last British viceroy and independent **India's first Governor General**, **Rajagopalachari was temporarily chosen to hold the office.**

    ■ Therefore he was the **last governor general of India.**

○ **Post-independence**:

  - Rajagopalachari took over as the **chief minister of Madras** in April 1952.

  - During his tenure as the chief minister of Madras, he actively participated in reforming the education system and bringing changes in the society.

    ■ He also made Hindi a compulsory language in Tamil schools.

    ■ His move led to protests against him, following which Rajagopalachari resigned as the CM.

Note:

- He was a social conservative but advocated a **free market economy**.
  - He wanted to **reintroduce the Varna system** into society.
  - He believed in the **significance of religion for society**.
- Rajagopalachari was made **Home Affairs Minister** after the death of **Sardar Patel** in 1950.
- In 1959, he resigned from the Indian National Congress and founded the **Swatantra Party.**

➢ **Role in Freedom Struggle**:

○ **Non-Cooperation Movement:** He met **Mahatma Gandhi** for the first time in 1919 in Madras (now Chennai) and participated in Gandhi's **Non-Cooperation Movement**.
- He was also **jailed for two years in Vellore in 1920.**
- After his release, he opened his own ashram to promote **Gandhi's principles of Hindu-Muslim harmony** and the **abolition of untouchability.**
- He was also a proponent of khadi.

○ **Vaikom Satyagraha**: He was also involved in the **Vaikom Satyagraha** movement against untouchability

○ **Dandi March**: When Gandhi led the **Dandi March** to break the salt law in 1930, Rajagopalachari carried out a similar march at **Vedaranyam** in the **Madras Presidency**.
- He also became the editor of Gandhi's newspaper, **Young India**.

○ **Quit India Movement**: During the **Quit India Movement**, Rajagopalachari opposed Gandhi.
- He was of the view that the British were going to leave the country eventually, so launching another Satyagraha was not a good decision.

➢ **Literary Contributions:**

○ He wrote a **Tamil translation of the Ramayana**, which was later published as Chakravarthi Thirumagan.
- The book won the **Sahitya Akademi Award** in Tamil language in 1958.

65ᵗʰ Mahaparinirvan Diwas

Why in News

Recently, the Prime Minister has paid tributes to **Babasaheb Dr. Bhimrao Ambedkar** on Mahaparinirvan Diwas.

Key Points

➢ **About Mahaparinirvan Diwas:**

○ Parinirvana, regarded as **one of the major principles as well as goals of Buddhism**, is a **Sanskrit term** which means release or freedom after death.
- As per the Buddhist text **Mahaparinibbana Sutta, the death of Lord Buddha** at the age of 80 is considered as the original Mahaparinirvana.

○ 6ᵗʰ December is **observed to commemorate the unfathomable contribution** to society given by **Dr. Bhimrao Ambedkar** and his achievements. Owing to **Ambedkar's status as a Buddhist leader**, his **death anniversary** is referred to as Mahaparinirvana Diwas.

➢ **Babasaheb Dr. Bhimrao Ambedkar:**

○ **Birth:** 14ᵗʰ April 1891 in Mhow, Central Province (now Madhya Pradesh).

○ **Brief Profile:**
- Dr. Ambedkar was a **social reformer, jurist, economist, author, polyglot orator** and a scholar of comparative religions.
  - In 1916, he received a **doctorate degree from Columbia University**, becoming the **first Indian to do so.**
- He is known as the **Father of the Indian Constitution** and was **India's first law minister.**

○ **Related Information:**
- He established a fortnightly newspaper **"Mooknayak" in 1920** which laid the foundations of an assertive and organised Dalit politics.
- He founded the **Bahishkrit Hitkarini Sabha (1923)**, devoted to spreading education and culture amongst the downtrodden.
- He was appointed by the **Bombay Presidency Committee** to work in the **Simon Commission** in 1925.

- He led the **Mahad Satyagraha in March 1927** to challenge the regressive customs of the Hindus.
- The **Kalaram Temple Movement of 1930** formed a pivotal role in the Dalit movement in India in which Ambedkar led a protest outside the Kalaram temple which did not allow Dalits to enter the temple premises.
- He participated in **all three round-table conferences.**
- In 1932, he signed the **Poona pact** with Mahatma Gandhi, which abandoned the idea of separate electorates for the depressed classes (Communal Award).
  - However, the **seats reserved for the depressed classes** were increased from 71 to 147 in provincial legislatures and to 18% of the total in the Central Legislature.
- In 1936, he was elected to the **Bombay Legislative Assembly** as a legislator (MLA).
- In 1947, he was appointed **Chairman of the Drafting Committee** for the new Constitution.
- He accepted Prime Minister Nehru's invitation to become **Minister of Law in the first Cabinet of independent India.**
- He resigned from the Cabinet in 1951, over differences on the Hindu Code Bill (aimed at reforming Hindu society).
- In 1956, he converted to Buddhism.
- He passed away on 6th December 1956.
- He was conferred **Bharat Ratna** in 1990.
- **Chaitya Bhoomi** is a memorial to **B.R. Ambedkar which is located in Dadar, Mumbai.**

○ **Important Works:** Newspaper Mooknayak (1920); The Annihilation of Caste (1936); The Untouchables (1948); Buddha Or Karl Marx (1956), The Buddha and His Dhamma (1956), etc.

○ **Quotes:**
- **'Democracy is not merely a form of government.** It is primarily a mode of associated living, of conjoint communicated experience. It is essentially an attitude of respect and reverence towards fellow men'.
- "I measure the progress of a community by the degree of progress which women have achieved".
- 'Humans are mortal. So are ideas. An idea needs propagation as much as a plant needs watering. Otherwise, both will wither and die'.

Indo-Pak War: 1971

Why in News

Recently, **National Cadet Corps** (NCC) has announced to conduct 'Azadi ki Vijay Shrankhla aur Sanskritiyon ka Mahasangam' event as part of **Azadi ka Amrit Mahotsav (75th Anniversary of India's Independence).**

➢ Under **Azadi ki Vijay Shrankhla' program,** the bravehearts of the **Indo-Pakistan 1971 War** are being honoured at 75 locations throughout the country.

Bangladesh Liberation War
Refugee and troop movements (1971)

➢ **Sanskritiyon ka Maha Sangam** entails a special national integration camp will be conducted in New Delhi wherein **candidates from all over the country will participate in cultural exchange.**

Key Points

➢ **Timeline of India-Pakistan War 1971:**
  ○ **Political Imbalance:** In the 1950s the centralised Pakistani state was run undemocratically by a **military-bureaucratic oligarchy dominated by West Pakistan.**
    - Under this system, **Bengalis had no political say**. But West Pakistan dominance was challenged in 1970 during general elections.

- ❍ **Landslide Victory of Awami League:** East Pakistan' **Sheikh Mujibur Rahman's Awami League** had a clear overall majority, enough to become the prime minister.
  - ● However, west Pakistan was not willing to let a leader from its eastern provincial wing rule the country.
- ❍ **Cultural Differences:** The then West Pakistan (present Pakistan), under the leadership of Yahya Khan, **started a brutal assault on the people of East Pakistan** (present Bangladesh) who were demanding freedom because of the language and cultural differences between the two regions.
  - ● After political negotiations failed, the Pakistani army under General Yahya Khan decided to start the crackdown.
- ❍ **Operation Searchlight:** West Pakistan kicked in operation searchlight across the whole of East Pakistan on **March 26, 1971.**
  - ● This resulted in **millions of Bangladeshis fleeing to India**, mainly West Bengal, Assam, Meghalaya and Tripura.
  - ● West Bengal, in particular, was massively burdened by the onrush of the refugees and the state appealed to the then Prime Minister Indira Gandhi and her government for assistance for food and shelter.
- ❍ **Indo-Bangla Cooperation:** With the subsequent bravery of the Indian Army coupled with the spirited fight put up by **Mukti Bahini** — the Bangladeshi guerilla resistance movement consisting of the Bangladeshi military, paramilitary and civilians — defeated the Pakistani forces.
- ❍ **Defeat of Pakistani Military**: On December 16, 1971, Lt Gen Amir Abdullah Khan Niazi, the Chief Martial Law Administrator of East Pakistan and Commander of Pakistan Army forces located in East Pakistan **signed the Instrument of Surrender.**
  - ● Over **93,000 Pakistani troops surrendered** to the Indian forces and Bangladesh Liberation forces making it the largest surrender since World War II.
  - ● The intervention brought a conclusion to the war in **13 short days and led to the birth of a new nation.**
- ➢ **Significance of Indo-Pakistan War For India:**

- ❍ **Diminishing the Two-front War Threat:** The East Pakistan uprising provided India with the opportunity to break up Pakistan and eliminate the threat of a two-front war in any future confrontation.
  - ● Although the eastern front remained largely inactive in 1965, it tied down substantial military resources that could have been deployed to greater effect in the western theatre.
- ❍ **Departure from Non-Alignment:** The India-Pakistan war was preceded by the signing of the **Indo-Soviet Treaty in August 1971, which boosted India diplomatically.**
  - ● The victory defined India's much broader role in foreign politics.
  - ● Many countries in the world, including the United States, realised that the balance of power had shifted to India in South Asia.

1857 Uprising

Why in News

A memorial-museum is being built by the Haryana government at Ambala to honour the martyrs of the **1857 uprising**.

- ➢ The objective of constructing a war memorial in Ambala is to **immortalise the bravery of those unsung heroes** who never got credit for scripting the first revolt (against the British).
- ➢ It will also highlight **Haryana's contribution to the freedom struggle** with a special emphasis on revolt incidents at Ambala.

Key Points

- ➢ **About the 1857 Revolt**:
  - ❍ It was the first expression of organised resistance against the British East India Company
  - ❍ It began as a **revolt of the sepoys of the British East India Company's army** but eventually secured the participation of the masses.
  - ❍ The revolt is known by several names: **the Sepoy Mutiny (**by the British Historians)**, the Indian Mutiny, the Great Rebellion (**by the Indian Historians)**, the Revolt of 1857, the Indian Insurrection,** and **the First War of Independence (**by **Vinayak Damodar Savarkar**).

Note:

Revolt in Haryana

➢ **Centre of Revolt**: According to the historian **KC Yadav,** the 1857 uprising actually started in Ambala, and not Meerut as popularly believed.
  ○ He had documented his findings in his book titled '**The Revolt of 1857 in Haryana'**.
➢ **Important Leaders**: Rao Tula Ram in Ahirwal, Gaffur Ali and Harsukh Rai in Palwal, Dhanu Singh in Faridabad, Nahar Singh in Ballabhgarh etc. were the important leaders of revolt in Haryana.
➢ **Battles Fought**: Many battles were fought by the rulers of the states and by the farmers also, sometimes defeating the British army.
  ○ Some of the most important battles were fought at **Sirsa**, **Sonipat**, **Rohtak** and **Hissar.**
  ○ In Sirsa the famous **battle of Chormar** was fought**.**

➢ **Causes of Revolt:**
  ○ **Political Cause**:
    ● **British policy of expansion:** The political causes of the revolt were the British policy of expansion through the **Doctrine of Lapse** and direct annexation.
      ■ A large number of Indian rulers and chiefs were dislodged, thus arousing fear in the minds of other ruling families who apprehended a similar fate.
    ● By applying the doctrine of lapse, **Dalhousie annexed** the States of **Satara** (1848 A.D.), **Jaitpur, and Sambalpur** (1849 A.D.), **Baghat** (1850 A.D.), **Udaipur** (1852 A.D.), **Jhansi** (1853 A.D.), and **Nagpur** (1854 A.D.)
  ○ **Social and Religious Cause:**
    ● The rapidly spreading Western Civilisation in India was alarming concerns all over the country.
    ● The **abolition of practices like sati and female infanticide**, and the legislation legalizing **widow remarriage**, were believed as threats to the established social structure.
    ● Introducing western methods of education was directly challenging the orthodoxy for Hindus as well as Muslims
  ○ **Economic Cause**:
    ● In rural areas, peasants and zamindars were infuriated by the **heavy taxes on land** and the **stringent methods of revenue collection** has led to the losing the lands that peasants had held for generations.
      ■ Large numbers of **sepoys belonged to the peasantry class** and had family ties in villages, so the grievances of the peasants also affected them.
    ● After the Industrial Revolution in England, there was an **influx of British manufactured goods** into India, which ruined industries, particularly the textile industry of India
      ■ Indian handicraft industries had to compete with cheap machine-made goods from Britain.
  ○ **Military Causes**:
    ● **Indian sepoys formed more than 87% of the British troops** in India but were considered inferior to British soldiers.
    ● An Indian sepoy was paid less than a European sepoy of the same rank.
    ● They were required to serve in areas far away from their homes.
    ● In 1856 Lord Canning issued the **General Services Enlistment Act** which **required that the sepoys must be ready to serve even on British land across the sea.**
  ○ **Immediate Cause**:
    ● The Revolt of 1857 eventually broke out over the incident of greased cartridges.
      ■ A rumour spread that the **cartridges of the new Enfield rifles were greased with the fat of cows and pigs**.
      ■ Before loading these rifles the sepoys had to bite off the paper on the cartridges.
      ■ Both Hindu and Muslim sepoys refused to use them.

Centres of Revolt, Leadership and Suppression		
Places of Revolt	**Indian Leaders**	**British Officials who suppressed the revolt**
Delhi	Bahadur Shah II	John Nicholson
Lucknow	Begum Hazrat Mahal	Henry Lawrence
Kanpur	Nana Saheb	Sir Colin Campbell
Jhansi & Gwalior	Lakshmi Bai & Tantia Tope	General Hugh Rose

Note:

Bareilly	Khan Bahadur Khan	Sir Colin Campbell
Allahabad and Banaras	Maulvi Liyakat Ali	Colonel Oncell
Bihar	Kunwar Singh	William Taylor

Cause of Failure of Revolt

➢ **Limited Uprising:** The revolt was mainly confined to the Doab region.
  ○ The large princely states, **Hyderabad, Mysore, Travancore, and Kashmir**, as well as the smaller ones of **Rajputana**, did not join the rebellion
  ○ The southern provinces did not take part in it.
➢ **No Effective Leadership:** The rebels lacked an effective leader. Although Nana Saheb, Tantia Tope and Rani Lakshmi Bai were brave leaders, they could not offer effective leadership to the movement as a whole.
➢ **Limited Resources:** The rebels lacked resources in terms of men and money. The English, on the other hand, received a steady supply of men, money and arms in India.
➢ **No Participation of the Middle Class:** The English educated middle class, the rich merchants, traders and zamindars of Bengal helped the British to suppress the revolt.

Outcome of Revolt

➢ **End of Company Rule**: The revolt marked the end of the East India Company's rule in India.
  ○ Lord Canning at a **Durbar in Allahabad** announced that Indian administration was taken over by Queen Victoria, which, in effect, meant the British Parliament.
➢ **Religious Tolerance**: It was promised and due attention was paid to the customs and traditions of India.
➢ **Administrative Change**: The Governor General's office was replaced by that of the Viceroy.
  ○ The rights of Indian rulers were recognised.
  ○ The Doctrine of Lapse was abolished.
  ○ The right to adopt sons as legal heirs was accepted.
➢ **Military Reorganisation:** The ratio of British officers to Indian soldiers increased but the armoury remained in the hands of the English. It was arranged to end the dominance of the Bengal army.

Note:

Social Issues

Highlights

- *Human Rights Violations*
- *International Day of Persons with Disabilities*
- *SMILE Scheme*
- *Main Bhi Digital 3.0 Campaign*
- *Pradhan Mantri Shram Yogi Maan-Dhan Pension Scheme*
- *Trafficking in Persons (Prevention, Care & Rehabilitation) Draft Bill 2021*

Human Rights Violations

Why in News

Recently data related to **human rights violations in states** was provided by the Ministry of Home Affairs in **Rajya sabha.**

➢ Around 40% of **human rights violation cases** lodged annually by the **National Human Rights Commission (NHRC)** in the past three financial years till this **31st October (2021)** were from **Uttar Pradesh.**

Key Points

➢ **About:**
- ○ A **human rights violation** is the disallowance of the freedom of thought and movement to which all humans legally have a right.
- ○ While individuals can violate these rights, the leadership or government of civilization most often belittles marginalized persons.
- ○ This, in turn, **places these people in the cycle of poverty and oppression.** Individuals who approach life with the attitude that not all human lives are of equal value then perpetuate this cycle.

➢ **Examples:**
- ○ Forcibly evicting people from their homes **(the right to adequate housing)**
- ○ Contaminating water, for example, with waste from State-owned facilities **(the right to health)**
- ○ Failure to ensure a minimum wage sufficient for a decent living **(rights at work)**
- ○ Failure to prevent starvation in all areas and communities in the country **(freedom from hunger).**

➢ **Types of Human Rights Violations:**
- ○ **Directly or Intentionally:**
  - Violations can **either be intentionally performed** by the state and or come as a result of the state failing to prevent the violation.
    - ■ When a **state engages in human rights violations**, various actors can be involved such as police, judges, prosecutors, government officials, and more.
    - ■ The **violation can be physically violent in nature,** such as police brutality, while rights such as the **right to a fair trial can also be violated, where no physical violence is involved.**
- ○ **Failure by the state to Protect Rights:**
  - It occurs when **there's a conflict between individuals or groups** within a society.
  - If the **state does nothing to intervene and protect vulnerable people** and groups, it's participating in the violations.
    - ■ In the **US** the state failed to protect black Americans when lynching's frequently occurred around the country.

➢ **Current Scenario in India:**
- ○ **Total Violations:**
  - The **total number of rights' violation cases in India** lodged by the NHRC **reduced from 89,584 in 2018-19** to 76,628 in 2019-20 and **to 74,968 in 2020-21.**
    - ■ In 2021-22, till 31st October (2021), **64,170 cases were lodged.**
- ○ **Caste-based Discrimination and Violence:**
  - According to a report released last year, crimes

Note:

against **Dalits increased by 6% from 2009 to 2018** with over 3.91 lakh atrocities being reported.

○ **Communal and Ethnic Violence:**
- Many people were attacked by vigilante cow protection groups and many of those affected were minority groups.
- People from **African countries faced racism** and discrimination in India.

○ **Freedom of Association:**
- The government cancelled the registration of several **civil society organisations** which specifically prevented them from getting foreign funding, even after the **United Nations (UN)** claimed it was not in accordance with international law.

○ **Freedom of Expression:**
- Several people were arrested under **sedition laws** for expressing their dissent with government policy and several Indians were arrested for even posting comments on Facebook.

○ **Violence against Women:**
- Recently released report **National Family Health Survey (NFHS) 5**, points to rising instances of **domestic and sexual violence against women in the state.**
  - It shows that married women, between the ages of 18-49, who have ever experienced spousal violence, has more than doubled from 20.6 in 2014-15 to 44.5%.

○ **Children's Rights:**
- **National Crime Records Bureau (NCRB)** data reveals a total of 1,28,531 **crimes against children** were recorded in India last year (2020), implying that an average of 350 such cases were reported each day during the **pandemic.**

International Day of Persons with Disabilities

Why in News

Every year on **3rd December**, International Day of Persons with Disabilities is observed.

➢ Earlier, the **draft norms for ensuring accessibility** for the differently abled at airports has been released by the Ministry of Civil Aviation.

Disability

➢ A disability is a **condition or function judged to be significantly impaired** relative to the usual standard of an individual of their group.

➢ The term is often **used to refer to individual functioning**, including physical impairment, sensory impairment, cognitive impairment, intellectual impairment, mental illness, and various types of chronic disease.

➢ This usage has been **described by some disabled people** as being associated with a medical model of disability.

Key Points

➢ **Background:**
- ○ The annual observance of this day **began in 1992** after it was proclaimed by the **United Nations General Assembly** resolution 47/3.
- ○ In 2006, the **Convention on the Rights of Persons with Disabilities (CRPD)** was also adopted.
- ○ It aims at **working towards creating equal opportunities for persons** with disabilities through the implementation of the **2030 agenda for sustainable development.**

➢ **About:**
- ○ The day is observed to **promote the rights and well-being of people** with disabilities at every level of society and development.
- ○ It also **aims to raise awareness of the situations** of persons with disabilities in all aspects of political, social, economic and cultural life.

➢ **Data related to Persons with Disabilities:**
- ○ **According to the World Health Organization (WHO), more than 1 billion people experience disability**, and this figure is predicted to rise, due in part to population ageing and an increase in the prevalence of non-communicable diseases.
- ○ As per the **National Statistics Office** report on disability released last year (2020), about **2.2% of India's population lives** with some kind of physical or mental disability.

➢ **Theme for 2021:**
- ○ 'Leadership and participation of persons with disabilities toward an inclusive, accessible, and sustainable post-**Covid-19** world'.

Note:

➢ **Related Initiatives:**
  ○ **Global:**
    ● **World Programme of Action (WPA):** It is a **global strategy to enhance disability prevention**, rehabilitation and equalization of opportunities, which pertains to full participation of persons with disabilities in social life and national development. The WPA also **emphasizes the need to approach disability** from a human rights perspective.
  ○ **India's:**
    ● **Unique Disability Identification (UDID) Portal**
    ● **Accessible India Campaign**
    ● **DeenDayal Disabled Rehabilitation Scheme**
    ● **Assistance to Disabled Persons for Purchase/ fitting of Aids and Appliances (ADIP)**

Related Observances
➢ **4th January:** World Braille Day
➢ **21st March**: World Down Syndrome Day
➢ **2nd April:** World Autism Day
➢ **23rd September**: International Day of Sign Languages
➢ **10th December:** Human Rights Day

SMILE Scheme

Why in News

Recently, the Ministry of Social Justice and Empowerment has formulated a scheme **SMILE - Support for Marginalized Individuals for Livelihood and Enterprise.**

➢ It includes a sub-scheme - '**Central Sector Scheme** for Comprehensive Rehabilitation of persons engaged in the act of Begging.

➢ Currently, a pilot project of it is ongoing in 7 cities namely Delhi, Bangalore, Hyderabad, Indore, Lucknow, Nagpur and Patna.

Key Points

➢ **About:**
  ○ It is a new Scheme after th**e merger of existing Schemes for Beggars and Transgenders.**
  ○ Scheme provides for the **use of the existing shelter homes** available with the State/UT Governments and Urban local bodies for rehabilitation of the persons engaged in the act of Begging.

    ● In case of non-availability of existing shelter homes, **new dedicated shelter homes** are to be set up by the implementing agencies.

➢ **Focus:**
  ○ The focus of the scheme is extensively on **rehabilitation, provision of medical facilities, counseling, basic documentation, education, skill development**, economic linkages and so on.
  ○ It is estimated that an approximate **60,000 poorest persons would be benefited** under this scheme for leading a life of dignity.

➢ **Implementation:**
  ○ It will be implemented with the support of State/ UT Governments/Local Urban Bodies, Voluntary Organizations, Community Based Organizations (CBOs) , institutions and others.

➢ **Scheme for Comprehensive Rehabilitation of Beggars:**
  ○ It will be **a comprehensive scheme for persons engaged in the act of begging.**
  ○ The scheme has been implemented **in the selected cities on pilot basis having large concentrations** of the Beggar community.
  ○ During the year 2019-20, this Ministry had released an amount of Rs. **1 Crore to National Institute of Social Defence (NISD)** and Rs. 70 Lakh to **National Backward Classes Finance & Development Corporation (NBCFDC)** for skill development programmes for beggars.

➢ **Status of Beggars in India:**
  ○ According to the **Census 2011** ,the **total number of beggars in India is 4,13,670** (including 2,21,673 males and 1,91,997 females) and the number has increased from the last census.
  ○ **West Bengal tops the chart followed by Uttar Pradesh and Bihar** at number two and three respectively. Lakshadweep merely has two vagrants according to the 2011 census.
  ○ Among the union territories, **New Delhi had the largest number of beggars** 2,187 followed by 121 in Chandigarh.
  ○ Among the northeastern states, **Asam topped the chart** with 22,116 beggars, while Mizoram ranked low with 53 beggars.
  ○ Recently, the **Supreme Court** has agreed to examine a plea for **decriminalising begging** which has been made an offense in various states under Prevention of Begging Act.

Note:

National Backward Classes Finance & Development Corporation

➢ It is a **Government of India Undertaking** under the aegis of Ministry of Social Justice and Empowerment.

➢ It was incorporated **under Section 25 of the Companies Act 1956** on 13th January 1992 as a Company not for profit.

➢ Its objective is **to promote economic and developmental activities** for the benefit of Backward Classes and to assist the poorer section of these classes in skill development and self-employment ventures.

National Institute of Social Defence

➢ The NISD is an **Autonomous Body** and is registered under **Societies Act XXI of 1860** with the Government of National Capital Territory (NCT), Delhi.

➢ It is a **central advisory body** for the Ministry of Social Justice and Empowerment.

➢ It is the **nodal training and research institute** in the field of social defence.

➢ The institute currently **focuses on human resource development** in the areas of drug abuse prevention, welfare of senior citizens, beggary prevention, transgender and other social defence issues.

➢ The **mandate of the institute is to provide inputs for the social defence programmes** of the Government of India through training, research & documentation.

Main Bhi Digital 3.0 Campaign

Why in News

Recently, the **Ministry of Housing and Urban Affairs (MoHUA)** and Ministry of Electronics & Information Technology (MeitY) launched **'Main Bhi Digital 3.0'** Campaign under **PM SVANidhi (Prime Minister Street Vendor's AtmaNirbhar Nidhi) Scheme.**

Key Points

➢ **About:**
  ○ It is a special Campaign for **Digital Onboarding and Training (DOaT) for Street Vendors** (SVs).
  ○ It is aimed at **digital onboarding of SVs** who have already been provided loans under **PM SVANidhi Scheme.**

  ○ Lending Institutions (LIs) have been instructed **to issue a durable QR Code & Unified Payments Interface (UPI) ID at the time of disbursement** and train the beneficiaries in conduct of **digital transactions**.
  ○ An Integrated IT Platform has been developed for implementation of this Scheme. SVs can **apply for loans directly through PM SVANidhi Portal.**

➢ **PM SVANidhi Scheme:**
  ○ **About:**
    ● It was announced as a part of the **Economic Stimulus-II** under the **Atmanirbhar Bharat Abhiyan.**
    ● It has been implemented since 1st June 2020, for providing **affordable working capital loans to street vendors** to resume their livelihoods that have been adversely affected due to **Covid-19 lockdowns,** with a sanctioned budget of Rs. 700 crore.
  ○ **Aims:**
    ● To benefit **over 50 lakh street vendors** who had been vending on or before 24th March 2020, in urban areas including those from surrounding peri-urban/rural areas.
    ● To **promote digital transactions through cash-back incentives** up to an amount of **Rs. 1,200 per annum.**
      ■ As of 31st January 2021, the PM SVANidhi scheme has disbursed loans to **13.82 Lakh beneficiaries amounting to Rs 1,363.88 Crores.**
  ○ **Features:**
    ● The vendors can avail **a working capital loan of up to Rs. 10,000**, which is repayable in monthly installments in the tenure of one year.
    ● 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** on a quarterly basis.
    ● There will be **no penalty on early repayment of the loan.** The vendors can avail the facility of the enhanced credit limit on timely/early repayment of the loan.
  ○ **Challenges:**
    ● Several banks are seeking applications on **stamp papers worth between Rs. 100 and Rs. 500.**

Note:

- There have also been instances of banks **seeking PAN cards and even checking the CIBIL or Credit score of applicants** or state authorities asking for voter ID cards, which many migrant vendors do not carry with them.
  - **CIBIL** score is an evaluation of one's credit history and determines their eligibility for a loan.
- There have also been complaints of **harassment by police and municipal officials.**

Other Initiatives for Street Vendors:
- **Pradhan Mantri Jeevan Jyoti Bima Yojana.**
- **Pradhan Mantri Suraksha Bima Yojana.**
- **Jan-Dhan Yojana.**
- **Building and Other Construction Workers Act 1996.**
- **Pradhan Mantri Shram Yogi Maandhan Yojana.**
- **Pradhan Mantri Matru Vandana Yojana.**

Pradhan Mantri Shram Yogi Maan-Dhan Pension Scheme

Why in News

According to the Ministry of Labour & Employment, nearly 46 lakh Unorganised Workers (UW) have been registered under the **Pradhan Mantri Shram Yogi Maandhan (PM-SYM) pension scheme**.

Unorganised Workers
- UWs are **mostly engaged as** rickshaw pullers, street vendors, **mid-day meal** workers, head loaders, brick kiln workers, cobblers, rag pickers, domestic workers, washer men, home-based workers, own account workers, agricultural workers, construction workers, beedi workers, handloom workers, leather workers, audio- visual workers or in similar other occupations.
- There are estimated **45 crore such unorganised workers in the country.**

Key Points

- **About:**
  - PM-SYM is a **Central Sector Scheme** administered by the Ministry of Labour and Employment and implemented through Life Insurance Corporation of India and Community Service Centers (CSCs).

- **LIC (Life Insurance Corporation)** is the Pension Fund Manager and responsible for Pension pay out.

- **Eligibility:**
  - Should be an Unorganised Worker (UW).
  - Monthly Income Rs 15000 or below.
  - Entry age between 18 and 40 years.
  - Should possess a mobile phone, savings bank account and Aadhaar number.
  - Should not be covered under **New Pension Scheme (NPS)**, **Employees' State Insurance Corporation (ESIC) scheme** or **Employees' Provident Fund Organisation (EPFO)**.
  - Should not be an income tax payer.

- **Salient Features:**
  - **Minimum Assured Pension:**
    - Each subscriber shall receive a minimum assured pension of **Rs 3000/- per month after attaining the age of 60 years.**
  - **Family Pension:**
    - During the receipt of pension, if the subscriber dies**, the spouse of the beneficiary shall be entitled to receive 50% of the pension received by the beneficiary as family pension.** Family pension is applicable only to spouses.
    - If a beneficiary has given regular contribution and died due to any cause (before age of 60 years), his/her spouse will be entitled to join and continue the scheme subsequently by payment of regular contribution or exit the scheme as per provisions of exit and withdrawal.
  - **Contribution:**
    - The subscriber's c**ontributions shall be made through 'auto-debit' facility** from his/ her savings bank account/ Jan- Dhan account.
    - PM-SYM functions on a **50:50 basis** where prescribed age-specific contribution shall be made by the beneficiary and the matching contribution by the Central Government.

- **Other Government Schemes for Unorganised Sector:**
  - **Labour Reforms**
  - **Pradhan Mantri Rojgar Protsahan Yojana (PMRPY)**
  - **PM SVANidhi: Micro Credit Scheme for Street Vendors**
  - **Atmanirbhar Bharat Abhiyan**

Note:

- Deendayal Antyodaya Yojana National Urban Livelihoods Mission
- PM Garib Kalyan Ann Yojana (PMGKAY)
- One Nation One Ration Card
- Atmanirbhar Bharat Rozgar Yojana
- Pradhan Mantri Kisan Samman Nidhi
- World Bank Support to India's Informal Working Class

Trafficking in Persons (Prevention, Care & Rehabilitation) Draft Bill 2021

Why in News

The Indian Leadership Forum Against Trafficking (ILFAT) has written to the Ministry of Women and Child Development identifying gaps in the **Trafficking in Persons (Prevention, Care and Rehabilitation) draft Bill 2021,** which is expected to be tabled in the Winter session of **Parliament**.

Key Points

➢ **Issues with the Bill:**
  ○ While the Bill provides rehabilitation to the survivors, it **does not extend the relief beyond shelter homes.**
    ● There is a demand for a community-based rehabilitation model that provides health services, legal aid, access to welfare schemes and income opportunities crucial for ensuring "all-round reintegration of victims'' back into their community and family.
  ○ According to the **United Nations'** human rights experts, it was not in accordance with the **international human rights laws.**
  ○ The Bill seemed to **combine sex work and migration with trafficking.**
  ○ The Bill was criticised for addressing **trafficking through a criminal law perspective** instead of complementing it with a human-rights based and victim-centred approach.
  ○ It was also criticised for **promoting "rescue raids" by the police as well as institutionalisation of victims** in the name of rehabilitation.

  ○ It was pointed out that certain vague provisions would **lead to blanket criminalisation of activities** that do not necessarily relate to trafficking.

➢ **Provisions in the New Bill:**
  ○ **It extends to all citizens inside as well as outside India:**
    ● Persons on any ship or aircraft registered in India wherever it may be or carrying Indian citizens wherever they may be,
    ● A foreign national or a stateless person who has his or her residence in India at the time of commission of offence under this Act, and
    ● The law will apply to every offence of trafficking in persons with cross-border implications.
  ○ **Victims Covered:**
    ● It extends beyond the protection of women and children as victims to **now include transgenders as well as any person** who may be a victim of trafficking.
    ● It also does away with the provision that a victim necessarily needs to be transported from one place to another to be defined as a victim.
  ○ **Defines 'Exploitation':**
    ● The exploitation of the prostitution of others or other forms of sexual exploitation including pornography, any act of physical exploitation, forced labour or services, slavery or practices similar to slavery, servitude or forced removal of organs, illegal clinical drug trials or illegal bio-medical research.
  ○ **Government Officers as Offenders:**
    ● Offenders will also include defence personnel and government servants, doctors and paramedical staff or anyone in a position of authority.
  ○ **Penalty:**
    ● A minimum of seven years which can go up to an imprisonment of 10 years and a fine of Rs 5 lakh in most cases of child trafficking.
    ● In case of the trafficking of more than one child, the penalty is now life imprisonment.
  ○ **Similarity to Money laundering Act:**
    ● Property bought via such income as well as used for trafficking can now be forfeited with provisions set in place, similar to that of the **money laundering Act.**

Note:

- **Investigation Agency:**
  - The **National Investigation Agency (NIA)** shall act as the national investigating and coordinating agency responsible for prevention and combating of trafficking in persons.
- **National Anti-Human Trafficking Committee:**
  - Once the law is enacted, the Centre will notify and establish a National Anti-Human Trafficking Committee, for ensuring overall effective implementation of the provisions of this law.
  - This committee will have representation from various ministries with the home secretary as the chairperson and secretary of the women and child development ministry as co-chair.
  - State and district level anti-human trafficking committees will also be constituted.

➢ **Significance:**
  - The transgender community, and any other person, has been included which will **automatically bring under its scope activity such as organ harvesting.**
  - Also, **cases such as forced labour**, in which people lured with jobs end up in other countries where their passports and documentation is taken away and they are made to work, will also be covered by this new law.

Human Trafficking Situation in India

➢ **Data Analysis:**
  - According to the **National Crime Records Bureau (NCRB)** data, a total of 6,616 human trafficking cases were registered in the country in 2019, as compared to 5,788 cases in 2018 and 5,900 cases in 2017.
  - Children make up almost **a third of all human trafficking victims worldwide**, with the situation being more disturbing in India for children.

- According to the NCRB 2018 data, 51% of all trafficking victims were children, of which more than 80% were girls.
- The recently orphaned children in India, due to the **Covid-19 pandemic**, also run the increased risk of trafficking in the garb of adoption, employment or livelihood and shelter.

➢ **Legislations that Prohibits Human Trafficking:**
  - **Article 23 (1)** in the constitution of India prohibits trafficking in human beings and forced labour.
  - The Immoral Traffic (Prevention) Act, 1956 (ITPA) penalizes trafficking for commercial sexual exploitation.
  - India also prohibits bonded and forced labour through the Bonded Labour System (Abolition) Act 1976, Child Labour (Prohibition and Abolition) Act 1986, and Juvenile Justice Act.
  - Sections 366(A) and 372 of the Indian Penal Code, prohibits kidnapping and selling minors into prostitution respectively.
  - Apart from this, the Factories Act, 1948 guaranteed the protection of rights of workers.

➢ **Related International Conventions, Protocols and Campaigns:**
  - Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children in 2000 as a part of the UN Convention Against Transnational Organised Crime (**Palermo Convention**).
  - Protocol against the Smuggling of Migrants by Land, Sea and Air.
  - **Universal Declaration of Human Rights (1948)**
  - **Blue Heart Campaign**
  - **Sustainable Development Goals**

■■■

Note:

Art & Culture

Highlights

- *Kashi Vishwanath Corridor*

Kashi Vishwanath Corridor

Why in News

Recently, the Prime Minister has **inaugurated Phase 1 of the Kashi Vishwanath Corridor Project in Uttar Pradesh's Varanasi.**

➢ 23 buildings – tourist facilitation centre, Vedic Kendra, Mumukshu Bhavan, Bhogshala, city museum, viewing gallery, food court among others — have been inaugurated as part of the project.

Key Points

➢ **About:**
  ○ It is the massive makeover and the **first after the 1780 AD when the Maratha queen Ahilyabai Holkar of Indore renovated the Kashi Vishwanath temple** and the area surrounding it.
  ○ The foundation was laid in March, 2019. The project was **conceptualised to create an easily accessible pathway for the pilgrims**, who had to meander through congested streets to take a dip in the Ganga and offering the water of the holy river at the temple.
  ○ More than 40 ancient temples were **rediscovered during the work on the project.** They were restored while ensuring there is no change in the original structure.

➢ **Significance:**
  ○ It **connects the iconic Kashi Vishwanath temple and the ghats** along the river Ganga.
    ● Kashi Vishwanath Temple is **one of the most famous Hindu temples dedicated to Lord Shiva**.
    ● The temple stands on the western bank of the holy river Ganga, and is **one of the twelve Jyotirlingas, the holiest of Shiva temples.**
  ○ It will help **boost tourism by providing the pilgrims and travellers with amenities such as wider** and cleaner roads and lanes, better lighting with bright street lights, and clean drinking water.

■■■

Note:

Security

Highlights

- *Greater Tipraland: Tripura*

Greater Tipraland: Tripura

Why in News

Recently, several tribal outfits in Tripura have joined hands to push their demand for a separate state, **Greater Tipraland** for indigenous communities in the region.

➢ Among the political parties that have come together for the cause are **TIPRA Motha** (Tipraha Indigenous Progressive Regional Alliance) and **IPFT** (Indigenous People's Front of Tripura).

Key Points

➢ **The Demand:**
  ○ The parties are demanding a **separate state of 'Greater Tipraland'** for the indigenous communities of the north-eastern state.
  ○ They **want the Centre to carve out the separate state under Article 2 and 3** of the Constitution.
    ● Among the 19 notified **Scheduled Tribes** in Tripura, **Tripuris** (aka Tipra and Tiprasas) **are the largest.**
    ● According to the 2011 census, **there are at least 5.92 lakh Tripuris in the state,** followed by **Bru or Reang** (1.88 lakh) and **Jamatias** (83,000).

> **Article 2 & 3**
>
> ➢ **Article 2:** Parliament may by law **admit into the Union, or establish, new States** on such terms and conditions as it thinks fit.
>   ○ However, **Parliament cannot establish a new union territory by passing a law**; that can only be done through a constitutional amendment.
>   ○ States like Sikkim (previously not within India) became a part of the country under Article 2.
> ➢ **Article 3:** It empowered the Parliament **to make law relating to the formation of new states** and alteration of existing states.

TRIPURA DISTRICT MAP

➢ **Immediate Cause:**
  ○ The churn in the state's politics with the rise of TIPRA Motha and the **Assembly polls due in early 2023** are the two major reasons behind the development.

➢ **Historical Background:**
  ○ Tripura was a kingdom ruled by the **Manikya dynasty from the late 13th century** until the signing of the Instrument of Accession with the Indian government in 1949.
  ○ The demand stems from the **anxiety of the indigenous communities in connection with the change in the demographics of the state,** which has reduced them to a minority.

Note:

○ It happened due to the **displacement of Bengalis from the erstwhile East Pakistan between 1947 and 1971.**

○ From 63.77% in 1881, the population of the tribals in Tripura was down to 31.80% by 2011.

○ In the intervening decades, **ethnic conflict and insurgency gripped the state, which shares a nearly 860-km long boundary with Bangladesh**.

○ The joint forum has also pointed out that the **indigenous people have not only been reduced to a minority, but have also been dislodged from land reserved** for them by the penultimate king of the Manikya dynasty **Bir Bikram Kishore Debbarman.**

➢ **Initiatives to Address the Issue:**

○ **Tripura Tribal Areas Autonomous District Council:**

● The **Tripura Tribal Areas Autonomous District Council (TTADC)** was formed under the sixth schedule of the Constitution in 1985 to ensure development and secure the rights and cultural heritage of the tribal communities.

■ 'Greater Tipraland' envisages a situation in which the entire TTADC area will be a separate state. It also proposes dedicated bodies to secure the rights of the Tripuris and other aboriginal communities living outside Tripura.

● The TTADC, which has legislative and executive powers, covers nearly two-third of the state's geographical area.

● The council comprises 30 members of which 28 are elected while two are nominated by the Governor.

○ **Reservation**:

● Also, out of the 60 Assembly seats in the state, 20 are reserved for Scheduled Tribes.

Other Demands in the North East

➢ **Greater nagalim** (Parts of Arunachal Pradesh, Manipur, Assam and Myanmar)

➢ **Bodoland** (Assam)

➢ **Tribal Autonomy Meghalaya**

Note:

Miscellaneous

Highlights

- Earth's Black Box
- PANEX-21
- Exercise Ekuverin
- Kyhytysuka Sachicarum: New Marine Reptile
- Supersonic Missile Assisted Torpedo
- Atmanirbhar Hastshilpkar Scheme
- Mount Semeru Volcano
- Indian Navy Day

- Kala Sanskriti Vikas Yojna
- World AIDS Day 2021
- Worldwide Cost of Living Report
- Issi Saaneq: New Dinosaur Species
- Ramanujan Prize
- SAMPANN Project
- NASA's IXPE Mission
- Pinaka Extended Range Rocket System

Earth's Black Box

Why in News

Australian scientists and artists are going to **make black box of the planet** to hold the world accountable for their actions by creating a black box of the planet.

Key Points

➢ **About:**
  ○ The box will be constructed in **Tasmania, an Australian island** state off the south coast.
  ○ It will be made with **3-inch thick steel and covered with solar panels.**
  ○ It will **operate much like a plane's flight recorder,** which records an aircraft's final moments before crashing.
  ○ The storage drives **inside Earth's Black Box** are designed to **last for around 30 to 50 years.**
  ○ The black box will be **around the size of a city-bus**, and inside there will be **storage drives that record climate change conversations** and also atmospheric carbon dioxide levels and average temperatures.

➢ **Types of Data Collection by the Box:**
  ○ Two different types of data will be collected and stored inside the monolith.
    ● It will collect **climate-change-related data** like land and sea temperature measurements, **species extinction**, energy consumption,

human population, **ocean acidification**, and atmospheric CO_2 levels.

    ● It will collect contextual data, like newspaper headlines and trending stories, key news stories and social media posts.

➢ **Reason for choosing Tasmania:**
  ○ Tasmania was chosen for its **relative geopolitical and environmental safety**, and the monolith will be designed to be **resilient against threats** including **cyclones, earthquakes** and, with its sloped walls, attacks by vandals.

Note:

➢ **Significance:**
  ❍ Black box will **actually help in preventing a major climate change catastrophe**.
    ● **Climate change** is **one of the gravest threats humanity faces** and is **exacerbating economic and health inequalities**, increasing the frequency and intensity of natural disasters and threatening the world's food supply.

PANEX-21

Why in News

Recently, a **Curtain Raiser Event** for PANEX-21 for the member nations of the Bay **of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) countries** was held.

➢ The exercise is **planned to be conducted later this year (2021).**

Key Points

➢ **About:**
  ❍ It is a **Humanitarian Assistance and Disaster Relief exercise.**
  ❍ It will be participated by **subject matter experts and delegates** from India, Bangladesh, Nepal, Bhutan, Myanmar, Sri Lanka and Thailand.
  ❍ A **Multi-Agency Exercise (MAE)** comprising a static display showcasing **Humanitarian Assistance and Disaster Relief (HDR)** equipment employed by the Indian Armed Forces and various civil agencies will also take place.
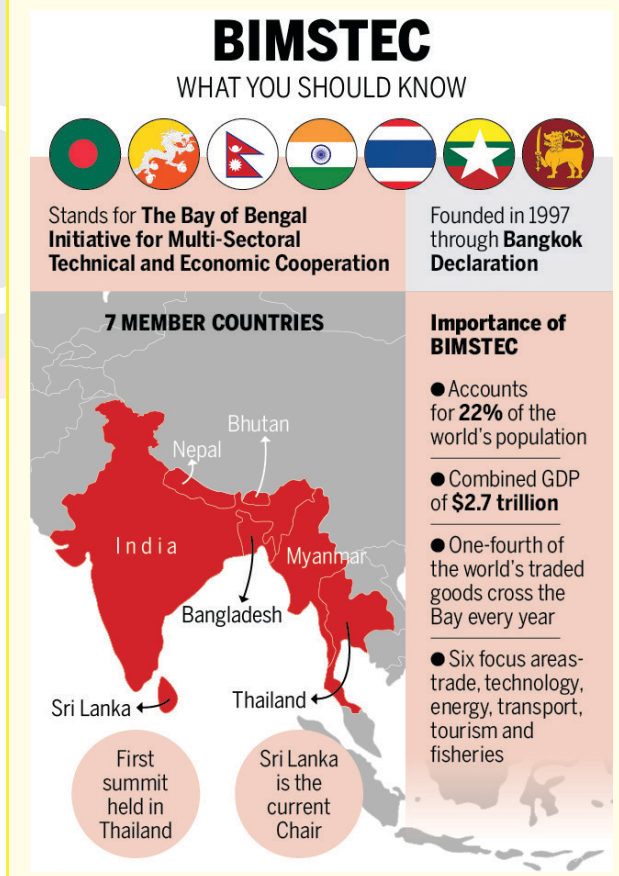
➢ **Aim:**
  ❍ To **foster joint planning and build regional cooperation** for responding to **natural disasters.**
    ● **Natural disasters** are **sudden ecological disruptions or threats** that exceed the adjustment capacity of the affected community and require external assistance.
    ● Natural disasters can be **broadly classified into categories** including geophysical such as **earthquakes** and **volcanic eruptions**; hydrological such as **floods**; meteorological such as hurricanes; climatological such as heat and cold waves and droughts; and biological such as epidemics.

➢ **Importance of the Exercise:**

BIMSTEC

➢ It is a **regional organization which** comprises **seven countries.**

➢ **Five** of these seven countries- India, Nepal, Sri Lanka, Bhutan and Bangladesh- are **from South Asia** while the remaining **two**, Thailand and Myanmar, are from **Southeast Asia.**

➢ The group remained dormant for many years till it was revived a few years ago as an alternative to the **South Asian Association for Regional Cooperation (SAARC),** which despite having the potential, has not been able to move forward due to friction between India and Pakistan.

➢ With a focus on intra-regional cooperation, the BIMSTEC has also formed a platform with the **SAARC** and the **Association of Southeast Asian Nations (ASEAN)** member countries.

➢ **Secretariat:** Dhaka, Bangladesh.

BIMSTEC
WHAT YOU SHOULD KNOW

Stands for **The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation**

Founded in 1997 through **Bangkok Declaration**

7 MEMBER COUNTRIES

Bhutan, Nepal, India, Myanmar, Bangladesh, Sri Lanka, Thailand

Importance of BIMSTEC
● Accounts for **22%** of the world's population
● Combined GDP of **$2.7 trillion**
● One-fourth of the world's traded goods cross the Bay every year
● Six focus areas- trade, technology, energy, transport, tourism and fisheries

First summit held in Thailand

Sri Lanka is the current Chair

  ❍ **Covid-19 pandemic** along with other natural disasters have **brought out new lessons** which involve a change in drills and procedures for carrying out disaster mitigation and management of disaster.

Note:

- The exercise is **being conducted keeping in mind these changes** and the challenges after the pandemic.

Exercise Ekuverin

Why in News

Recently, the 11th Edition of Joint Military **Exercise EKUVERIN** between India & Maldives has been started at Kadhdhoo Island, Maldives.

➤ Earlier, the 15th edition of the **biennial trilateral Coast Guard Exercise 'Dosti'** involving **India, the Maldives and Sri Lanka** was held in the Maldives.

Key Points

➤ India and Maldives have been conducting **Exercise Ekuverin meaning 'Friends' in the Maldivian language since 2009.**

➤ The **14 days Joint Exercise** is held alternatively in **India and Maldives.**

➤ It **focuses on enhancing interoperability** between the two forces for carrying out counter insurgency and counter-terrorism operations in a semi-urban environment under the United Nations mandate.

➤ This year's exercise will also include cultural and sports activities to enhance **defence cooperation and bilateral relations.** The exercise will go a long way in strengthening India's relations with Maldives amidst emerging security dynamics in the **Indian Ocean Region.**

Kyhytysuka Sachicarum: New Marine Reptile

Why in News

Recently, an international team of researchers has discovered a **new marine reptile** named **Kyhytysuka sachicarum.**

Key Points

➤ Kyhytysuka translates to **'the one that cuts with something sharp'** in an in**digenous language from the region in central Colombia** where the fossil was found.

➤ It has been **named so to honour the ancient Muisca culture** that existed there for millennia.

➤ The fossil is a **stunningly preserved meter-long skull**, is one of the last surviving **ichthyosaurs** – ancient animals that look eerily like living swordfish.

  ○ **Ichthyosaur:**
    - They are the members of an extinct group of aquatic reptiles, most of which were **very similar to porpoises in appearance and habits.**

Note:

- They had a **very wide geographic distribution**, and their fossil remains span almost the entire **Mesozoic Era.**
  - They are first known from the **Triassic Period of Asia**, where they began as long-bodied, undulating swimmers without many of the specializations seen in later species.
- ➢ The species comes from an **important transitional time during the Early Cretaceous period** when the Earth was coming out of a relatively cool period, had **rising sea levels,** and the supercontinent Pangea (A supercontinent that incorporated almost all the landmasses on Earth) was splitting into northern and southern landmasses.

Supersonic Missile Assisted Torpedo

Why in News

Recently, the **Defence Research and Development Organisation (DRDO)** successfully launched the **Supersonic Missile Assisted Torpedo System (SMART)** from Wheeler Island in Odisha.

Key Points

- ➢ **About:**
  - ○ It is a **missile assisted release of the lightweight Anti-Submarine Torpedo System** for **anti-submarine warfare (ASW)** operations far beyond torpedo range. It is a **canister based missile system.**
  - ○ The system is **a next generation missile-based standoff torpedo delivery system.**
  - ○ The system has been designed to enhance anti-sub marine warfare capability far beyond the conventional range of the torpedo.
- ➢ **Functioning:**
  - ○ SMART, when launched from a warship or a truck-based coastal battery, takes **off like a regular supersonic missile.**
  - ○ It covers **most of its flight in the air at lower altitudes with two-way data link from the warship or an airborne submarine** target detection system and provides the exact location of the hostile submarine to correct its flight path midway.

- ○ Just when it approaches close enough to the submerged submarine, the missile will eject the torpedo system into the water and the autonomous torpedo will start moving towards its target to take out the submarine.
  - Torpedo is a cigar-shaped, self-propelled underwater weapon, launched from a submarine, surface vessel, or airplane and designed for exploding upon contact with the hulls of surface vessels and submarines.
  - **Varunastra** is the first indigenous heavyweight ship launched anti-submarine electric torpedo.
- ➢ **Significance:**
- ○ Strengthens the country's maritime strategic capabilities.
- ○ A major breakthrough for stand-off capability in anti-submarine warfare.
  - Project 28, approved in 2003, is a class of anti-submarine warship corvettes currently in service with the Indian Navy. It includes INS Kamorta, INS Kadmatt, INS Kiltan and INS Kavaratti.
  - **Project 75** is a programme by the Indian Navy that entails building six Scorpene-Class attack submarines (Kalvari, Khanderi, Karanj, Vela, Vagir and Vagsheer).
  - **Project 75 India** envisages indigenous construction of submarines equipped with the state-of-the-art Air Independent Propulsion system at an estimated cost of Rs. 43,000 crore.

Atmanirbhar Hastshilpkar Scheme

Why in News

Recently, the Atmanirbhar Hastshilpkar Scheme **has been announced for the Artisans of the North Eastern**

Note:

Region under the Ministry of Development of North Eastern Region.

Key Points

➢ **About:**
  ○ **Financial assistance will be provided to the grass root Artisans of the region** in the form of term loan for income generating activities for setting up / expansion / modernization / working capital requirement and other activities related to the sector.
  ○ During the announcement, credit assistance of Rs 1 lakh each was provided to as many as 17 artisans.
    ● The credit facility is **collateral-free and carries a subsidized interest rate of 6%** p.a., which is repayable in 24 months.
    ● For regular repayment, an **incentive of 1% on the interest rate** is provided, which will be refunded to the artisans on successful repayment of loans.

➢ **Eligibility:**
  ○ Registered/ unregistered artisan/ Individual
  ○ Having valid qualification or practicing any art form
  ○ No existing loan from any other bank/ financial institution
  ○ Bank Account

➢ **Launched by:**
  ○ North Eastern Development Finance Corporation Ltd. (NEDFi).

NEDFi

➢ NEDFi is a **premier financial institution** in the North-Eastern Region.

➢ It has completed an eventful twenty-six years since its establishment in 1995.

➢ Over the years, the Corporation has provided loans to over 7500 projects and taken up several development initiatives through its **Corporate Social Responsibility (CSR) activities** in the **eight states of North-East India.**

Mount Semeru Volcano

Why in News

Recently, **Mount Semeru volcano of Indonesia** erupted which killed at least 14 persons and left dozens injured.

➢ The last time it erupted was in **December 2020.**

Indonesia : eruption of Mount Semeru

Key Points

➢ **About Semeru Volcano:**
  ○ Semeru, also known as **the Great Mountain** - is the **highest volcano in Java** and one of the most active.
  ○ Semeru volcano is also the **part of the Island arcs** formed by the subduction of the Indo-Australian plate below **Sunda Plate (part of Eurasian Plate).**
    ● The trench formed here is called **Sunda trench** whose major section is the Java Trench.

➢ **Volcano in Indonesia:**
  ○ Indonesia, with the **maximum number of active volcanoes in the world**, is prone to seismic upheaval due to its location on the **Pacific's Ring of Fire.**
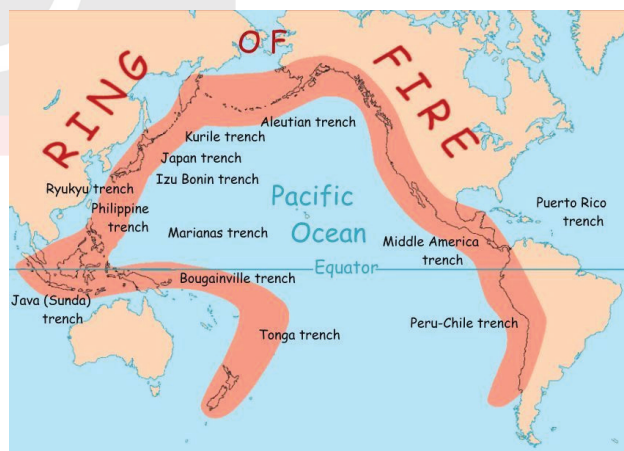
➢ **Pacific's Ring of Fire:**
  ○ The **Ring of Fire**, also referred to as the **Circum-Pacific Belt**, is a path along the **Pacific Ocean characterized by active volcanoes** and frequent earthquakes.
  ○ Its length is **approximately 40,000 kilometers.** It traces boundaries between several tectonic plates—including the Pacific, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.

Note:

❍ **75% of Earth's volcanoes** i.e. **more than 450 volcanoes are located along the Ring of Fire**. 90% of Earth's **earthquakes** occur along its path, including the planet's most violent and dramatic seismic events.

➤ **Other Major Volcanoes of Indonesia:**
  ❍ **Mount Merapi**
  ❍ **Mt. Sinabung**

Indian Navy Day

Why in News

Every year, **Indian Navy Day** is celebrated on **4th December** to respect the Indian Navy's counter-attack in **Operation Trident** during the **Indo-Pakistan war in 1971**.

Key Points

➤ **About:**
  ❍ The Indian Navy was established in 1612 by the **East India Company**.
  ❍ This year, the Navy plans to celebrate the **theme Swarnim Vijay Varsh** to celebrate the **50th Anniversary of India's victory** in the **1971 war.**

➤ **Operation Trident:**

INDIAN NAVY DAY
A tribute to Indian Navy for a successful 'operation trident' in India-Pakistan war of 1971

Konsole

  ❍ It was a **counter-attack by the Indian Navy** on the Karachi harbour during the **Indo-Pakistan war in 1971.**

❍ India used **anti-ship missiles for the first time** during this operation and destroyed the Pakistani destroyer ship PNS Khaibar.

❍ The Indian Navy's three warships - **INS Nipat, INS Nirghat and INS Veer - played an important role in the attack.**

➤ **Indian Navy:**
  ❍ It is headed by the **President of India** as its Supreme Commander.
  ❍ Indian Navy's Motto is - Sam no Varunah (शं नो वरूण) that means that the God of water, Varuna, should be auspicious unto us.
  ❍ Some of the **earliest operations of the Indian Navy** include its contribution in liberating Goa from Portugal in 1961.
  ❍ The **Navy has developed as an admirable force** with the making of the nuclear-powered ballistic missile submarine **INS Arihant** and several other ships.
  ❍ The **Indian Navy currently has one aircraft carrier**, the **INS Vikramaditya** which was a former Russian ship that was commissioned into service in 2013.
  ❍ It operates **three classes of submarines:** Chakra (it has the nuclear-powered INS Chakra) , Sindhughosh and Shishumar.
  ❍ The **Indigenous Aircraft Carrier (IAC) 1** named **INS Vikrant** has recently (2021) started sea trials (one of the last phases of trials).
  ❍ **Marine Commandos or MARCOS** is the special force unit of the Indian Navy, trained to conduct amphibious warfare, counter-terrorism, special reconnaissance, hostage rescue and asymmetric warfare.
  ❍ They were the **first to respond to the 26/11 Mumbai terror attacks.**

Kala Sanskriti Vikas Yojna

Why in News

Recently, the Ministry of Culture has launched a **Scheme of Financial Assistance for the Development of Buddhist/Tibetan Culture and Art** under **"Kala Sanskriti Vikas Yojna (KSVY)".**

➤ Under this scheme, **financial assistance is provided to the voluntary Buddhist and Tibetan Organizations**

Note:

	13 ICH traditions recognised by UNESCO		
1.	Tradition of Vedic chanting, 2008	8.	Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2.	Ramlila, the traditional performance of the Ramayana, 2008	9.	Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3.	Kutiyattam, Sanskrit theatre, 2008	10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India ,2014
4.	Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11.	Yoga, 2016
5.	Mudiyettu, ritual theatre and dance drama of Kerala, 2010	12.	Nowruz, 2016
6.	Kalbelia folk songs and dances of Rajasthan, 2010	13.	Kumbh Mela, 2017
7.	Chhau dance, 2010		

including Monasteries engaged in the propagation and scientific development of Buddhist/ Tibetan Culture and tradition, located in any part of the country. The quantum of funding is **Rs.30 lakhs per year for an organization.**

Key Points

➢ KSVY is an umbrella scheme **under the Ministry of Culture for the promotion of art and culture in the country.** It is a **central sector scheme.**

➢ The ministry implements many schemes under KSVY, where the grants are sanctioned/approved for holding programs/activities.

  ❍ Scheme of Financial Assistance for Promotion of Art and Culture.

  ❍ Scheme of Financial Assistance for Creation of Cultural Infrastructure.

  ❍ **Scheme for Safeguarding the Intangible Cultural Heritage**, which aims to promote the 13 intangible cultural heritage of India, recognised by the **United Nations Educational, Scientific and Cultural Organization** (UNESCO).

World AIDS Day 2021

Why in News

  World AIDS Day is observed **on 1st December every year all over the world** to spread awareness about the disease and remember all those who lost their lives to it.

Key Points

➢ **About:**

  ❍ It was founded in 1988 by the **World Health Organization (WHO)** and was the first ever global health day with a motto of raising public awareness about **Acquired ImmunoDeficiency Syndrome (AIDS).**

  ● AIDS is a pandemic disease caused by the infection of **Human Immunodeficiency Virus (HIV),** which damages the human immune system.

  ● There were an estimated 37.7 million people living with HIV at the end of 2020, over two thirds of whom (25.4 million) are in the African Region.

  ● **In 2020**, 680 000 people died from HIV-related causes and 1.5 million people acquired HIV.

➢ **Theme for 2021:** 'End inequalities. End AIDS'.

  ❍ With a special focus on reaching people left behind, WHO and its partners are highlighting the growing inequalities in access to essential HIV services.

  ❍ WHO is calling on **global leaders and citizens to rally to confront the inequalities that drive AIDS** and to reach people who are currently not receiving essential HIV services.

➢ **Significance:**

  ❍ The very day reminds the public and government that HIV has not gone away and there is still **a vital need to raise money, increase awareness, fight prejudice and improve education**.

❍ It is an opportunity **to show solidarity with the millions of people** living with HIV worldwide.

> **Human Immunodeficiency Virus (HIV)**
> ➢ HIV attacks CD4, a type of **White Blood Cell** (T cells) in the body's immune system. T cells are those cells that move around the body detecting anomalies and infections in cells.
> ➢ After entering the body, HIV multiplies itself and destroys CD4 cells, thus severely damaging the human immune system. Once this virus enters the body, it can never be removed.
> ➢ The CD4 count of a person infected with HIV reduces significantly. In a healthy body, CD4 count is between 500- 1600, but in an infected body, it can go as low as 200.

Worldwide Cost of Living Report

Why in News

Recently, the **Worldwide Cost of Living report** has been released highlighting that **Tel Aviv (Israel's capital)** is the world's most expensive city to live in.

➢ The report is compiled by the **Economist Intelligence Unit (EIU)**. It compares the cost of living indices in different cities.

Key Points

➢ **Most Expensive City:** The Israeli city of Tel Aviv topped the rankings for the first time, overtaking last year's leader Paris, which is now at second place along with Singapore.
  ❍ Paris and Singapore came joint second, followed by Zurich and Hong Kong. New York was in sixth, with Geneva in seventh.

➢ **Report Methodology:** The index is **benchmarked against prices in New York City,** hence **cities with currencies that are stronger against the US dollar are likely to appear higher in the rankings**.

➢ **Scope of the Result:** The **2021 Worldwide Cost of Living index** tracks the cost of living across 173 global cities and compares the price of more than 200 everyday products and services.

➢ **Impact of Covid-19:** Supply-chain blockages and changing consumer demand have pushed up the cost of living in many of the biggest cities. Moreover, **inflation** is the fastest recorded over the past five years.

➢ **Indian Scenario:** In India, **Ahmedabad, Gujarat has been listed in the top ten cheapest cities** of the survey.
  ❍ Among the cheapest cities, Damascus (capital of Syria) is at the top. It is followed by Tripoli (Libya,) Tashkent (Uzbekistan), Tunis (Tunisia) and Almaty (Kazakhstan') in the ranking of cheapest cities.

> **Economist Intelligence Unit (EIU)**
> ➢ The Economist Intelligence Unit is the research and analysis division of The Economist Group, which is the sister company to The Economist newspaper.
> ➢ The EIU also releases the **Democracy Index,** which provides a snapshot of the state of democracy worldwide in 165 independent states and two territories.
> ➢ India ranks at **53rd position in EIU's Democracy Index.**

Issi Saaneq: New Dinosaur Species

Why in News

Recently, researchers have discovered the **first dinosaur species** that lived on **Greenland** 214 million years ago (**Late Triassic epoch**).

Key Points

➢ **Discovery:**
  ❍ In 1994, **palaeontologists from Harvard University** unearthed two well-preserved dinosaur skulls during an excavation in **East Greenland**.
    • One of the specimens was originally thought to be from a **Plateosaurus**, a well-known long-necked dinosaur that lived in Germany, France and Switzerland.

Note:

- Researchers have determined that the **finding belongs to a new species**, which they have named '**Issi saaneq**'.

➢ **About**:
  ○ This medium-sized, long-necked dinosaur was a predecessor of the **sauropods, the biggest land animals ever** to have thundered across our planet.
    - Issi Saaneq **differs from all other saropodomorphs** discovered so far, but has **similarities with dinosaurs found in Brazil**, such as the **Macrocollum** and **Unaysaurus**, which are almost 15 million years older.
    - It was the **first sauropodomorph to have reached altitudes over 40 degrees north.**
  ○ The name of the new dinosaur (Issi Saaneq) pays tribute to **Greenland's Inuit language** and means "**coldbone**".
    - The Inuit language, the **northeastern division of the Eskimo languages**, spoken in northern Alaska, Canada, and Greenland.

➢ **Significance of Discovery**:
  ○ The new species lived during an important time in **Earth's history**. It will help the researchers to understand the climatic changes according to that time.
  ○ The fact that this is a new species unique to Greenland is important, because it **helps researchers to understand more about the range of Late Triassic dinosaurs**, as well as how sauropods evolved.
  ○ The discovery of Issi saaneq will **broaden the knowledge** about the e**volution of plateosaurid sauropodomorphs.**

Ramanujan Prize

Why in News

The **Ramanujan Prize for Young Mathematicians from developing countries** has been given to **Professor Neena Gupta**.

➢ She is a **mathematician at the Indian Statistical Institute in Kolkata** and has been awarded for her outstanding work in **affine algebraic geometry** and **commutative algebra**.

➢ She is the third woman to receive the Ramanujan Prize.

➢ Her solution for solving the **Zariski cancellation problem**, a fundamental problem in Algebraic Geometry, earned her the **2014 Young Scientists Award of the Indian National Science Academy**.

Key Points

➢ **About:**
  ○ The Ramanujan Prize for **Young Mathematicians from developing countries has been awarded annually since 2005.**
  ○ It is administered by the **Abdus Salam International Centre for Theoretical Physics (ICTP)** jointly with the **Department of Science and Technology (DST)** Government of India and the **International Mathematical Union (IMU).**
    - **ICTP:** Founded in 1964 by the late **Nobel Laureate Abdus Salam**, it seeks to accomplish its mandate by providing scientists from developing countries with the continuing education and skills that they need to enjoy long and productive careers.
    - **IMU:** It is **an international non-governmental and non-profit scientific organization**, with the purpose of promoting international cooperation in mathematics.
      ■ It is a **member of the International Science Council (ISC)**.
    - **DST**: The **DST** has **agreed to fund the Prize,** starting with the 2014 Prize.
      ■ It has been supported by DST **in the memory of Srinivasa Ramanujan**, a genius in pure mathematics who was essentially self-taught and made spectacular contributions to elliptic functions, continued fractions, infinite series, and analytical theory of numbers.

➢ **Eligibility & Prize**:
  ○ It is **awarded to a researcher from a developing country** who is **less than 45 years of age on 31st December** of the year of the award, and who has **conducted outstanding research in a developing country**.
  ○ Researchers **working in any branch** of the mathematical sciences **are eligible.**
  ○ The Prize carries a **USD 15,000 cash award.**

Srinivasa Ramanujan
➢ Ramanujan was born on 22nd December 1887 in a village Erode (400 km from Chennai, then known as Madras).

Note:

- The famous British mathematician **Godfrey Harold Hardy** recognised his talent in 1913. He went to Cambridge, on Godfrey Harold Hardy's invitation.
- Ramanujam made substantial contributions to the **analytical theory of numbers** and **worked on elliptic functions**.
- He also worked on the **partition of the whole number**, **hypergeometric series** and **Euler's constant**.
- His papers were published in English and European journals, and in 1918 he was elected to the **Royal Society of London**.
- He died on April 26th, 1920, at the age of 32, just after returning to India after a long illness.
- In India, **December 22nd** is celebrated as **National Mathematics Day** in the memory of **Srinivasa Ramanujan**.

The Man who knew Infinity

Srinivasa Ramanujan Iyengar
(Best known as S. Ramanujan)
(22 Dec 1887 - 26 April 1920)

SAMPANN Project

Why in News

Over one lakh people have received pensions directly in their bank accounts through the **SAMPANN (System for Accounting and Management of Pension)** project.

Key Points

- **About:**
  - It was **launched in 2018**. It is a seamless **online pension processing and payment system** for Department of Telecommunications pensioners.
  - It **provides direct credit of pension** into the bank accounts of pensioners.
  - It is an ambitious project being **implemented by the Ministry of Communications.**

- It has helped the Department **in faster settlement of pension cases, improved reconciliation/auditing and ease of accounting.**
- It has also been instrumental in settling close to 76000 BSNL Voluntary Retirement Scheme 2019 cases in a short span of 6 months.
- It is a system with a flexible design which enables it to accommodate ever expanding requirements.

- **Benefits:**
  - It provides **e-Pension payment orders which make the payment process easier and hassle-free.**
  - Timely settlement of pension cases.
  - Every pensioner gets **access to key information like payment history** along with a login option.
  - Login for each pensioner enables access to key information like payment history.
  - Online submission of grievances and timely SMS alerts.

NASA's IXPE Mission

Why in News

Recently, **National Aeronautics and Space Administration (NASA)** launched a new mission named **Imaging X-ray Polarimetry Explorer (IXPE).**

Key Points

- **About:**
  - **IXPE observatory** is **a joint effort of NASA and the Italian Space Agency.**
  - It will study **"the most extreme and mysterious objects in the universe – supernova remnants, supermassive black holes, and dozens of other high-energy objects."**
  - Its primary length is **two years and the observatory will be at 600 kilometers altitude**, orbiting around Earth's equator.
  - It is expected to **study about 40 celestial objects** in its first year in space.
  - It will complement other X-ray telescopes such as the Chandra X-ray Observatory and the European Space Agency's X-ray observatory, XMM-Newton.

- **Significance:**
  - It will help observe **polarized X-rays from neutron stars and supermassive black holes.** By measuring

the polarization of these X-rays, we can study where the light came from and understand the geometry and inner workings of the light source.

- ○ It will help scientists understand how black holes spin and their location in the past.
- ○ It will help unravel how **pulsars** shine so brightly in X-rays.
- ○ It will help learn what powers the jets of energetic particles that are ejected from the region around the supermassive black holes at the centers of galaxies.

➢ **NASA's Other Recent Missions:**
- ○ Double Asteroid Redirection Test (DART).
- ○ **Mission Lucy (**Jupiter Trojan Asteroids).
- ○ **Near-Earth Asteroid Scout**

Supernova

➢ A supernova is an extremely powerful explosion that accompanies the death of a massive star.

Black Hole

➢ A black hole is a **place in space where gravity pulls so much that even light can not get out.** The gravity is so strong because matter has been squeezed into a tiny space.

➢ **Gravitational waves are created** when two black holes orbit each other and merge.

Neutron Stars

➢ Neutron stars c**omprise one of the possible evolutionary end-points of** high mass stars.

➢ Once the core of the star has completely burned to iron, energy production stops and the core rapidly collapses, squeezing electrons and protons together to form neutrons and neutrinos.

➢ A **star supported by neutron degeneracy pressure is known as a 'neutron star',** which may be seen as a pulsar if its magnetic field is favourably aligned with its spin axis.

Pinaka Extended Range Rocket System

Why in News

Recently, the **DRDO (Defence Research and Development Organization)** successfully test fired the **Pinaka**

Extended Range (Pinaka-ER) Multiple Launch Rocket System (MLRS).

➢ Earlier, the DRDO also launched the **Supersonic Missile Assisted Torpedo System (SMART)**.

Background & Variants of Pinaka

➢ **Background**:
- ○ The **development** of the Pinaka multi-barrel rocket systems was **started by the DRDO in the late 1980s,** as an **alternative to the Multi Barrel Rocket Launcher systems** of Russian make called the 'Grad', which are still used by some regiments.
- ○ After successful tests of Pinaka Mark-1 in the late 1990, it **was first used successfully in the battlefield during the 1999 Kargil War**. Subsequently, multiple regiments of the system came up over the 2000s.

➢ **Variants**:
- ○ DRDO has also developed and successfully tested the **Mk-II and guided variants of the Pinaka,** which has a range of around 60 km, while the **Guided Pinaka system has a range of 75 km** and has integrated navigation, control and guidance system to improve the end accuracy and enhance the range.
  - ● The navigation system of the Guided Pinaka missile is also **aided by the Indian Regional Navigation Satellite System (IRNSS).**
- ○ In 2020, an enhanced version of the **Pinaka Mark (Mk)-1 missile** was **successfully flight-tested** from the Integrated Test Range in Chandipur, off the coast of Odisha.

Key Points

➢ **About:**
- ○ The Pinaka, a **Multi-Barrel Rocket-Launcher (MBRL) system** named after Shiva's bow, can fire a salvo of **12 rockets over a period of 44 seconds.**

- The **new version is equipped with advanced technology to enhance its strength.** The metal **weight is lesser** compared to the earlier version.
- The newly tested system can achieve **a range of up to 45km which is a big feat** for the **Indian Army.**

- The **existing Pinaka system**, which is already in the Army, has a range of up to **35-37km.**
- **Significance:**
  - The **new incarnation of pinaka represents one of the few examples of an evolutionary process** being followed with an indigenous Indian weapon system.
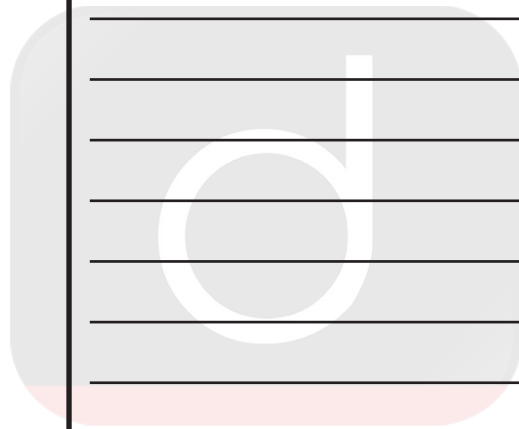
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Key Points

Details

Summary

Key Points

Details

Summary