drishti

Current Affairs
(Consolidation)

August 2022
(Part – I)

Contents

■■■

Polity and Governance

Highlights

- The Privileges of Members of Parliament
- Manipur to Implement the NRC
- Inner – Party Democracy
- Tobacco Endgame
- Mother's Right to Decide Surname of Child
- Governing Telecommunication in India
- Higher Education Commission of India
- Electoral Bonds
- National e-Governance Service Delivery Assessment
- Hate Speech and Blasphemy
- Integration of Health Applications with ABDM
- The Energy Conservation (Amendment) Bill 2022
- Foreign Visit of the State Government Ministers
- Central Vigilance Commission
- Withdrawal of Personal Data Protection Bill
- Model Tenancy Act
- Food Processing Sector
- New Bills in Lok Sabha
- Pradhan Mantri Adi Adarsh Gram Yojana
- Electricity Amendment Bill, 2022
- PESA Act
- Pradhan Mantri Adi Adarsh Gram Yojana
- SMILE-75 Initiative
- Criminal Procedure (Identification) Act, 2022
- National Intellectual Property Awareness Mission (NIPAM)

The Privileges of Members of Parliament

Why in News?

Recently, the **Vice President of India** highlighted the wrong assumptions of Members of Parliament about the **Parliamentary privileges**, that action can't be taken against them by investigating agencies during a Parliamentary session.

➤ There have been protests by some political parties against the alleged misuse of central agencies like the **Enforcement Directorate (ED)**, **Central Bureau of Investigation (CBI),** and the **Income Tax department (IT)** by the government to frame political rivals.

What are the Parliamentary Privileges?

➤ **About:**
  ○ Parliamentary privileges are special rights, immunities and exemptions enjoyed by the two Houses of Parliament, their committees and their members.
    ● These privileges are defined in **Article 105 of the Indian Constitution**.

  ○ Under these privileges, the members of Parliament are **exempted from any civil liability (but not criminal liability)** for any statement made or act done in the course of their duties.
    ● The privileges are claimed only when the person is a member of the house.
    ● As soon as s/he ends to be a member, the privileges are said to be called off.

  ○ **Parliament has not made any special law** to exhaustively codify all the privileges. They are **rather based on five sources:**
    ● Constitutional provisions
    ● Various laws made by Parliament
    ● Rules of both the Houses
    ● Parliamentary conventions
    ● Judicial interpretations

➤ **Privileges:**

  ○ **Freedom of Speech in Parliament:**
    ● The freedom of speech and expression guaranteed to a citizen under **Article 19(2)** is different from the freedom of speech and expression provided to a member of the parliament.

Note:

- It has been guaranteed under Article 105(1) of the Indian constitution. But the freedom is subject to rules and orders which regulate the proceedings of the parliament.
  - **Limitations:**
    - ◆ Freedom of speech should be in accordance with the constitutional provisions and subject to rules and procedures of the parliament, as **stated under Article 118 of the Constitution.**
    - ◆ Under **Article 121 of the Constitution**, the members of the parliament are restricted from discussing the conduct of the judges of the **Supreme Court** and the High Court.
  - ❍ **Freedom from Arrest:**
    - The members enjoy freedom from arrest in any **civil case 40 days before and after the adjournment of the house and also when the house is in session.**
    - **No member can be arrested from the limits of the parliament without the permission of the house** to which s/he belongs so that there is no hindrance in performing their duties.
    - If the detention of any members of the parliament is made, **the chairman or the speaker should be informed by the concerned authority, of the reason for the arrest**.
      - ■ But a member can be arrested outside the limits of the house on criminal charges against him under the **Preventive Detention act,** the Essential Services Maintenance Act **(ESMA),** the National Security Act (NSA), or any such act.
  - ❍ Right to Prohibit the Publication of Proceedings:
    - **Article 105(2)** of the Constitution, **no person shall be held liable for publishing any reports, discussions etc. of the house under the authority of the member of the house.**
      - ■ For paramount and national importance, it is essential that the proceedings should be communicated to the public to aware them of what is going on in the parliament.
  - ❍ **Right to Exclude Strangers:**
    - The members of the house have the **power and right to exclude strangers** who are not members of the house from the proceedings. This right is very **essential for securing free and fair discussion** in the house.

What did the Vice President Hold?

- ➢ According to the Vice President under the Article 105 of the Constitution, the Members of Parliament enjoy certain privileges so that they can perform their parliamentary duties without any hindrance.
  - ❍ One of the privileges is that a **Member of Parliament cannot be arrested in a civil case,** 40 days before the commencement of the Parliamentary session or Committee meeting, and 40 days thereafter.
    - This privilege is already incorporated under **Section 135A of the** Civil Procedure Code, 1908.
  - ❍ However, in **criminal matters, Members of Parliament are not on a different footing than a common citizen**.
    - It means that a Member of Parliament does not enjoy any immunity from being arrested in a criminal case, during the session, or otherwise.

What is the View of Supreme Court?

- ➢ The Supreme Court in the **State of Kerala Vs. K. Ajith and Others (2021),** observed, that "**privileges and immunities are not gateways to claim exemptions** from the general law of the land, particularly as in this case, the criminal law which governs the action of every citizen."
- ➢ In July 2021, the **Supreme Court rejected Kerala government's plea to withdraw criminal cases against its MLAs** who were charged in the assembly.
  - ❍ **The Supreme court stated that Parliamentary Privileges are Not Gateways of Immunity and** the legislators who indulge in vandalism and general mayhem cannot claim parliamentary privilege and immunity from criminal prosecution.

Manipur to Implement the NRC

Why in News?

Recently, the **Manipur Assembly has resolved to implement the** National Register of Citizens (NRC) and establish a **State Population Commission (SPC).**

- ➢ The decision has come after at least 19 **apex tribal organisations wrote to the Prime Minister demanding NRC** and other mechanism to **insulate the indigenous people** from the "ever-increasing number of non-local residents"**.**

What is the National Register of Citizens?

➢ NRC is a register **prepared in respect of each village, showing the houses or holdings in a serial order** and indicating against each house or holding the number and names of persons staying therein.

➢ The register was **first prepared after the 1951 Census of India** and since then it has not been updated until recently.

  ❍ It has been **updated in Assam only for now and the government plans to update it nationally** as well.

➢ **Purpose:** To separate "illegal" immigrants from "legitimate" residents.

➢ **Nodal Agency:** Registrar General and Census Commissioner India.

Why is Manipur Pushing for NRC?

➢ According to data presented in the Manipur Assembly, the population of Manipur has increased significantly from 1971 to 2011, pointing to a **strong possibility of a huge influx of non-Indians,** especially Myanmar Nationals primarily Kukis-Chin Communities.

  ❍ Apart from the Kuki-Chin groups, pro-NRC groups have identified "Bangladeshis" and **Muslims from Myanmar** who have "occupied the constituency of Jiribam and scattered in the valley areas" as well as Nepalis (Gurkhas) who have "risen in tremendous number" as "**outsiders**".

➢ The northeastern States have been paranoid about "outsiders", "foreigners" or "alien cultures" **swamping out their numerically weaker indigenous communities.**

  ❍ Manipur, home to **three major ethnic groups, is no different.**

  ❍ These ethnic groups are the **non-tribal Meitei people** and the tribal **Naga and Kuki-Zomi groups**.

➢ There has been **a history of conflict among these three groups,** but the NRC issue has seemingly put the Meiteis and the Nagas on the same page.

  ❍ They claim that an NRC is necessary because the political crisis in neighbouring **Myanmar, triggered by the military coup** in February 2021, has forced hundreds of people into the State from across its 398-km international border.

  ❍ A majority of those who fled or are fleeing belong to the **Kuki-Chin communities, ethnically related**

to the Kuki-Zomi people in Manipur** as well as the **Mizos** of Mizoram.

What are the Other Protective Mechanisms in Manipur?

➢ In December 2019, Manipur became the fourth northeastern State to be brought under the **Inner-Line Permit (ILP) system** after **Arunachal Pradesh, Mizoram and Nagaland.**

  ❍ The ILP – a temporary official travel document to allow inward travel of an Indian citizen into a protected area, was **implemented under the British-era Bengal Eastern Frontier Regulation.**

  ❍ However, in less than two years later, an umbrella organisation that spearheaded the ILP movement said the system was flawed and that **Manipur needed a stronger and more effective mechanism for protecting indigenous populations.**

➢ Following the "intrusion of immigrants" from Bangladesh (East Pakistan formerly), Myanmar and Nepal, **a pass or permit system for Manipur was introduced**, which was abolished later on in 1950.

➢ In June 2021, Manipur government approved **1961 as the base year for identifying the "natives"** for the purpose of ILP.

  ❍ Most groups are not happy with this cut-off year and insist on 1951 as the cut-off year for the NRC exercise.

➢ In 2021, the Ministry of Home Affairs (MHA) directed Nagaland, Manipur, Mizoram, Arunachal Pradesh and Border Guarding Force (BGF), i.e. **Assam rifles**. to check illegal influx from Myanmar into India.

  ❍ Similar Instructions were Issued in August 2017 and February 2018.

What is the Status of the NRC Elsewhere in the Northeast?

➢ Assam is the **only State in the region that undertook an exercise to update the NRC of 1951 with 24ᵗʰ March, 1971**, as the cut-off date for citizenship of a person.

➢ Nagaland attempted a similar exercise called **RIIN (Register of Indigenous Inhabitants of Nagaland) in June 2019** to primarily sift the **indigenous Nagas from the non-indigenous Nagas.**

Note:

drishti

Inner – Party Democracy

Why in News?

Recently, **Boris Johnson (UK's Former Prime Minister)** has been ousted as leader of the **British Conservative Party** in a series of coups periodically mounted by the party's **Members of Parliament** against him.

➢ This calls for India to seriously consider empowering its elected representatives, to ensure accountability for party leadership.

How are Members of Parliament elected in the United Kingdom?

➢ **To become an MP** representing a main political party, a candidate must be **authorised** to do so by the **party's nominating officer.** They must then **win the most votes** in the constituency.

  ○ **They do not owe their nomination to the party leader**, but are selected by the **local constituency party**.

➢ The UK is divided into **650 areas called constituencies.**

  ○ During an election, everyone eligible to cast a vote in a constituency selects one candidate to be their MP.

    ● The candidate who gets the most votes become the MP for that area until the next election.

    ● If an MP **dies or retires**, a **by-election** is held in that constituency to find a new MP for that area.

➢ At a general election, **all constituencies become vacant and a Member of Parliament is elected for each** from a list of candidates standing for election.

  ○ General elections happen **every five years.**

How are Members of Parliament elected in India?

➢ **Parliament of India** consists of two houses and members are elected for each one of them.

  ○ **Lok Sabha:**

    ● It is also called **The House of the People**.

    ● **Election of Representative:**

      ■ For electing representatives, each state is divided into **territorial constituencies.**

        ◆ Representatives are elected from **each constituency** using the **First-past-the-post**

system; the candidate who secures the **majority of votes is declared elected.**

      ◆ **By the Union Territories (Direct Election to the House of the People) Act, 1965**, the members of Lok Sabha from the UTs are chosen by direct election.

  ○ **Rajya Sabha:**

    ● It is also called **The Council of States**.

    ● **Election of Representative:**

      ■ The representatives of states are elected by the **members of state legislative assemblies**.

      ■ The representatives of each **Union Territory** in the Rajya Sabha are **indirectly elected by members of an electoral college specially constituted for the purpose.**

        ◆ Only three UTs (**Delhi, Puducherry and Jammu & Kashmir**) have representation in Rajya Sabha (others don't have enough population).

      ■ **The members nominated by the President** are those who have special knowledge or practical experience in art, literature, science and social service.

        ◆ The rationale is to provide eminent persons a place in the house without going through elections.

What Powers does an MP have in the UK against the Prime Minister?

➢ A Prime Minister **has to be able to maintain the confidence** of his ministers at all time to run a stable government.

➢ If there is a sense that the l**eader is no longer acceptable to the country**, then a well-structured mechanism come **into action to protect the party's electoral gains** by providing fresh leadership.

➢ **Individual Conservative MPs** write to the **1922 Committee (which comprises backbench MPs, and looks out for their interests)** expressing that they have **"no confidence"** in their leader.

  ○ If a numerical or percentage threshold **(15% of the party's MPs in the U.K.)** is breached, **an automatic leadership vote is triggered**, with the party leader **forced to seek a fresh mandate from the parliamentary party**.

Note:

drishti

What Powers does an MP have in India against the Prime Minister?

➢ **No Confidence Motion:**

○ A **no-confidence motion** is a **parliamentary motion** which is moved in the **Lok Sabha** against the **entire council of ministers**, stating that they are **no longer deemed fit to hold positions of responsibility due to their inadequacy in some respect or their failure to carry out their obligations.**

○ No prior reason needs to be stated for its adoption in the Lok Sabha.

● A motion of "No Confidence Motion" against the Government can be introduced **only in the Lok Sabha under rule 198.**

● The Constitution of India **does not mention about either a Confidence or a No Confidence Motion.**

■ Although, **Article 75** does specify that the Council of Ministers shall be **collectively responsible to the Lok Sabha.**

● A motion of No Confidence can be admitted when **a minimum of 50 members support the motion in the house.**

■ The Speaker then, once satisfied that the motion is in order, will **ask the House if the motion can be adopted.**

■ If the motion is **passed** in the house, the **Government is bound to vacate the office.**

● A no-confidence motion needs a majority vote to pass the House.

■ **If individuals or parties abstain from voting,** those numbers will be **removed** from the overall strength of the House and then the majority will be taken into account.

What can be Considered as Hindrance to MPs Liberty in India?

➢ **Anti-Defection Law:**

○ The anti-defection law **punishes individual Members of Parliament (MPs)/MLAs** for leaving **one party for another.**

○ Parliament added it to the Constitution as the **Tenth Schedule in 1985**. Its purpose was to **bring stability to governments** by discouraging legislators from changing parties.

● The Tenth Schedule - popularly known as the Anti-Defection Act - was included in the **Constitution via the 52nd Amendment Act, 1985.**

● It sets the **provisions for disqualification** of elected members on the grounds of defection to another political party.

● It was a response to the **toppling of multiple state governments by party-hopping MLAs** after the general elections of 1967.

○ However, it allows a group of MP/MLAs to join (i.e., merge with) another political party without inviting the penalty for defection. And it does not penalize political parties for encouraging or accepting defecting legislators.

● As per the 1985 Act, **a 'defection' by one-third of the elected members of a political party** was considered a 'merger'.

● But the **91st Constitutional Amendment Act, 2003**, changed this and now **at least two-thirds of the members of a party must be in Favour of a "merger" for it to have validity in the eyes of the law.**

○ The members disqualified under the law **can stand for elections from any political party for a seat in the same House.**

○ The decision on questions as to disqualification on ground of defection are referred to the **Chairman** or the **Speaker** of such House, which is subject to '**Judicial review**'.

● However, **the law does not provide a timeframe within which the presiding officer has to decide a defection case.**

Tobacco Endgame

Why in News?

To fulfil its plan to be **smokefree by 2025**, the New Zealand Parliament recently tabled the **Smokefree Environments and Regulated Products (Smoked Tobacco) Amendment Bill.**

➢ Emulating New Zealand, **Malaysia is also considering a ban on smoking** and the sale of all tobacco products, including **e-cigarettes**, to people born after 2007.

Note:

What is the New Zealand's Bill on Tobacco Endgame?

➤ **About:**
  ○ The Tobacco Endgame **refers to a policy approach that focuses on ending the Tobacco Epidemic,** aiming at a **'tobacco-free future'.**
  ○ The Bill seeks three Strategies to reduce Smoking significantly or ending it.
  ○ If implemented, it will be the world-first legislation that will **stop the next generation from ever being able to legally buy cigarettes.**

➤ **Strategies Proposed:**
  ○ Drastically reducing nicotine content in tobacco so it is no longer addictive (known as **"denicotinisation"** or "very low nicotine cigarettes" (VLNC)).
  ○ A 90% to 95% reduction in the number of shops that can sell tobacco.
  ○ Making it **illegal to sell tobacco to people born on or after 1 January 2009.** (thus, creating a **"smoke free generation"**).

What is the Status of Tobacco Consumption?

➤ **Globally:**
  ○ The tobacco epidemic is **one of the biggest public health threats the world has ever faced**, killing more than 8 million people a year (as per the **World Health Organisation**), including around 1.2 million deaths from exposure to second-hand smoke.
    ● Nearly one in four people across the globe use tobacco.
  ○ All forms of tobacco are harmful, and there is **no safe level of exposure to tobacco.**
    ● Cigarette smoking is the **most common form of tobacco use worldwide.**
    ● Other tobacco products include waterpipe tobacco, various smokeless tobacco products, cigars, cigarillos, roll-your-own tobacco, pipe tobacco, bidis and kreteks.
  ○ Tobacco use is a major risk factor for many chronic diseases, including **cancer**, **lung disease**, **cardiovascular disease** and stroke.

➤ **Status in India:**
  ○ 38% men and 9% women **above 15 years of age use tobacco products**, as per the **National Family Health Survey 5(2019-21)**.

  ○ Women (19%) and men (51%) belonging to **Scheduled Tribes are more likely to use tobacco** than those from any other caste/tribe groups.
  ○ Among men as well as women, the use of **tobacco is higher in rural areas** (43% for men and 11 % for women) than in urban areas.
  ○ Nearly three-fifths of men and 15% of women with **no schooling or less than 5 years of schooling** use tobacco.

➤ **Socio-Economic Burden of Tobacco Consumption:**
  ○ Tobacco use **contributes to poverty by diverting household spending** from basic needs such as food and shelter to tobacco.
  ○ The economic costs of tobacco use are substantial and include **significant health care costs for treating the diseases caused by tobacco** use as well as the **lost human capital** that results from **tobacco-attributable morbidity and mortality.**
  ○ It is **one of the major causes of death and disease in India** and accounts for **nearly 1.35 million deaths every year.**
    ● India is also the **second largest consumer and producer of tobacco.** A variety of tobacco products are available at very low prices in the country.
    ● The total economic costs attributed to tobacco use (from all diseases in India in the year 2017-18 for persons aged 35 years and above) amounted to **INR 177 341 crore.**

What Measures have been Taken to Tackle High Tobacco Consumption?

➤ **Global Initiatives:**
  ○ **WHO Framework Convention on Tobacco Control (WHO FCTC):**
    ● It was developed in response to the **globalisation of the tobacco epidemic and is an evidence-based treaty** that reaffirms the right of all people to the highest standard of health.
    ● **India has adopted** the tobacco control provisions under the WHO FCTC.
  ○ **World No Tobacco Day:**
    ● 31st May is observed as **'World No Tobacco Day'** every year to spread awareness around the deadly effects of tobacco consumption.

Note:

➢ **India's Initiatives:**

○ **Cigarettes and Other Tobacco Products Act (COTPA), 2003:**

- It replaced the **Cigarettes Act of 1975 (largely limited to statutory warnings- 'Cigarette Smoking is Injurious to Health'** to be displayed on cigarette packs and advertisements. It did not include non-cigarettes).

- The 2003 Act also included cigars, bidis, cheroots, pipe tobacco, hookah, chewing tobacco, pan masala, and gutka.

○ **Promulgation of the Prohibition of Electronic Cigarettes Ordinance, 2019:**

- It prohibits Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement of e-Cigarettes.

○ **National Tobacco Quitline Services (NTQLS):**

- Tobacco Quitline Services have the potential to reach a large number of tobacco users with the sole objective to provide telephone-based information, advice, support, and referrals for tobacco cessation.

○ **mCessation Programme:**

- It is an initiative using mobile technology for tobacco cessation.

- India launched mCessation using text messages in 2016 as part of the government's **Digital India initiative.**

Mother's Right to Decide Surname of Child

Why in News?

Recently, the **Supreme Court** ruled that the mother, being the only natural guardian of the child after the death of the biological father (husband), has the **right to decide the surname of the child.**

➢ The court was dealing with a plea challenging a judgement passed by the High Court of Andhra Pradesh in January 2014, which asked to **restore the child's surname to the previous one** and to show **the name of the late husband in records** as his natural father and if that is not possible, **to mention the new husband as his stepfather.**

What did the SC Rule?

➢ Surname is **not only indicative of lineage and should not be understood just in the context of history, culture and lineage** but more importantly the role it plays with regard to the **social reality along with a sense of being for children** in their particular environment.

➢ Homogeneity of surname emerges as a **mode to create, sustain and display 'family.**

➢ The SC also opined that the mother, being the only natural guardian, also has the **right to give up the child in adoption.**

What are the Laws Related to Guardianship in India?

➢ **Hindu Minority and Guardianship Act:**

○ **Indian laws accord superiority to the father** in case of guardianship of a minor (below the age of 18 years).

○ Under the religious law of Hindus, or the **Hindu Minority and Guardianship Act, (HMGA) 1956**, the natural guardian of a Hindu minor in respect of the minor's person or property "**is the father, and after him, the mother.**

- Provided the custody of a minor who has not completed the age of five years shall ordinarily be with the mother."

➢ **Guardian and Wards Act of 1890 (GWA):**

○ It deals with the **appointment of a person as a 'guardian' to a child**, both with respect to the child and property.

○ Child custody, guardianship and visitation issues between parents are determined under the GWA, if a natural parent wants to be declared as an exclusive guardian to his/her own child.

○ Upon disputes between parents in a petition under the GWA, read with the HMGA; **guardianship and custody can be vested with one parent with visitation rights to the other parent.**

○ In doing so, the welfare of the minor or **"best interests of the child" shall be of paramount consideration.**

Note:

drishti

What is Understood by 'Best Interests of the Child'?

➤ India is a signatory to the **United Nations Convention on the Rights of the Child (UNCRC).**

➤ The definition of "best interests of the child" has been incorporated from the **Juvenile Justice (Care and Protection of Children) Act, 2015.**

➤ The "best interests of the child" means **"the basis for any decision taken regarding the child,** to ensure fulfilment of his basic rights and needs, identity, social well-being and **physical, emotional and intellectual development" and is paramount in any custody battle.**

➤ **Muslim Personal Law (Shariat) Application Act, 1937:**

  ❍ It says that the Shariat or the religious law will apply in case of guardianship according to which the **father is the natural guardian,** but **custody vests with the mother until the son reaches the age of seven** and the **daughter reaches puberty** though the father's right to general supervision and control exists.

  ❍ The concept of Hizanat in Muslim law states that the welfare of the child is above all else.

  ❍ This is the reason why Muslim law **gives preference to the mother over father in the matter of custody** of children in their tender years.

➤ **Supreme Court Judgements:**

  ❍ The **Supreme Court's** landmark judgement in **Githa Hariharan v. The Reserve Bank of India** in 1999 provided partial relief.

  ❍ In this case, the HMGA was challenged for violating the guarantee of equality of sexes under **Article 14** of the Constitution of India.

    ● Article 14 says that no person shall be denied treatment of equality before the law or the equal protection of the laws within the territory of India.

  ❍ The court held that the term **"after"** should not be taken to mean "after the lifetime of the father ", but rather **"in the absence of the father".**

    ● However, the judgement failed to recognise both parents as equal guardians, subordinating a mother's role to that of the father.

  ❍ Though the judgement sets a precedent for courts, it has **not led to an amendment to the HMGA.**

Governing Telecommunication in India

Why in News?

Recently, The **Department of Telecommunications (DoT)** under the **Ministry of Communications** has invited input on the need to revise the legal framework governing the telecom sector.

➤ It has also released a **consultation paper** which suggested the need for a new legal framework that is **clear, exact, and in tune with the altering occasions** and applied sciences.

Why the Need for a New Framework?

➤ The legal foundation for telecommunications in India is defined by laws created long before India's independence.

➤ Technology has advanced substantially in recent decades since the **Indian Telegraph Act,** came into force on October 1, 1885. Hence, the stakeholders have been demanding evolution of legal framework to keep it in tune with changing technology.

What are the Suggestions?

➤ **Collaborative Regulation:**

  ❍ To evolve a new **legal framework enabling spectrum utilization in a liberalized and technologically impartial method**.

  ❍ Also, guarantee flexibility to the central authorities for spectrum utilization in the public curiosity.

➤ **Rethink Frequency Range:**

  ❍ The law needs to contain provisions for **re-framing and harmonization of the frequency range.**

➤ **Simple Framework:**

  ❍ To further, **simplify the framework** for mergers, demergers, and acquisitions, or different types of restructuring.

  ❍ To strike a crucial balance between continuity of service and safeguarding public interests.

➤ **Enhance Security:**

  ❍ Must have applicable provisions for **addressing conditions of public emergency, and public security** and for taking measures within the pursuits of nationwide safety.

Note:

➢ **Continuation of Service:**
  ○ In case of insolvency-related issues in the telecom sector, the focus should be on continuity of service.
  ○ The proceedings **should not lead to suspension of license as long as the services continue to be provided**, and there is no default in payment of dues against the telecom license or use of spectrum.

What is the Present Status of the Telecom Sector in India?

➢ **About:**
  ○ The telecommunications industry is divided into the following subsectors: **Infrastructure, Equipment, Mobile Virtual Network Operators (MNVO), White Space Spectrum, 5G, Telephone service providers, and Broadband.**
  ○ The Telecom industry in India is the **second largest in the world with a subscriber base of 1.17 bn** as of April 2022 (wireless + wireline subscribers). India has an of which,
    ● The teledensity (the number of telephone connections for every hundred individuals living within an area) of the rural market, which is largely untapped, stands at 58.16% while the teledensity of the urban market is 134.70%.
  ○ The Telecom sector is the **3rd largest sector in terms of FDI inflows, contributing 7% of total FDI inflow, and contributes directly to 2.2 mn employment and indirectly to 1.8 mn jobs**.
    ● Between 2014 and 2021, the FDI inflows in the Telecom sector rose by 150% to $20.72 bn from $8.32 bn during 2002-2014.

➢ **Issues:**
  ○ **Declining Average Revenue Per User (ARPU):** ARPU's decline now is sharp and steady, which, combined with falling profits and in some cases, serious losses, is prompting the Indian telecom industry to look at consolidation as the only way to boost revenues.
  ○ **Lack of Telecom Infrastructure in Semi-rural and Rural areas:** Service providers have to incur huge initial fixed costs to enter semi-rural and rural areas.
  ○ **Pressure on Margins Due to Stiff Competition:** With competition heating up post entry of Reliance Jio, other telecom players are feeling the heat of a substantial drop in tariff rates both for voice call and data (more significant for data subscribers).

➢ **Government Initiatives:**
  ○ The Department of Information Technology intends to **set up over 1 million internet-enabled common service centres across India** as per the **National e-Governance Plan.**
  ○ FDI cap in the telecom sector has been increased to 100% from 74%. Out of 100%, 49% will be done through the automatic route and the rest will be done through the **Foreign Investment Facilitation Portal (FIPB)** approval route.
  ○ FDI of up to 100% is permitted for infrastructure providers offering dark fiber, electronic mail, and voicemail.
  ○ In 2021, the Union Cabinet approved a **number of structural and process reforms in the Telecom sector.**

Higher Education Commission of India

Why in News?

Recently, the Government of India announced that they're reworking a draft of the Bill **(Draft Higher Education Commission of India (Repeal of University Grants Commission Act) Bill, 2018)** that will bring to life the **Higher Education Commission of India (HECI)**, for college and university-level education, cutting across disciplines.

➢ The new reworked draft will also be in tune with the **National Education Policy of India.**

What is the Draft Higher Education Commission of India Bill, 2018?

➢ **About:**
  ○ The bill stands for **"Draft Higher Education Commission of India (Repeal of University Grants Commission Act) Bill, 2018".**
  ○ It was introduced in January, 2018.
    ● But it was never finalised, and within two years, the **National Education Policy 2020** was announced.
➢ **Key Points:**
  ○ The Bill **repeals the University Grants Commission Act, 1956** and establishes the **Higher Education Commission of India (HECI)**.

Note:

- The HECI will **maintain academic standards** in higher education by:
  - Specifying learning outcomes for courses.
  - Specifying eligibility criteria for Vice Chancellors.
  - Ordering closure of higher educational institutions which fail to adhere to minimum standards.
- Every higher educational institution empowered to award degrees or diplomas will have to **apply to the HECI to commence its first academic operations.**
  - The HECI also has the power to **revoke permission on specified grounds.**
- The Bill sets up an **Advisory Council** chaired by the **Union Minister of Human Resource Development.**
  - The Council will advise on **coordination and determination of standards** in higher education between the centre and states.

➢ **Coverage:**
- The Bill will apply to '**higher educational institutions**' which include:
  - **Universities** set up by **Acts of Parliament** or **state legislatures.**
  - Institutions **deemed to be a university, and colleges.**
  - It excludes **institutions of national importance.**

What were Major Challenges in 2018's Bill?

➢ **Autonomy:**
- The Bill aims to promote **autonomy of higher educational institutions**.
  - However, certain provisions of the Bill **do not meet this stated objective**.
  - It may be argued that instead of granting higher educational institutions increased autonomy, the **Bill provides HECI with extensive regulatory control.**

➢ **Regulatory Ambit:**
- Currently, institutions offering professional courses **are regulated by 14 professional councils.**
  - Of these, the Bill seeks to bring **legal and architecture education** within the purview of HECI.
  - It is unclear why **only these two areas are included within the regulatory ambit** of the HECI and not the other fields of professional education.

➢ **Disbursal of Grants:**
- At present, the **UGC has the power to allocate and disburse grants to universities and colleges.**
  - While the **Bill replaces the UGC**, it **does not include any provisions regarding disbursal of grants.**
  - This raises a question whether **HECI will have any role in the disbursal of grants** to higher educational institutions.

➢ **Independent Regulations:**
- Presently, the **Central Advisory Board of Higher Education (CABE)** co-ordinates and advises the centre and states on education related matters.
- The Bill creates an **Advisory Council** and requires HECI to implement its recommendations.
  - This may **restrict HECI from functioning as an independent regulator.**

What are the Functions of HECI?

➢ The HECI will **recommend ways** to promote **autonomy of higher educational institutions** and ensure maintenance of academic standards in higher education.

➢ **It will specify norms for:**
- Learning outcomes for courses.
- Standards of teaching and research.
- Evaluation procedure to measure yearly academic performance of institutions.
- Accreditation of institutions.
- Ordering closure of institutions.

➢ **Further, the HECI may specify norms for:**
- Granting authorisation to institutions to commence academic operations.
- Award of degree or diploma.
- Affiliation of institutions with universities.
- Grant of autonomy.
- Graded autonomy.
- Eligibility criteria for appointment of Vice Chancellors.
- Setting & winding up of institutions.
- Fee regulation.

What is the Significance of National Policy, 2020?

➢ **Recognising Importance of Formative years:**

Note:

- ○ In adopting a **5+3+3+4 model for school education starting at age 3**, the policy recognises the **primacy of the formative years** from ages 3 to 8 in shaping the child's future.
- ➤ **Departure from Silos Mentality:**
  - ○ Another key aspect of school education in the new policy is the **breaking of the strict division of arts, commerce and science streams in high school.**
- ➤ **The Confluence of Education and Skills:**
  - ○ Introduction of **vocational courses with an internship**.
    - This may nudge the **vulnerable sections of society** to send their children to school.
- ➤ **Making Education More Inclusive:**
  - ○ The NEP proposes the extension of the **Right to Education (RTE)** to all children up to the age of 18.
- ➤ **Allowing Foreign Universities:**
  - ○ The document states **universities from among the top 100 in the world** will be able to set up campuses in India.
- ➤ **Ending Hindi vs English Debate:**
  - ○ It emphasizes on making **mother tongue, local language or the regional language** the medium of instruction at least till Grade 5, which is considered the best medium of teaching.

Electoral Bonds

Why in News?

Recently, the **State Bank of India (SBI)** shared data reporting that **Donations to political parties through electoral bonds (EBs)** have crossed the Rs 10,000-crore mark.

- ➤ In the 21st sale of EBs conducted in July 2022, **parties received another Rs 389.5 crore from EB purchases**.
- ➤ The total amount collected by parties has gone up to **Rs 10,246 crore since 2018 when the EB scheme was introduced.**

What are Electoral Bonds?

- ➤ **About:**
  - ○ **State Bank of India is authorised** to issue and encash these bonds.
  - ○ Electoral bonds are **purchased anonymously by donors** and are **valid for 15 days from the date of issue.**
  - ○ As debt instruments, these can be **bought by donors from a bank,** and the **political party can then encash them.**
  - ○ These can be redeemed **only by an eligible party by depositing the same in its designated account** maintained with a bank.
  - ○ The bonds are issued by SBI in denominations of **Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh and Rs 1 crore.**
  - ○ The bonds are available for purchase by any citizen of India for a **period of ten days each** in the months of **January, April, July and October** as may be specified by the **Central Government**.
- ➤ **Eligibility:**
  - ○ Only the political parties registered under Section 29A of the **Representation of the People Act, 1951** and have **secured not less than 1% of the votes polled** in the last general election to the **House of the People** or the **Legislative Assembly**, are eligible to receive electoral bonds.

Why are Electoral Bonds a Concern for India?

- ➤ **Contradicting its Basic Idea:**
  - ○ The central criticism of the electoral bonds scheme is that **it does the exact opposite of what it was meant to do** i.e. to bring **transparency to election funding.**
    - For example, critics argue that the **anonymity of electoral bonds is only** for the broader public and opposition parties.
- ➤ **Possibility of Extortion:**
  - ○ The fact that such bonds are **sold via a government-owned bank (SBI)** leaves the door open for the **government to know exactly who is funding its opponents.**
    - This, in turn, allows the possibility for the government of the day **to either extort money**, especially from the big companies, or **victimise them for not funding the ruling party** — either way providing an unfair advantage to the party in power.

Note:

- ➤ **A Blow to Democracy:**
  - ○ Through an amendment to the **Finance Act 2017**, the Union government has **exempted political parties from disclosing donations** received through electoral bonds.
    - ● This means the **voters will not know** which individual, company, or organization has funded which party, and to what extent.
  - ○ However, in a **representative democracy**, citizens cast their votes for the people who will represent them in Parliament.
- ➤ **Compromising Right to Know:**
  - ○ **The Indian Supreme Court** has long held that the **"right to know"**, especially in the context of elections, is an integral part of the **right to freedom of expression (Article 19)** under the **Indian Constitution**.
- ➤ **Against Free & Fair Elections:**
  - ○ Electoral bonds **provide no details to the citizens.**
  - ○ The said **anonymity does not apply to the government of the day**, which can always access the donor details by demanding the data from the State Bank of India (SBI).
  - ○ This implies that the **government in power can leverage this information and disrupt free and fair elections**.
- ➤ **Crony Capitalism:**
  - ○ The electoral bonds scheme **removes all pre-existing limits on political donations** and effectively allows **well-resourced corporations to fund elections** subsequently paving the way for crony capitalism.
  - ○ **Crony Capitalism:** An economic system characterized by **close, mutually advantageous relationships between business leaders and government officials.**

National e-Governance Service Delivery Assessment

Why in News?

Recently, the website of the **Ministry of Home Affairs (MHA)** has been ranked first under Central Ministries Portal, and the **Digital Police portal** ranked second in a **National E-Governance service delivery assessment (NeSDA)** of websites of central government ministries.

What is National E-Governance Service Delivery Assessment?

- ➤ **About:**
  - ○ It is a **periodic assessment intended to improve the effectiveness** of States/Union Territories and the Central Government in **delivery of their online services** to citizens.
  - ○ It is released by **Ministry of Personnel, Public Grievances and Pensions**.
  - ○ In this assessment, the service **portals were evaluated alongside their parent Ministry/portal Department's** in this project.
  - ○ The assessment was conducted by the **Department of Administrative Reforms and Public Grievances (DARPG)** in association with its knowledge partners **NASSCOM and KPMG** in 2021.
  - ○ NeSDA 2021 is the second edition of NeSDA, **the first edition was launched in 2019 and it is a biennial study.**
- ➤ **Categorisation of Portal:**
  - ○ All Government portals that were evaluated were divided into **two main categories**-
    - ● States/Union Territories/Central Ministry portal.
    - ● State/Union Territory/ Central Ministry Services Portals.
- ➤ **Parameters:**
  - ○ There were **four main parameters** of assessment: -
    - ● **Accessibility.**
    - ● **Content Availability.**
    - ● **Ease of Use and Information Security.**
    - ● **Privacy for Central Ministry Portals.**
  - ○ An additional **three parameters** were also used for the Central Ministry Services Portals -
    - ● **End Service Delivery.**
    - ● **Integrated Service Delivery.**
    - ● **Status and Request tracking.**
- ➤ **Recent evaluation of NeSDA 2021:**
  - ○ In the case of MHA, the **National Crime Records Bureau (NCRB)** Digital Police portal was shortlisted for evaluation under the Services Portal.
  - ○ Accordingly, the main website of Ministry of Home Affairs was chosen as the **parent Ministry portal for evaluation.**

Note:

○ In the category o**f State/UT portal, among group A states**- **Kerala** became a front runner and the progress **was made by Tamil Nadu** followed by **Punjab.**

○ Among **group B states**- **Odisha** being at top **followed by Uttar Pradesh** and **Bihar.**

○ Among **North-Eastern states Nagaland, Meghalaya and Assam are at top.**

○ Among UTs, **J&K topped followed by A&N, Puducherry, Delhi and Chandigarh.**

Hate Speech and Blasphemy

Why in News?

Recently, there has been a rise in cases related to **Hate Speech, Blasphemy** in India.

What is Hate Speech?

➢ **About:**

○ According to the **267ᵗʰ Report of the Law Commission of India**, **Hate Speech** is stated as an incitement to hatred primarily against a group of persons defined in terms of race, ethnicity, gender, sexual orientation, religious belief, and the like.

● Thus, hate speech is any word written or spoken, signs, visible representations within the hearing or sight of a person with the intention to cause fear or alarm, or incitement to violence.

➢ **Related Data:**

○ According to the **National Crime Records Bureau(NCRB),** there has been a huge increase in cases registered to promote hate speech and foster animosity in society.

● As there were only 323 cases registered in 2014, it had increased to 1,804 cases in 2020.

What are the Regulations Related to Blasphemy?

➢ **About:**

○ **Section 295(A) of the Indian Penal Code (IPC)**, punishes any speech, writings, or signs that "with premeditated and malicious intent" insult citizens' religion or religious beliefs with a fine and imprisonment for up to three years.

➢ **SC Interpretation:**

○ **Ramji Lal Modi case (1957):**

● The legality of Section 295(A) was **affirmed by a five-judge Bench of the Supreme Court** in this case.

■ Supreme court **reasoned that while Article 19(2) allows reasonable limits on freedom of speech and expression for the sake of public order,**

◆ The punishment under Section 295(A) deals with aggravated form of blasphemy which is committed with the malicious aim of offending the religious sensibilities of any class.

○ **Superintendent, Central Prison, Fatehgarh Vs Ram Manohar Lohia case (1960):**

● It stated that the **link between the speech spoken and any public disorder caused as a result** of it should have a close relationship for retrieving Section 295(A) of IPC.

● Further in 2011, it concluded that only speech that amounts to "incitement to impending unlawful action" can be punished.

■ That is, the **state must meet a very high bar before using public disturbance as a justification for suppressing expression**.

Why there is a Need for Distinction between Blasphemy and Hate Speech Laws?

➢ **Too wide Interpretation:**

○ **Section 295(A)** is considerably too wide and it cannot be stated that deliberate disrespect to religion or religious sensibilities is necessarily tantamount to incitement.

➢ **Section 295(A) contains hate speech statutes:**

○ The Supreme Court has said on several occasions that perhaps the goal of hate speech statutes in Section 295(A) is to prevent prejudice and ensure equality.

➢ **Laws Lack Clarity:**

● Hate speech laws are predicated on the **critical distinction between criticizing or ridiculing religion and encouraging prejudice or aggression** towards individuals or a community because of their faith.

Note:

■ Unfortunately, there is a **huge disparity between this interpretation and the actual wording** due to which the law is still being exploited at all levels of administration.

Integration of Health Applications with ABDM

Why in News?

Recently, with successful integrations of 52 digital health applications, **the National Health Authority (NHA)** announced the expansion of the digital health ecosystem being established under its flagship scheme **Ayushman Bharat Digital Mission (ABDM)**,

➢ These integrations are achieved through **ABDM Sandbox**.

➢ In the last two months, additional 12 health service applications completed their integration across various milestones in the ABDM sandbox environment.

   ○ The tally now includes 20 government applications and 32 private sector applications.

Which New Apps have been Integrated?

➢ The 12 new applications added to the ABDM Partners ecosystem are –

   ○ **HMIS (Hospital Management Information System)** for Central Government Hospital Scheme (CGHS)

   ○ **Hospital Management System** by NICE-HMS

   ○ **Anmol Application** of the National Health Mission by **National Informatics Center (NIC)**,

   ○ **eSanjeevani**

   ○ UK Telemedicine Service for Uttarakhand Government by Dhanush Infotech Pvt Ltd.

   ○ **Health Tech solutions** like Equal app by Infinity Identity Technologies Pvt Ltd

   ○ **IHX Claim Management Platform** by IHX

   ○ **Karkinos Application Suite** by Karkinos Healthcare Private Limited,

   ○ **Meraadhikar app** by Fingoole Technologies Pvt Ltd,

   ○ **nPe Bills & Services app** by NICT

   ○ **Paperplane WhatsApp Clinic** by Paperplane Communications Pvt Ltd

   ○ **HISP-EMR** by the Society for Health Information System Program (HISP India)

ABDM and Integration of Apps - What is the Significance?

➢ **About ABDM:**

   ○ ABDM is a national digital health eco-system that supports **Universal Health Coverage** in an efficient, accessible, inclusive, and affordable manner, through the provision of a wide range of information and infrastructure services.

   ○ It aims to develop the backbone necessary to **support the integrated digital health infrastructure** of the country.

   ○ It will **bridge the existing gap amongst different stakeholders of the Healthcare ecosystem through digital highways.**

➢ **Significance of the Integration:**

   ○ As more existing health applications join the ecosystem, the **scope for innovation increases, and the system evolves much faster**.

   ○ This integration signifies how the **public and private sectors can come together and collaborate to strengthen a digital health ecosystem** for the country.

   ○ This **collaborative approach toward digitization** of healthcare delivery will **help India achieve its goal of healthcare for all** in the most effective, efficient, and affordable manner.

What are the Key Points about ABDM?

➢ **Objectives:**

   ○ To establish **state-of-the-art digital health systems**, to manage the core digital health data, and the infrastructure required for its seamless exchange.

   ○ To establish **registries at an appropriate level to create a single source** of truth in respect of clinical establishments, healthcare professionals, health workers, drugs, and pharmacies.

   ○ To enforce the adoption of open standards by all national digital health stakeholders.

   ○ To create a system of **personal health records, based on international standards, easily accessible to individuals and healthcare professionals and services providers, based on individual's informed consent;**

   ○ To promote the development of **enterprise-class health application systems with a special focus on achieving the Sustainable Development Goals for health**.

Note:

- ➤ **Building Blocks of ABDM:** The **Ayushman Bharat Mission** is based on 4 main building blocks:
- ➤ **Health ID**
  - ○ Each individual user of the ABDM system will have to generate a **unique health ID** that will be verified and linked to their identification.
  - ○ The user's medical information will be stored on this unique health ID.
- ➤ **Healthcare Professionals Registry**
  - ○ It is a complete **database of healthcare professionals who are associated with the deployment of healthcare services across the country**.
  - ○ By registering themselves on the registry, healthcare professionals can have easy and quick access to patient data and other benefits.
- ➤ **Health Facility Registry**
  - ○ It is an extensive database of all healthcare facilities across the nation. These include both private and public health care facilities like hospitals, diagnostic labs, small clinics, nursing homes, etc.
- ➤ **ABHA Mobile App**
  - ○ The **ABHA mobile app** is to be used by the patients to control and access their medical information, as well as share it with healthcare professionals.
  - ○ The app is supported by the **secure PHR (Personal Health Record)** system.

What is ABDM Sandbox?

- ➤ It's a **digital space for experimentation** created **for testing integration processes before the digital health product** is made live for actual use.
- ➤ Any digital health service provider/ developer can register on the ABDM Sandbox by following a pre-defined process of integrating and validating their software systems with the ABDM **Application Program Interface (APIs).**
- ➤ Currently, 919 public and private sector integrators have enrolled under ABDM Sandbox for integrating and validating their software solutions under the scheme.

What are the Other Recent Developments in Digitization of India's Healthcare Ecosystem?

- ➤ **National Digital Health Mission (NDHM):**
  - ○ It is a complete **digital health ecosystem.** The digital platform will be launched with four key features — **health ID, personal health records, Digi Doctor** and **health facility registry.**
- ➤ **Health Data Management Policy:**
  - ○ In December 2020, the Ministry of Health & Family Welfare approved the **Health Data Management Policy** under NDHM to protect and manage personal data of patients using the digital services of the scheme.
  - ○ The policy acts as a guidance document across the **National Digital Health Ecosystem (NDHE).**
  - ○ The data collected across the NDHE will be stored at the central level, the state/UT level and at the health facility level.
- ➤ **Other Initiatives:**
  - ○ Data mining, digital health record and digital health infrastructure.

The Energy Conservation (Amendment) Bill 2022

Why in News?

Recently, the Ministry of Power has tabled the **Energy Conservation (Amendment) Bill 2022** in **Lok Sabha.**

- ➤ The Bill proposes to **amend the Electricity Conservation Act 2001**, last amended in 2010, to introduce changes such as incentivising the use of clean energy by issuing carbon saving certificates.

What are the Provisions of the Electricity Conservation Act 2001?

- ➤ **Energy Efficiency Norms:**
  - ○ **Empowers the Centre to specify norms and standards of energy efficiency for appliances**, industrial equipment and buildings with a connected load over 100 kiloWatts (kW) or a contractual demand of more than 15 kilovolt-amperes (kVA).
- ➤ **Bureau of Energy Efficiency:**
  - ○ The Act established the **Bureau of Energy Efficiency (BEE).**

Note:

- The 2010 amendment extended the tenure of the Director General of the Bureau of Energy Efficiency from three to five years.
  - ○ This **Bureau can specify qualifications required for energy auditors** who monitor and review the power consumption of various industries.
- ➢ **Energy Trading:**
  - ○ The Government can **issue energy savings certificates to those industries which consume less than their maximum allotted energy.**
  - ○ However, this certificate can be sold to customers who consume higher than their maximum allowed energy threshold – **providing for a framework for energy trading.**
- ➢ **Prohibition until Conforms Specified Norms:**
  - ○ The Act allows the Centre to prohibit the manufacture, sale, purchase or import of any particular equipment unless it conforms to specified norms issued six months/ one year before.
- ➢ **Penalty:**
  - ○ Consumers who **utilise excess energy will be penalized according to their excess consumption.**
  - ○ Any appeals against any such order passed by the Central or state government will be heard by the appellate tribunal already established **under the Electricity Act, 2003.**

What are the Proposed Changes in the Act?

- ➢ **Share of renewable Energy:**
  - ○ Defining the **minimum share of renewable energy** to be consumed by industrial units or any establishment.
  - ○ This consumption **may be done directly from a renewable energy source** or indirectly via the power grid.
- ➢ **Incentivising for Clean Energy:**
  - ○ Incentivising efforts to use clean energy by issuing **carbon saving certificates.**
  - ○ Considering **additional incentives like carbon credits** for the use of clean energy to lure the private sector to **climate action.**
- ➢ **Strengthening Related Institutions:**
  - ○ Strengthening institutions set up originally under the Act, such as the **Bureau of Energy Efficiency.**
- ➢ **Promoting Green Hydrogen:**

- ○ Facilitating the promotion of **Green Hydrogen** as an alternative to the **fossil fuels** used by industries
- ➢ **Increases Ambit of Conservation Standards:**
  - ○ Including larger residential buildings under energy conservation standards to promote sustainable habitats.
  - ○ Currently, only large industries and their buildings come under the ambit of the Act.

What are the Objectives of the Proposed Amendments?

- ➢ **To reduce India's power consumption via fossil fuels** and thereby **minimize the nation's carbon footprint.**
- ➢ To develop **India's Carbon market** and boost the adoption of clean technology.
- ➢ **To meet its Nationally Determined Contributions (NDCs)**, as mentioned in the Paris Climate Agreement, before its 2030 target date.

What are India's climate change commitments?

- ➢ India has committed to reducing the carbon intensity of its economy by 33-35 % by 2030 **from its 2005 levels as part of its NDCs under the Paris Climate Agreement.**
- ➢ India has also promised **to achieve over 40% of its power generation from non-fossil-fuel energy resources by 2030.**
- ➢ In a bid to reduce its CO_2 emissions to 550 metric tonnes (Mt) by 2030, **India has committed to creating an additional carbon sink for 2.5 -3 billion tonnes** of CO_2 by increasing its tree and forest cover.
- ➢ India revised NDCs at the **COP26 Summit** held in Glasgow in November, 2021. India's **five new climate targets are:**
  - ○ To increase its non-fossil energy **capacity to 500 GW by 2030**
  - ○ To meet **50 % of India's power demand via renewable energy** sources
  - ○ To reduce the **carbon intensity of the Indian economy by 45 %.**
  - ○ To reduce India's total projected carbon emissions by one billion tonnes from 2021 to 2030
  - ○ To achieve a target **net zero (for carbon emissions) by 2070.**

Note:

What are the Measures to reduce India's Carbon Footprints?

➢ **Domestic Solar Manufacturing:**
  ❍ In Budget 2022-23, the government Allocated Rs 19,500 crores to facilitate **domestic solar manufacturing in India.**

➢ **Biomass Cofiring:**
  ❍ Use of 5-7 % biomass pellets for co-firing in thermal power plants.

➢ **Blending of Fuel:**
  ❍ To promote blending of fuel, an additional differential excise duty of Rs 2/litre to be levied on unblended fuel.

➢ **Battery Swapping Policy:**
  ❍ To achieve clean transport, a new battery swapping policy to be formulated for electric vehicles

➢ **Green Bonds:**
  ❍ Issue 'Green Bonds' — fixed-income financial methods to fund projects with positive environmental effects — to raise capital for green infrastructure. Such sovereign green bonds can be used in climate adaptation projects which lack private funding.

Foreign Visit of the State Government Ministers

Why in News?

Recently, Delhi's Chief Minister was **denied permission to attend the World Cities Summit in Singapore.**

➢ Also, the state transport minister of Delhi filed a plea in Delhi high court to set aside the need for travel clearances by the Centre for private foreign visits of State government Ministers.

What's the Issue?

➢ The Chief Minister of Delhi was invited by the Singapore government to participate in the **world cities conference** but his clearance to visit was denied by the central government.
  ❍ Further, the central government said the trip to Singapore was "not advisable," noting that it was **mostly attended by mayors and that, in any case, urban governance in Delhi was not solely the responsibility of the state government.**

➢ Also, in 2019 the Delhi Chief Minister's proposed visit to Copenhagen for attending the 7th **C-40 World Mayors Summit** was rejected by the MEA without providing any reason.

Under which Provisions are approvals Required?

➢ In 1982 the **cabinet secretariat** issued guidelines regarding foreign travel of Ministers of State government and Union Territories and State government officials.
  ❍ Foreign visits by members of the State governments in their official capacity would require **clearances from the Ministry of External Affairs (MEA), Ministry of Home Affairs, Finance Ministry, and the Central Administrative Ministry.**

➢ Further, another order circulated in 2004, modifying the provisions to the extent that the final orders were to be issued by the Finance Ministry.
  ❍ It stated that Chief Ministers required **further approval from the Prime Minister's Office** before an official visit.

➢ Again in 2010, another directive was issued that made political clearances mandatory before private visits of Ministers in State governments.

On what Grounds has the Petition been Filed?

➢ **Violates Right to Privacy:**
  ❍ Requiring permission for visiting abroad by state government Ministers violates their right to privacy and dignity of their constitutional office.

➢ **Beyond Jurisdiction of Governor's Office:**
  ❍ It argues that **Governor** advising against the proposed Singapore visit is beyond the jurisdiction of his office's authority.

➢ **Violates Article 21:**
  ❍ The use of arbitrariness and unaccountable implementation of power by the Governor and Central Government is **against national interest and good governance** and **impinges upon the right to travel abroad as guaranteed under Article 21.**

Central Vigilance Commission

Why in News?

Recently, the Government appointed Suresh N Patel as the new chief of the **Central Vigilance Commission.**

Note:

drishti

What is the Central Vigilance Commission (CVC)?

➢ **About:**

    ❍ The Central Vigilance Commission was **set up by the Government in 1964** on the **recommendations of the Committee on Prevention of Corruption, headed by Shri K. Santhanam**, to advise and guide Central Government agencies in the field of vigilance.

    ❍ CVC are conceived to be the **apex vigilance institution, free of control from any executive authority, monitoring all vigilance activity** under the Central Government and advising various authorities in Central Government organizations in planning, executing, reviewing and reforming their vigilant work.

    ❍ The Parliament enacted Central Vigilance Commission Act, 2003 (CVC Act) conferring statutory status on the CVC.

    ❍ It is an independent body which is only responsible to Parliament.

    ❍ It submits its report to the President of India.

➢ **Members:**

    ❍ Central Vigilance Commissioner - Chairperson.

    ❍ Not more than two Vigilance Commissioners - Members.

➢ **Functions:**

    ❍ The CVC **receives complaints on corruption or misuse of office** and recommends **appropriate action**.

    ❍ Following institutions, bodies, or a person can approach CVC:

      ● **Central government, Lokpal, Whistle blowers**

    ❍ **It is not an investigating agency**. The CVC either gets the investigation done through the **Central Bureau of Investigation(CBI)** or through chief vigilance officers (CVO) in government offices.

    ❍ It is empowered to inquire into **offences** alleged to have been committed under the **Prevention of Corruption Act, 1988** by certain categories of public servants.

What are the Service Conditions of the Chief vigilance Commissioner?

➢ **Appointment:**

    ❍ The Central Vigilance Commissioner is to be appointed by the President of India after the recommendation of a three-member committee which consist,

      ● Prime Minister

      ● Minister of Home Affairs (MHA)

      ● **Leader of Opposition in Lok Sabha**

➢ **Term:**

    ❍ S/He holds the **office for 4 years**.

➢ **Removal:**

    ❍ S/He can be removed or suspended from the office by the President on the **ground of misbehavior** but only after the **Supreme Court** has held an inquiry into his case and recommended action against him.

    ❍ Further, He can also be removed for proved misbehavior or incapacity if the Supreme Court inquiry finds him guilty.

    ❍ S/He can also resign by writing to the President.

Withdrawal of Personal Data Protection Bill

Why in News?

The government of India has withdrawn the **Personal Data Protection Bill** from **Parliament** as it considers a **"comprehensive legal framework"** to regulate the online space to boost innovation in the country **through a new bill**.

What was the Personal Data Protection Bill & Its Major Challenges?

➢ **About:**

    ❍ **The Personal Data Protection Bill, 2019** was introduced in **Lok Sabha** by the Minister of Electronics and Information Technology, on December 11, 2019.

    ❍ Commonly referred to as the "**Privacy Bill**", it intended to **protect individual rights** by regulating the collection, movement, and processing of data that is personal, or which can identify the individual.

➢ **Challenges:**

    ❍ Many contend that the **physical location of the data** is not relevant in the cyber world as the **encryption keys may still be out of the reach** of national agencies.

Note:

- National security or reasonable purposes are **open-ended and subjective terms**, which may lead to intrusion of the state into the private lives of citizens.
- Technology giants like **Facebook and Google are against it** and have criticised the protectionist policy of **data localisation** as they are afraid it would have a domino effect in other countries as well.
  - It had been **opposed by social media firms**, experts and even ministers, who said that it had **too many loopholes to be effective** and beneficial for both users and companies.
  - Also, it may backfire on I**ndia's own young startups** that are attempting global growth, or on larger firms that process foreign data in India.

Why has the Bill been withdrawn?

➢ **Too Many Amendments:**
  - **The Joint Committee of Parliament** analyzed the Personal Data Protection Bill, 2019 in detail.
    - **81 amendments were proposed and 12 recommendations were made** towards a comprehensive legal framework on the **digital ecosystem**.
    - Considering the report of the JCP, **a comprehensive legal framework is being worked upon.**
➢ Hence, it is proposed to withdraw.
➢ **Compliance Intensive:**
  - The Bill was also seen as **being too "compliance intensive"** by startups of the country.
    - The revamped bill will be much **easier to comply with**, especially for startups.
➢ **Issues with Data Localisation:**
  - The tech companies questioned a proposed provision in the Bill called **Data Localisation.**
    - Under data localisation, it would have been **mandatory for companies** to store a copy of certain sensitive personal data **within India**, and the **export of undefined "critical" personal data** from the country would be **prohibited.**
    - The activists had criticised that it **would allow the central government** and its agencies blanket exemptions from adhering to any and all provisions of the Bill.
➢ **Pushback from Stakeholders:**

- The bill had faced **major push back from a range of stakeholders** including big tech companies such as Facebook and Google, and privacy and civil society activists.
➢ **Delay in Implementation:**
  - The delays in the Bill had been criticised by several stakeholders pointing out that it was a matter of grave concern that India did not have a basic framework to protect people's privacy.

What did the Joint Committee of Parliament Recommend?

➢ It proposed **81 amendments to the Bill** finalized by the Srikrishna panel, and **12 recommendations** including **expanding the scope of the proposed law to cover discussions on non-personal data**, thereby changing the mandate of the Bill from personal data protection to broader data protection.
  - **Non-personal data** is any set of data that **does not contain personally identifiable information.**
➢ The JCP's report also recommended changes on issues such as **regulation of social media companies**, and on using only "**trusted hardware**" in smartphones, etc.
➢ It proposed that social media companies that do not act as intermediaries should be treated as **content publishers, making them liable for the content they host.**

Model Tenancy Act

Why in News?

According to Ministry of Housing and Urban Affairs (MoHUA), Model Tenancy Act has been rectified by only four states, i.e., Andhra Pradesh, Tamil Nadu, Uttar Pradesh, and Assam.

What was the Need for Model Tenancy Act?

➢ The **existing rent control laws are restricting the growth of rental housing and discourage owners from renting out their vacant houses due to fear of repossession**.
➢ One of the potential measures to unlock the vacant house is to **bring transparency and accountability to the existing system of renting premises and to balance the interests of both the property owner and tenant in a judicious manner.**

Note:

○ As per Census 2011, more than 1 crore houses were lying vacant in urban areas.

➤ Earlier, almost a third of all Indians were living in urban areas, their proportion rising from 31.16% in 2011 to 27.82% in 2001. By 2050, more than half of India would be living in cities or towns, mainly due to migration.

What is the Model Tenancy Act?

➤ **About:**

○ **The Model Tenancy Act,2021** is to establish Rent Authority to regulate renting of premises and to protect the interests of landlords and tenants and to provide speedy adjudication mechanism for resolution of disputes and matters connected therewith or incidental thereto.

○ It aims at creating a **vibrant, sustainable, and inclusive rental housing market in the country.**

○ It will enable the creation of adequate rental housing stock for all income groups thereby addressing the issue of homelessness,

○ It will enable the institutionalization of rental housing by gradually shifting it toward the formal market

➤ **Key Provisions:**

○ **Written Agreement is Mandatory:**

● A **written agreement** is mandatory between the property owner and the tenant.

○ **Establishes Independent Authority and Rent Court:**

● Establishes an independent authority in every state and UT for **registration of tenancy agreements** and even a separate court **to take up tenancy related disputes.**

○ **Maximum Limit for Security Deposit:**

● Limit the **tenant's advance security deposit to a maximum of two months' rent** for residential purposes and to a **maximum of six months** for **non-residential purposes.**

○ **Describes Rights and Obligations of both Landlord and Tenant:**

● The **landlord** will be responsible for activities like structural repairs except those necessitated by damage caused by the tenant, whitewashing of walls and painting of doors and windows, etc.

● The **tenant** will be responsible for drain cleaning, switches and socket repairs, kitchen fixtures

repairs, replacement of glass panels in windows, doors and maintenance of gardens and open spaces, among others.

○ **24-hour Prior Notice by the Landlord:**

● A landowner will have to give **24-hour prior notice before entering the rented premises** to carry out repairs or replacement.

○ **Mechanism for Vacating the Premises:**

● If a landlord has **fulfilled all the conditions stated** in the rent agreement - giving notice etc.- and the **tenant fails to vacate the premises** on the expiration of the period of tenancy or termination of tenancy, the landlord is **entitled to double the monthly rent for two months** and four times after that.

➤ **Significance:**

○ The authority will provide **a speedy mechanism in resolving disputes** and other related matters.

○ It will help overhaul the legal framework with respect to rental housing across the country.

○ It is expected to give a fillip to private participation in rental housing as a business model for addressing the huge housing shortage.

➤ **Challenge:**

○ The Act is not binding on the states as land and urban development remain state subjects.

Food Processing Sector

Why in News?

Recently, in a written reply to the **Rajya Sabha** Minister of State (Food Processing Industries) stated the initiatives taken by the Government to support the **Food Processing Sector**.

What is Food Processing and the Present Status of the Sector in India?

➤ **About:**

○ Food processing is a **type of manufacturing in which raw materials are processed into intermediate foods or edible items** using scientific knowledge and technology.

● Bulky, perishable, and occasionally inedible food resources are converted into more usable,

concentrated, shelf-stable, and pleasant meals or beverages using a variety of techniques.

- It **improves the storability, portability, palatability, and convenience of the finished product.**

➢ **Significance:**

❍ The Indian food sector **ranks fifth in terms of scale, contributing almost 6% of GDP, 13% of Indian exports, and 6% of overall industrial investment in the country.**

➢ **Present Status:**

❍ India is the **world's second-largest producer of fruits and vegetables, after China, yet just 2% of the crop gets processed.**

❍ Despite a significant manufacturing base, the **processing is little (less than 10 percent).**

  ● Processing accounts for around 2% of fruits and vegetables, 8% of marine products, 35% of milk, and 6% of poultry.

❍ India has **the world's greatest livestock population, with 50% of buffaloes and 20% of cattle,** but only around 1% of the entire meat population is transformed into value-added goods.

What are the Various Policy Measures taken by the Government?

➢ Inclusion of **food & agro-based processing units and cold chain** as an agricultural activity under **Priority Sector Lending (PSL)** norms in April 2015.

➢ As a measure toward **ease of doing business**, the **Food Safety and Standards Authority of India (FSSAI)** through notifications in 2016 has **shifted from product-by-product approval to an ingredient and additive-based approval process.**

➢ 100% **Foreign Direct Investment (FDI)** approval under automatic route has been permitted for the food processing sector

➢ A Special Food Processing Fund of Rs. 2000 crore was set up with **National Bank for Agriculture and Rural Development (NABARD)** to provide affordable **credit for investments** in setting up **Mega Food Parks (MFP)** as well as processing units in the MFPs.

❍ In 2019, the coverage of the fund was extended to the setting up of **Agro-Processing Clusters** along with setting up of individual manufacturing units.

❍ Also, a **Designated Food Parks (DFPs)** scheme would be introduced in different states for the purpose of availing affordable credit from the special funds with NABARD.

New Bills in Lok Sabha

Why in News?

Two new bills, **the Competition (Amendment) Bill, 2022** & **New Delhi International Arbitration Centre (Amendment) Bill** were introduced in the Lok Sabha.

What is Competition (Amendment) Bill 2022?

➢ **About:**

❍ It seeks to change the structure of the **Competition Commission of India (CCI)**.

❍ It seeks to introduce provisions to **allow the CCI to address the needs of new-age markets.**

❍ It also has provisions for having **'value of transaction'** as a criteria for **notifying combinations to the CCI.**

➢ **Other Proposed Amendments:**

❍ A limitation period of three years for **filing information on anti-competitive agreements** and **abuse of dominant position before the CCI**

❍ Changes in certain definitions like **'enterprise'**, **'relevant product market'**, **'group'** and **'control'** to provide clarity.

➢ **Features:**

❍ Broadening **anti-competitive agreements.**

❍ Faster approvals of **mergers and acquisitions (M&A).**

❍ **Reducing penalty** for parties willing to share information during an investigation.

❍ Reducing litigation.

What is the Competition Commission of India?

➢ **About:**

❍ **Competition Commission of India (CCI)** is a **statutory body** of the Government of India responsible for enforcing the **Competition Act, 2002**, it was duly constituted in March 2009.

❍ **The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act)** was repealed and replaced by the Competition Act, 2002, on the recommendations of the **Raghavan committee.**

Note:

- ➢ **Objective:**
  - ○ Competition Commission of India (CCI) is the c**ompetition regulator**, and an **antitrust watchdog for smaller organizations** that are unable to defend themselves against large corporations, with the larger aim of **consumer welfare,** ensuring **fair and healthy competition** in economic activities.
- ➢ **Composition:**
  - ○ The Commission consists of **one Chairperson and six Members** who shall be **appointed by the Central Government.**
  - ○ The commission is a **quasi-judicial body** which gives **opinions to statutory authorities** and also deals with other cases. The Chairperson and other Members shall be **whole-time Members.**

What is the New Delhi International Arbitration Centre (Amendment) Bill?

- ➢ **The New Delhi International Arbitration Centre (NDIAC)** is an autonomous institution based in New Delhi, **to conduct arbitration, mediation, and conciliation proceedings**.
- ➢ It was established in 2019 and declared as an **Institute of National Importance** by an Act of Parliament.
  - ○ **The New Delhi International Arbitration Centre (Amendment) Bill**, was introduced by the Law Minister to change its name to India **International Arbitration Centre.**

Pradhan Mantri Adi Adarsh Gram Yojana

Why in News?

Recently, Government has modified the earlier scheme of **'Special Central Assistance to Tribal Sub-Scheme (SCA to TSS)'** with nomenclature **'Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY)'** for implementation during 2021-22 to 2025-26.

What is Pradhan Mantri Adi Adarsh Gram Yojana?

- ➢ **About:**
  - ○ It supplements the efforts of State Governments for **development and welfare of tribal people** by extending Special Central Assistance as an additive to the **State Tribal Sub-Plan** (**TSP**).

- ○ It aims at **mitigating gaps** and providing **basic infrastructure** in villages with significant **tribal population** in convergence with funds available under different schemes in **Central Scheduled Tribe Component.**
- ➢ **Revision of Scheme Guidelines:**
  - ○ To ensure all round development of the selected villages, so that they can indeed become '**Adarsh Grams**', the **SCA to TSS Scheme** was also revised to capture the **Gaps in critical socio-economic** 'Monitorable Indicators' as part of various sectors/ domains.
    - ● These domains include **water and sanitation**, **education**, **health and nutrition**, **agricultural best practices** etc. amongst others.
- ➢ **New Approach for Implementation**:
  - ○ The identification of needs or Gaps with regard to the '**Monitorable Indicators**' are based on a **Need Assessment exercise**.
  - ○ The **'Village Development Plan' (VDP)** is based on the data collected as part of the Need Assessment exercise.
  - ○ PMAGY provides the platform for convergent implementation of other Schemes with the aim to achieve saturation in the various domains.
- ➢ **Objectives:**
  - ○ Preparing **Village Development Plan** based on the needs, potential, and aspirations.
  - ○ Maximizing the **coverage of individual / family benefit schemes** of the Central / State Governments.
  - ○ Improving the **infrastructure** in vital sectors like **health, education, connectivity and livelihood.**
  - ○ The scheme envisions to mitigate gaps in prominent **8 sectors of development**:
    - ● **Road connectivity** (Internal and Inter village /block)
    - ● **Telecom connectivity** (Mobile /internet)
    - ● **School**
    - ● **Anganwadi Centres**
    - ● **Health Sub-Centre**
    - ● **Drinking water facility**
    - ● **Drainage**
    - ● **Solid waste management**

Note:

What are the Basic Safeguards Provided by Indian Constitution for Scheduled Tribes?

➤ **The Constitution of India** does not endeavor to define the term 'tribe', however, the term Scheduled Tribe' was inserted in the Constitution through **Article 342 (i)**.

  ○ It lays down that 'the **President** may, by public notification, specify the tribes or tribal communities or parts of or groups within the tribes or tribal communities or parts which shall, for the purposes of this Constitution, be deemed to be Scheduled Tribes.

  ○ **The Fifth Schedule of the Constitution** provides for the setting up a **Tribes' Advisory Council** in each of the States having Scheduled Areas.

➤ **Educational & Cultural Safeguards:**

  ○ **Article 15(4)**: Special provisions for advancement of other backward classes (it includes STs).

  ○ **Article 29**: Protection of Interests of Minorities (it includes STs).

  ○ **Article 46**:The State shall promote, with special care, the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Castes, and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.

  ○ **Article 350**: Right to conserve distinct Language, Script or Culture.

➤ **Political Safeguards:**

  ○ **Article 330**: Reservation of seats for STs in **Lok Sabha**.

  ○ **Article 332**: Reservation of seats for STs in State **Legislatures**.

  ○ **Article 243**: Reservation of seats in **Panchayats**.

➤ **Administrative Safeguard:**

  ○ **Article 275**: It provides for the **grant of special funds** by the Union Government to the State Government for promoting the **welfare of Scheduled Tribes** and providing them with a **better administration.**

What are some other Initiatives for Tribal Population?

➤ **TRIFED:**

  ○ **The Tribal Cooperative Marketing Development Federation of India (TRIFED)** came into existence in 1987. It is a **national-level apex organization** functioning under the administrative control of the Ministry **of Tribal Affairs.**

    ● The main aim of this drive is **to activate the Van Dhan Vikas Kendras (VDVKs) in the villages.**

➤ **Digital Transformation of Tribal Schools:**

  ○ **Ministry of Tribal Affairs (MTA)** inked a **Memorandum of Understanding (MoU)** with Microsoft **to support the digital transformation of schools** such as **Eklavya Model Residential Schools (EMRS)** and **Ashram Schools.**

➤ **Development of Particularly Vulnerable Tribal Groups:**

  ○ Ministry of Tribal Affairs has implemented the scheme of "**Development of PVTGs**" which covers 75 **Particularly Vulnerable Tribal Groups (PVTGs)** for their comprehensive socio-economic development.

➤ **Pradhan Mantri Van Dhan Yojana:**

  ○ The **'Sankalp Se Siddhi'** initiative, also known as **'Mission Van Dhan'**, was introduced by the central government in 2021, in line with the Prime Minister's aim to establish a **sustainable livelihood for India's tribal population.**

➤ **Eklavya Model Residential Schools:**

  ○ EMRS is a scheme for making **model residential schools** for Indian tribals (ST- Scheduled Tribes) across India. It started in the year 1997-98.

  ○ **The Eklavya Model Residential School** in Shinde (Nashik) has been planned by the Ministry Tribal Affairs to give impetus to quality education in nearby tribal areas.

Electricity Amendment Bill, 2022

Why in News?

Recently, **the Electricity (Amendment) Bill 2022** was introduced in **Parliament** amid protests and later sent to the **standing committee** for further deliberation.

➤ Many **power engineers** protested the Bill across the country, in states like Tamil Nadu, Telangana, Rajasthan, and others.

What is the Electricity (Amendment) Bill 2022?

➤ **About:**

  ○ **The Electricity Amendment Bill, 2022** aims at giving **multiple players open access to distribution networks of power suppliers** and also allowing **consumers to choose any service provider.**

- ➤ **Implication:**
  - ○ The Bill seeks to amend **Electricity Act 2003:**
    - To facilitate the **use of distribution networks** by all licensees, under provisions of **non-discriminatory "open access"** with the objective of **enabling competition**, **enhancing efficiency** of distribution licensees for improving services to consumers and **ensuring sustainability** of the power sector.
    - To facilitate **non-discriminatory open access to the distribution** network of a distribution licensee.
    - To make provisions vis-à-vis **graded revision in tariff** over a year besides **mandatory fixing of maximum ceiling** and **minimum tariff** by the appropriate commission.
    - To convert the rate of punishment **from imprisonment or fine** to **fine**.
    - To **strengthen functions** that will be discharged by the regulators.

What are the Protestors' Arguments Against the Bill?

- ➤ **Federal Structure:**
  - ○ **The Constitution** lists 'Electricity' as Item 38 of **List III (Concurrent)** of the **Seventh Schedule**, so both the **Central and state governments** have the power to make laws on this subject.
    - With the proposed amendments, the **federal structure** of Indian polity, a part of the **'basic structure'** of the Constitution of India, is being violated.
- ➤ **Electricity Subsidy:**
  - ○ **Free power for farmers** and **Below Poverty Line** population will go away eventually.
- ➤ **Differential Distribution:**
  - ○ Only **government discoms or distribution companies** will have universal power supply obligations.
    - Therefore, it is likely that **private licensees** will prefer to supply the electricity in **profit-making areas** – to industrial and commercial consumers.
      - Once this happens, **profit-making areas will be snatched** from government discoms and they will become **loss-making companies.**

How will this Bill impact the Power Employees & Consumers?

- ➤ **Monopoly of Private Players:**
  - ○ It will lead to a major loss for government distribution companies, eventually helping to **establish the monopoly of a few private parties in the country's power sector.**
- ➤ **Operational Issue:**
  - ○ About 80% of the cost of supply is on account of power purchase, **which will be the same for all distribution licensees operating in an area**.
  - ○ Having different retailers will **open a plethora of operational issues.**
  - ○ By bringing in more retailers or distribution licensees, **the quality of service or price is not going to be any different**.
- ➤ **Hit on Consumers:**
  - ○ **As per a report of UK auditors**, due to adoption of such faulty models the consumers h**ad to pay in excess of 2.6 billion pounds.**
    - The cost of such transfers was **charged to the ordinary consumer.**
      - While the private companies failed, **consumers were hit the most.**

What is the Government's Rationale for the Bill?

- ➤ Government has maintained that **no provision in the bill reduces powers of the states** to regulate the **power distribution sector, payment of power subsidy.**
- ➤ The government has indicated that **multiple discoms can already exist in the same area** and the **bill only simplifies the process** to ensure that competition leads to better operations and service.
- ➤ The government has maintained that it had **consulted every state and many associations** in writing, including a separate written assurance to the Agriculture Ministry, **that there is nothing anti-farmer in the bill.**
  - ○ The bill allows the use of **additional cross-subsidy** that is collected from industrial and commercial users in one area, for subsidising for the poor in other areas.
  - ○ With **India aiming to achieve 50% of its installed power capacity from renewables** by 2030, the government is of the view that the push for **Renewable Purchase Obligations (RPOs)** mentioned

in the bill will augment India's power demand, which is expected to double in the next eight years while moving to achieve green targets fixed as per the **Paris and Glasgow Agreements.**

PESA Act

Why in News?

Electoral Parties are trying to woo tribals in Gujarat by making promises to strictly implement the **Panchayat Extension to Scheduled Areas (PESA) Act, 1996.**

➤ Gujarat notified the State PESA Rules in January 2017 and made them applicable in 4,503 gram sabhas under 2,584 village panchayats in 50 tribal talukas in eight districts of the state.

➤ However, the Act has not been **enforced in letter and spirit.**

➤ Six states (Himachal Pradesh, Andhra Pradesh, Telangana, Rajasthan, Gujarat, Maharashtra) have formed the PESA laws, and Chhattisgarh would become the seventh state if the rules are enacted.

What is the PESA Act?

➤ **About:**
  ○ The PESA Act was enacted in 1996 "to provide for the extension of the provisions of Part IX of the Constitution relating to the Panchayats to the Scheduled Areas".
    ● **Part IX, comprising Articles 243-243ZT** of the Constitution, contains provisions **relating to municipalities and cooperative societies.**

➤ **Provisions:**
  ○ Under the Act, **Scheduled Areas are those referred to in Article 244(1)**, which says that the provisions of the **Fifth Schedule shall apply to the Scheduled Areas and Scheduled Tribes in states other than Assam, Meghalaya, Tripura, and Mizoram.**
  ○ The Fifth Schedule **provides for a range of special provisions for these areas.**
  ○ Ten states — Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, and Telangana — have notified Fifth Schedule areas that cover (partially or fully) several districts in each of these states.

➤ **Objectives:**
  ○ To **ensure self-governance through Gram Sabhas (village assemblies)** for people living in the **Scheduled Areas.**
  ○ It recognises the **right of tribal communities, who are residents of the Scheduled Areas**, to govern themselves through their own systems of self-government, and also acknowledges their traditional rights over natural resources.
  ○ Empowers Gram Sabhas to play a key role in approving development plans and controlling all social sectors.

What is the Significance of Implementing the Act?

➤ **Democratic Decentralisation:** PESA empowers gram sabhas to play a key role in approving development plans and controlling all social sectors. This includes management of:
  ○ Resources over jal, jangal, zameen (water, forest and land)
  ○ **Minor forest produce**
  ○ Human resources: Processes and personnel who implement policies
  ○ Managing local markets
  ○ Preventing land alienation
  ○ Regulating intoxicants among other things

➤ **Preserving Identity:** The powers of gram sabhas include maintenance of cultural identity and tradition, control over schemes affecting the tribals, and control over natural resources within the area of a village.

➤ **Conflict Resolution:** The PESA Act thus enables gram sabhas to maintain a safety net over their rights and surroundings against external or internal conflicts.

➤ **Public Watchdog:** The gram sabha would have the powers to monitor and prohibit the manufacturing, transport, sale and consumption of intoxicants within their village limits.

What are the Issues Related to PESA?

➤ **Partial Imlementation:** The state governments are supposed to enact state laws for their Scheduled Areas in consonance with this national law.
  ○ This has resulted in the partially implemented PESA.
  ○ The partial implementation has worsened self-governance in Adivasi areas, like in Jharkhand.

Note:

drishti

- **Administrative Hurdles:** Many experts have asserted that PESA did not deliver due to the lack of clarity, legal infirmity, bureaucratic apathy, absence of political will, resistance to change in the hierarchy of power, and so on.
- **Followed in Letter Rather than Spirit:** Social audits conducted across the state have also pointed out that in reality different developmental schemes were being approved on paper by Gram Sabha, without actually having any meeting for discussion and decision making.

How are Tribals and their Rights Protected in India?
- In India, most of the **tribes are collectively identified under Article 342 (1&2) as "Scheduled Tribes".**
- Their right to self-determination is **guaranteed by Part X:** The Scheduled and Tribal **Areas – Article 244:** Administration of Scheduled Areas and Tribal Areas.
- That is**, Fifth and Sixth Schedules** of the Indian Constitution.
- The Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996 or PESA.
- The **Tribal Panchsheel Policy**
- **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006** concerns the rights of forest-dwelling communities to land and other resources.

Pradhan Mantri Adi Adarsh Gram Yojana

Why in News?

Recently, Government has modified the earlier scheme of **'Special Central Assistance to Tribal Sub-Scheme (SCA to TSS)'** with nomenclature **'Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY)'** for implementation during 2021-22 to 2025-26.

What is Pradhan Mantri Adi Adarsh Gram Yojana?

- **About:**
  - It supplements the efforts of State Governments for **development and welfare of tribal people** by extending **Special Central Assistance** as an additive to the **State Tribal Sub-Plan** (**TSP**).
  - It aims at **mitigating gaps** and providing **basic infrastructure** in villages with significant **tribal population** in convergence with funds available under different schemes in **Central Scheduled Tribe Component.**
- **Revision of Scheme Guidelines:**
  - To ensure all round development of the selected villages, so that they can indeed become '**Adarsh Grams**', the **SCA to TSS Scheme** was also revised to capture the **Gaps in critical socio-economic** 'Monitorable Indicators' as part of various sectors/domains.
    - These domains include **water and sanitation**, **education**, **health and nutrition**, **agricultural best practices** etc. amongst others.
- **New Approach for Implementation**:
  - The identification of needs or Gaps with regard to the '**Monitorable Indicators**' are based on a **Need Assessment exercise**.
  - The **'Village Development Plan' (VDP)** is based on the data collected as part of the Need Assessment exercise.
  - PMAGY provides the platform for convergent implementation of other Schemes with the aim to achieve saturation in the various domains.
- **Objectives:**
  - Preparing **Village Development Plan** based on the needs, potential, and aspirations.
  - Maximizing the **coverage of individual / family benefit schemes** of the Central / State Governments.
  - Improving the **infrastructure** in vital sectors like **health, education, connectivity** and livelihood.
  - The scheme envisions to mitigate gaps in prominent **8 sectors of development**:
    - **Road connectivity** (Internal and Inter village /block)
    - **Telecom connectivity** (Mobile /internet)
    - **School**
    - **Anganwadi Centres**
    - **Health Sub-Centre**

- **Drinking water facility**
- **Drainage**
- **Solid waste management**

What are the Basic Safeguards Provided by Indian Constitution for Scheduled Tribes?

➤ **The Constitution of India** does not endeavor to define the term 'tribe', however, the term Scheduled Tribe' was inserted in the Constitution through **Article 342 (i)**.

  ○ It lays down that 'the **President** may, by public notification, specify the tribes or tribal communities or parts of or groups within the tribes or tribal communities or parts which shall, for the purposes of this Constitution, be deemed to be Scheduled Tribes.

  ○ **The Fifth Schedule of the Constitution** provides for the setting up a **Tribes' Advisory Council** in each of the States having Scheduled Areas.

➤ **Educational & Cultural Safeguards:**

  ○ **Article 15(4)**: Special provisions for advancement of other backward classes (it includes STs).

  ○ **Article 29**: Protection of Interests of Minorities (it includes STs).

  ○ **Article 46**:The State shall promote, with special care, the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Castes, and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.

  ○ **Article 350**: Right to conserve distinct Language, Script or Culture.

➤ **Political Safeguards:**

  ○ **Article 330**: Reservation of seats for STs in **Lok Sabha**.

  ○ **Article 332**: Reservation of seats for STs in State **Legislatures**.

  ○ **Article 243**: Reservation of seats in **Panchayats**.

➤ **Administrative Safeguard:**

  ○ **Article 275**: It provides for the **grant of special funds** by the Union Government to the State Government for promoting the **welfare of Scheduled Tribes** and providing them with a **better administration.**

SMILE-75 Initiative

Why in News?

The Government of India has formulated a comprehensive scheme of **SMILE (Support for Marginalised Individuals for Livelihood and Enterprise)** to address the persisting problem of **destitution and beggary**.

➤ Under the "SMILE-75" Initiative, 75 **Municipal Corporations** will undertake **comprehensive rehabilitation** of persons engaged in the act of begging in the spirit of **Azadi ka Amrit Mahotsav**.

What do we need to know about the SMILE 75-Initiative?

➤ **Aim:**

  ○ Municipal Corporations, in collaboration with **NGOs** and other stakeholders will cover several comprehensive welfare measures for **persons who are engaged in the act of begging,** with focus extensively on **rehabilitation**, provision of **medical facilities**, **counselling**, **awareness**, **education**, **skill development**, **economic linkages** and **convergence with other Government welfare programmes** etc.

    • The Ministry of Social Justice & Empowerment has also **allocated a total budget of Rs.100 crore** for the SMILE project for c**oming years till 2025-26.**

  ○ It seeks to develop a **support mechanism** for holistic rehabilitation of those engaged in the act of begging.

➤ **Implementing Ministry:**

  ○ **The Ministry of Social Justice and Empowerment.**

➤ **Components:**

  ○ **It includes the sub-scheme of:**

    • Comprehensive Rehabilitation of **persons engaged in the act of Begging**

➤ **Objectives:**

  ○ To make cities/town and municipal areas **begging-free.**

  ○ To make a **strategy for comprehensive rehabilitation** of the persons engaged in the act of begging through the coordinated action of various stakeholders.

What is the 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, **Assam topped the chart** with 22,116 beggars, while **Mizoram ranked low** with 53 beggars.

Criminal Procedure (Identification) Act, 2022

Why in News?

Recently, the **Criminal Procedure (Identification) Act, 2022** has come into force after being passed by the Parliament in April 2022.

➢ It replaces the **Identification of Prisoners Act, 1920**, a colonial era law, and authorises **police officers to take measurements of people convicted, arrested or facing trial in criminal cases**.

A comparison between the two Identification Acts

What is the Criminal Procedure (Identification) Act, 2022?

➢ It provides **Legal sanction to the police to take physical and biological samples of convicts** as well as those accused of crimes.

➢ The police as per section 53 or section 53A of the **Code of Criminal Procedure (CrPC), 1973**, can **collect Data.**

○ **Data that can be collected:** Finger-impressions, Palm-Print impressions, Footprint impressions, Photographs, Iris and Retina scan, Physical, Biological samples and their analysis, Behavioural Attributes including signatures, Handwriting or any other examination

○ CrPC is the **primary legislation regarding the procedural aspects of criminal law.**

➢ Any person convicted, arrested or detained under any preventive detention law will be required to provide "measurements" to a police officer or a prison official.

➢ **National Crime Records Bureau (NCRB) will store, preserve, share** with any law enforcement agency and destroy the record of measurements at national level. The records can **be stored up to a period of 75 years.**

➢ It aims to **ensure the unique identification of those involved with crime and to help investigating agencies** solve cases.

What is the Need to Replace the Previous Act?

➢ In 1980, the 87th Report of the **Law Commission of India** undertook a review of this legislation and **recommended several amendments.**

○ This was done in the backdrop of the *State of UP vs Ram Babu Misra case,* where the **Supreme Court** had highlighted the **need for amending this law.**

➢ The first set of recommendations laid out the need to amend the Act to **expand the scope of measurements to include "palm impressions", "specimen of signature or writing" and "specimen of voice".**

➢ The second set of recommendations raised the need to allow measurements to be taken for proceedings other than those under the Code of Criminal Procedure (CrPC).

➢ The Law Commission Report also notes that the **need for an amendment is reflected by the numerous amendments made to the Act by several States.**

➢ It was felt that with advancements in forensics, there is a need to **recognise more kinds of "measurements"** that can be used by law enforcement agencies for investigation.

What is the Significance of the Act?

➢ **Modern Techniques:**
  ○ The Act makes **provisions for the use of modern techniques to capture and record** appropriate body measurements.
    ● The existing law allowed **taking only fingerprint and footprint impressions** of a limited category of convicted persons.

➢ **Help Investing Agencies:**
  ○ It **seeks to expand the 'ambit of persons'** whose measurements can be taken as this will **help the investigating agencies to gather sufficient legally admissible evidence** and establish the crime of the accused person.

➢ **Making Investigation More Efficient:**
  ○ It provides legal sanction for taking appropriate body measurements of persons who are required to give such measurements and will **make the investigation of crime more efficient and expeditious** and will also help in increasing the conviction rate.

What are the Issues with Law?

➢ **Violation of Privacy:**
  ○ Seemingly technical, the legislative proposal **undermines the right to privacy** of not only persons convicted of crime but **also every ordinary Indian citizen.**
  ○ It has provisions to collect samples **even from protestors engaged in political protests.**

➢ **Ambiguous Provisions:**
  ○ Replacing the 1920 Identification of Prisoners Act, the proposed law considerably expands its scope and reach.
  ○ The phrase **'biological samples' is not described further, hence, it could involve bodily invasions such as drawing of blood and hair,** collection of DNA samples.
  ○ These are acts that **currently require the written sanction of a magistrate.**

➢ **Violation of Article 20:**
  ○ Enables coercive **drawing of samples and possibly involves a violation of Article 20(3)**, which protects the right against self-incrimination.

○ The Bill implied use of force in collection of biological information, could also lead to **narco analysis and brain mapping.**

➢ **Handling Data:**
  ○ The records will be preserved for 75 years, the other concerns **include the means by which the data collected will be preserved, shared, disseminated**, and destroyed.
  ○ Collection can also **result in mass surveillance**, with the database under this law **being combined with other databases** such as those of the **Crime and Criminal Tracking Network and Systems (CCTNS).**
    ● Crime and Criminal Tracking Network & Systems (CCTNS) is a plan scheme conceived in the light of experience of a non-plan scheme namely - Common Integrated Police Application (CIPA).

➢ **Unawareness among Detainees:**
  ○ Although it provides that **an arrested person (not accused of an offence against a woman or a child) may refuse the taking of samples**, not all detainees may know that they can indeed decline to let biological samples be taken.
  ○ And it may be easy for the police to ignore such refusal and later claim that they did get the detainee's consent.

National Intellectual Property Awareness Mission (NIPAM)

Why in News?

National Intellectual Property Awareness Mission (NIPAM), launched in 2021, has achieved the target of imparting **Intellectual Property (IP)** awareness and basic training to 1 million students.

➢ The target has been achieved **ahead of the deadline which was 15 August 2022.**

What is the National Intellectual Property Awareness Mission (NIPAM)?

➢ **About:**
  ○ The pan-India mission aims to provide **awareness on intellectual property and its rights** to 1 million students.

Note:

○ It aims to **inculcate the spirit of creativity and innovation** to students of higher education (classes 8 to 12) and ignite and inspire the students of college/Universities to innovate and protect their creations.

➤ **Implementing Agency:**

○ The program is being implemented by the **Intellectual Property Office**, the Office of Controller General of Patents, Designs and Trade Marks (CGPDTM), **Ministry of Commerce and Industry.**

➤ **Target Achieved:**

○ **During the period 08 December 2021 to 31st July 2022, the following milestones were achieved:**

● No. of participants (students/faculty) trained on IP: 10,05,272

● Educational institutes covered: 3,662

● Geographical coverage: 28 states and 7 Union Territories

What are Intellectual Property Rights?

➤ **About:**

○ **Intellectual property rights (IPR)** are the rights given to persons over the **creation of their minds**:

● Inventions, literary and artistic works, and symbols, names and images used in commerce.

● They usually give the creator an **exclusive right over the use of his/her creation for a certain period of time.**

○ These rights are outlined in **Article 27 of the Universal Declaration of Human Rights**, which provides for the **right to benefit from the protection** of moral and material interests resulting from authorship of scientific, literary or artistic productions.

○ The importance of intellectual property was first recognized in the **Paris Convention for the Protection of Industrial Property (1883)** and the **Berne Convention for the Protection of Literary and Artistic Works (1886)**.

● Both treaties are administered by the **World Intellectual Property Organization (WIPO)**.

➤ **Types of IPR:**

○ **Copyrights**:

● The rights of authors of **literary and artistic works** (such as books and other writings, musical compositions, paintings, sculpture, computer programs and films) **are protected by copyright**, for a minimum period of **50 years after the death of the author.**

○ **Industrial property:**

● **Protection of distinctive signs, in particular trademarks and geographical indications:**

■ Trademarks

■ Geographical Indications (GIs)

● **Industrial designs and trade secrets:**

■ Other types of industrial property are protected primarily to stimulate innovation, design and the creation of technology.

➤ **Need for IPR:**

○ **Encourages innovation:**

● The **legal protection** of new creations encourages the **commitment of additional resources** for further innovation.

○ **Economic growth:**

● The promotion and protection of intellectual property spurs **economic growth**, creates **new jobs and industries**, and enhances the **quality and enjoyment of life**.

○ **Safeguard the rights of creators:**

● IPR is required to **safeguard creators and other producers** of their intellectual commodity, goods and services by granting them certain time-limited rights to control the use made of the manufactured goods.

○ **Ease of Doing Business:**

● It promotes **innovation and creativity** and ensures **ease of doing business.**

○ **Transfer of Technology:**

● It facilitates the **transfer of technology** in the form of **foreign direct investment**, joint ventures and licensing.

What are the Treaties and Conventions related to IPR?

➤ **Global:**

○ India is a member of the **World Trade Organisation** and committed to the Agreement on **Trade Related Aspects of Intellectual Property (TRIPS Agreement)**.

○ India is also a member of **World Intellectual Property Organization (WIPO)**, a body responsible for the promotion of the protection of intellectual property rights throughout the world.

○ **India** is also **a member of the following important WIPO-administered International Treaties and Conventions relating to IPRs:**

- **Budapest Treaty** on the International Recognition of the **Deposit of Microorganisms for the Purposes of Patent Procedure**

- **Paris Convention for the Protection of Industrial Property**

- Convention Establishing the **World Intellectual Property Organization**

- **Berne Convention for the Protection of Literary and Artistic Works**

- **Patent Cooperation Treaty**

➤ **National:**

○ **Indian Patent Act 1970:**

- This principal law for patenting system in India came into force in the year 1972. It replaced the **Indian Patents and Designs Act 1911**.

- The Act was amended by the **Patents (Amendment) Act, 2005**, wherein product patent was extended to all fields of technology including **food, drugs, chemicals and microorganisms.**

○ **National Intellectual Property Rights (IPR) Policy 2016:**

- **The National Intellectual Property Rights (IPR) Policy 2016** was adopted in May 2016 as a vision document to guide future development of IPRs in the country.

- Its clarion call is "**Creative India; Innovative India**".

- It sets in place an **institutional mechanism** for implementation, monitoring and review.

- It aims to incorporate and adapt global best practices to the Indian scenario.

Note:

Economic Scenario

Highlights

- *Economic Scenario Economic Scenario Economic Scenario*
- *Guidelines to Regulate Digital Lending*
- *Gold Exchange Traded Funds*
- *Regional Rural Banks*
- *Financial Inclusion Index: RBI*
- *Udyam Portal*
- *FRP for Sugarcane and Sugar Industry in India*
- *Ethanol Plant*
- *Outbound Travel and Tourism - An Opportunity Untapped*
- *India's Unique Job Crisis*
- *Decline in Counterfeit Notes*
- *RBI's Surveys & Indian Economy*
- *Digital Currency*

Guidelines to Regulate Digital Lending

Why in News?

Recently, the **Reserve Bank of India (RBI)** issued the first set of guidelines for digital lending, to crack down on illegal activities by certain players.

➢ Towards addressing concerns that had sprung up, the RBI had constituted a **Working Group on 'digital lending including lending through online platforms and mobile apps' (WGDL)** in January, 2021.

➢ The group has **proposed stricter norms for digital lenders in November 2021**, some of which have been accepted and included in the new norms while others are under examination.

What do we Know about Digital Lending?

➢ **About:**
  ❍ It consists of **lending through web platforms or mobile apps,** by taking advantage of technology for authentication and credit assessment.
  ❍ Banks have launched their own independent digital lending platforms to tap into the digital lending market by leveraging existing capabilities in traditional lending.

➢ **Significance:**
  ❍ **Financial Inclusion:** It helps in **meeting the huge unmet credit need,** particularly in the microenterprise and low-income consumer segment in India.

  ❍ **Reduce Borrowing from Informal Channels:** It **helps in reducing informal borrowings** as it simplifies the process of borrowing.

  ❍ **Time Saving:** It **decreases time spent on working loan applications** in-branch. Digital lending platforms have also been known to cut overhead costs by 30-50%.

What are the Highlights of the Guidelines?

➢ **For Loan Disbursals and Repayments:**
  ❍ **All loan disbursals and repayments** will be required **to be executed only between the bank accounts of the borrower and the Regulated Entities (RE)** without any pass-through or pool account of the Lending Service Providers (LSP) or any third party.
    - **Regulated Entities include** a bank or a non-banking financial company.

➢ **Regarding Payment:**
  ❍ The new rules mandate that **fees or charges payable to LSPs in the credit intermediation process** will be paid directly **by the bank** or **Non-Banking Financial Companies (NBFCs)** and not by the borrower.

➢ **Regarding Loan Disclosure:**
  ❍ All-inclusive cost of digital loans in the form of Annual Percentage Rate (APR) is required to be disclosed to the borrowers.

➢ **Regarding increase in Credit Limit:**
  ❍ The new norm **prohibits any automatic increase in credit limit** without the explicit consent of the borrower.

Note:

➤ **Regarding Exiting Digital Loans:**

○ It also **provides, as part of the loan contract, a cooling-off/ look-up period** during which the borrowers can exit digital loans by paying the principal and the proportionate annual percentage rate without any penalty.

➤ **To Protect Data Privacy:**

○ To protect data privacy, the **data collected by digital lending apps has to be need-based**, with the customer's prior consent, and can be audited, if required.

➤ **Grievance Redressal Officer:**

○ Banks will have to ensure that they, and the LSPs engaged by them, **must have a suitable nodal grievance redressal officer** to deal with fintech- or digital lending-related complaints.

○ This officer will also **deal with complaints against their respective Digital Lending Apps (DLAs).**

○ Current guidelines allow for the borrower to complain to the **Integrated Ombudsman Scheme of the RBI** if their grievance was not resolved by the bank within 30 days.

➤ **Reporting of Loans:**

○ REs are required to ensure that **any lending done through DLAs has to be reported to Credit Information Companies (CICs),** irrespective of its nature or tenor.

○ More importantly, lending through the Buy Now Pay Later (BNPL) model also needs to be reported to CICs.

Who comes under RBI's New Purview?

➤ While announcing the norms, **RBI classified digital lenders into three categories.**

○ **Entities regulated by the RBI** and permitted to carry out lending business.

○ Entities **authorized to carry out lending** as per other statutory or regulatory provisions but not regulated by RBI.

○ Entities **lending outside the purview of any statutory** or regulatory provisions.

➤ The central bank's regulatory framework is focused on the **digital lending ecosystem of regulated entities** and the LSPs engaged by them to extend various permissible credit facilitation services.

○ However, **the lenders in the other categories do not come under the new guidelines and can consider formulating appropriate rules** and regulations on digital lending based on the recommendations of the working group.

What is the Need for Such Guidelines?

➤ With the advent of technological innovation**, there has been immense development in the digital lending ecosystem,** which has resulted in several fintech firms extending credit services.

➤ However, this growth has led to **mis selling to unsuspecting customers**, unethical business conduct by digital lenders and excessive engagement of third parties, and concerns over data privacy of the borrower.

➤ There have also been several complaints by consumers that **digital lending apps are charging exorbitant interest rates,** or they were committing fraud, among others.

Gold Exchange Traded Funds

Why in News?

In July 2022, **Gold Exchange Traded Funds (ETFs)** witnessed a net outflow of **Rs 457 crore** as **investors parked their money in other asset classes** as part of their portfolio rebalancing strategy.

➤ This was in comparison to a **net inflow of Rs 135 crore in June 2022.**

What are Gold Exchange Traded Funds?

➤ **About:**

○ **Gold ETF**, which aims to track the **domestic physical gold price**, are passive **investment instruments** that are based on **gold prices and invest in gold bullion**.

○ Gold ETFs are units representing **physical gold which may be in paper or dematerialised form.**

● **One gold ETF** unit is equal to **1 gram of gold** and is backed by **physical gold of very high purity.**

● They combine the **flexibility of stock investment** and the **simplicity of gold investments.**

➤ **Advantages:**

○ There is **complete transparency** on the holdings of an ETF.

○ Gold ETFs have much **lower expenses as compared to physical gold investments.**

Note:

○ **No wealth tax, no security transaction tax, no VAT and no sales tax** is levied on ETFs.

○ There is **no fear of theft** as ETFs are safe and secure as units held in Demat Account of the holder.

What could be the Reasons for the Outflow?

➢ Investors' expectations of **a rising interest rate cycle** leading to a fall in gold prices.

○ The fall in the gold price impacted the net flows into the gold ETFs.

➢ **A falling rupee** is another factor that has likely impacted the demand and supply dynamics of gold.

○ It has been witnessed globally too, with gold ETF's posting significant outflows on the back of lower gold prices.

Exchange Traded Fund

➢ **An Exchange-Traded Fund (ETF)** is a basket of securities that **trade on an exchange, just like a stock.**

➢ ETF reflects the **composition of an Index**, like BSE Sensex. Its trading value is based on the **Net Asset Value (NAV)** of the underlying stocks (such as shares) that it represents.

➢ ETF share prices **fluctuate all day as it is bought and sold.** This is different from **mutual funds** that only trade once a day after the market closes.

➢ An ETF can own hundreds or thousands of stocks across various industries, or it could be isolated to one particular industry or sector.

➢ **Bond ETFs are a type of ETFs** which may include **government bonds, corporate bonds, and state and local bonds**—called **municipal bonds**.

○ **A bond** is an instrument that represents a **loan made by an investor** to a **borrower** (typically corporate or governmental).

➢ Besides being cost efficient, ETFs offer a diversified investment portfolio to investors.

Regional Rural Banks

Why in News?

Recently, a meeting was held between the finance minister and the heads of banks to discuss various reforms in Regional Rural Banks (RRBs).

What are RRBs?

➢ **About:**

○ The Regional Rural Banks (RRBs) were established in 1975 under the provisions of the Ordinance promulgated on 26th September 1975 and Regional Rural Banks Act, 1976.

○ RRBs are **financial institutions** which ensure adequate credit for agriculture and other rural sectors.

○ The RRBs **combine the characteristics of a cooperative in terms of the familiarity of the rural problems** and a commercial bank in terms of its professionalism and ability to mobilise financial resources.

○ After the reforms in the 1990s, the government in 2005-06 **initiated a consolidation program** that resulted in the number of RRBs declining from 196 in 2005 to 43 in FY21, and 30 of the 43 RRBs reported net profits.

➢ **Functions:**

○ The basic functions of a bank can be summarized as follows:

● To provide safety to the savings of customers

● To create credit and increase the supply of money

● To encourage public confidence in the financial system

● To mobilize the savings of public

● To increase its network so as to reach every segment of the society

● To provide financial services to all customers irrespective of their level of income

● To bring in social equity by providing financial services to every stratum of society.

What are the Issues Related to RRBs?

➢ **Rising Cost:** The rising cost of operations of **Regional Rural Banks(RRBs)** as compared to scheduled commercial banks.

○ The government wants them to work towards increasing their earnings.

➢ **Limited Activities:** Due to the fact that many of these branches don't have enough business, they are incurring losses.

○ In rural areas, they mainly offer government schemes like **Direct Benefit ransfer.**

Note:

➢ **Low Internet Banking:** At present only 19 RRBs have internet banking facilities and 37 have mobile banking licenses.

  ○ Existing regulations allow only those RRBs to offer internet banking which maintains minimum statutory **capital to risk-weighted assets ratio (CRAR)** of more than 10%.

What are the Suggestions by the Government?

➢ It has asked RRBs to move towards **digitization, including offering internet banking services** to its customers and expanding their credit base further through increased lending to the **Micro, Small, and Medium Enterprises (MSME) sector.**

  ○ So that they become financially sustainable

➢ It urged the sponsor banks to formulate a clear roadmap in a time-bound manner to further strengthen the RRBs and support the post-pandemic economic recovery and

  ○ Also, suggested conducting a workshop on RRBs and sharing the best practices with each other.

How are RRBs being Reformed by the Government?

➢ Over the years, various steps have been taken by the government to increase the contribution of people to the financial system of India.

  ○ In 1969, a major renovation in the banking sector took place with the **Nationalization of all the Banks existing in India**. In the year 1981, the **National Bank for Agriculture and Rural Development (NABARD)** was established.

    ● The main aim of establishing NABARD was **to promote sustainable and impartial agriculture** and enhance rural prosperity through **effective credit support, related services, institution development, and other innovative initiatives**.

➢ Hence, the **National Bank for Agriculture and Rural Development (Nabard)** will spearhead the initiative to revive the RRBs.

  ○ Further, the development bank is already working on a **roadmap for 22 RRBs which is expected to be implemented by the end of this year**.

    ● The plan also included **merging branches of these RRBs with sponsor banks** once these branches reach a certain level of business.

○ Last year, the government set up a panel with members drawn from Nabard and the RBI to give recommendations for strengthening the regional lenders.

  ● The government has **contributed RS 4,084 crores towards RRB recapitalization in 2021-22,** of which Rs. 3,197 crores has been released to 21 lenders. **focus on financial inclusion by leveraging technology**

Financial Inclusion Index: RBI

Why in News?

The **Reserve Bank of India** **has released the Composite Financial Inclusion Index** **(FI-Index)** for the year ended 31st March 2022.

What are the Findings?

➢ India's Financial Inclusion Index has improved to **56.4 from 53.9** in the previous year 2021.

➢ The improvement has been seen across **all its sub-indices (Access, Usage and Equality).**

What is the Financial Inclusion Index?

➢ **About:**

  ○ It is a comprehensive index incorporating **details of banking, investments, insurance, postal as well as the pension sector** in consultation with the government and respective sectoral regulators.

  ○ It was developed by the RBI in 2021, **without any 'base year'**, and is published in July every year.

➢ **Aim:**

  ○ To **capture the extent of Financial Inclusion across the country.**

  ○ The FI-Index is responsive to ease of access, availability and usage of services and quality of services, consisting of **97 indicators.**

➢ **Parameters:**

  ○ It captures information on various aspects of financial inclusion in a single value **ranging between 0 and 100**, where 0 represents complete financial exclusion and **100 indicates full financial inclusion.**

  ○ It comprises **three broad parameters** (weights indicated in brackets) viz., Access (35%), Usage (45%), and Quality (20%) with each of these consisting of various dimensions, which are computed based on a number of indicators.

Note:

- The index is **responsive** to ease of access, availability and usage of services, and quality of services **for all 97 indicators.**

What is the Significance of FI Index?

➢ **Measures Level of Inclusion:**

  ○ It provides **information on the level of financial inclusion** and measures financial services for use in internal policy making.

➢ **Development Indicators:**

  ○ It can be **used directly as a composite measure** in development indicators.

➢ **Fulfil the G20 Indicators:**

  ○ It **enables fulfilment of G20** Financial Inclusion Indicators requirements.

  ○ The G20 indicators assess the state of financial inclusion and digital financial services, nationally and globally.

➢ **Facilitate Researchers:**

  ○ It also **facilitates researchers to study the impact of financial inclusion** and other macroeconomic variables.

What is Financial Inclusion?

➢ **Financial inclusion** is defined as the **process of ensuring access to financial services and timely and adequate credit where needed** by vulnerable groups such as weaker sections and low-income groups at an affordable cost.

➢ In a diverse country like India, financial inclusion is a critical part of the development process. Since independence, the **combined efforts of successive governments, regulatory institutions, and civil society have helped in increasing the financial-inclusion** net in the country.

➢ Being able to have access to a transaction account is a f**irst step toward broader financial inclusion** since a transaction account allows people to store money, and send and receive payments. A transaction account serves as a gateway to other financial services.

What are the Initiatives to Increase Financial Inclusion in India?

➢ **Pradhan Mantri Jan Dhan Yojana**

➢ **Digital Identity (Aadhaar)**

➢ **National Centre for Financial Education (NCFE)**

➢ **Centre for Financial Literacy (CFL) Project**

➢ **Expansion of financial services in Rural and Semi-Urban Areas**

➢ **Promotion of Digital Payments**

Udyam Portal

Why in News?

Around one crore Micro, Small and Medium Enterprises (MSMEs) have registered on the **Udyam portal** within a span of 25 months, according to the Union Minister of **Micro, Small, and Medium Enterprises.**

What is Udyam Portal?

➢ **About:**

  ○ It was launched on 1st July, 2020.

  ○ It's an online system for registering MSMEs, launched by the Union MSME ministry.

  ○ Further, it is linked to the databases of **the Central Board of Direct Taxes(CBDT)** and **Goods and Services Tax Network (GSTN).**

    - GSTN is a **unique and intricate IT enterprise** that establishes a channel of communication and interaction between taxpayers, the central and various state governments, and other stakeholders.

  ○ It is fully online, does not require any documentation, and is a step towards **Ease of Doing Business for MSMEs.**

➢ **Significance:**

  ○ Udyam registrations are essential for MSMEs to utilize the benefits of schemes for the Ministry of MSME and for **Priority Sector Lending** from banks.

    - Also, MSMEs contribute to the GDP, exports, and employment generation of the country.

➢ **New Initiatives:**

  ○ The **MSME ministry signed MoUs with the Ministry of Tourism and the National Small Industries Corporation for the sharing of Udyam data.**

  ○ Further, the **Digi locker** facility for Udyam registration would be linked.

Note:

What are MSME?

➢ **About:**

❍ The Micro Small and Medium Enterprises (MSMEs) sector is a **major contributor to the socio-economic development of the country**.

- In India, the sector has gained significant importance due to its **contribution to the Gross Domestic Product (GDP) of the country and its exports**.

- The sector has also contributed immensely with respect to **entrepreneurship development, especially in semi-urban and rural areas of India**.

❍ According to the provisions of the Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small, and Medium Enterprises (MSME) are **classified into two classes i.e., Manufacturing Enterprises and Service Enterprises.**

- The enterprises are further categorized **based on investment in equipment and annual turnover.**

➢ **Related initiatives:**

❍ **Scheme of Fund for Regeneration of Traditional Industries (SFURTI).**

❍ **A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE).**

❍ **MSME Innovative Scheme.**

FRP for Sugarcane and Sugar Industry in India

Why in News?

The **Cabinet Committee on Economic Affairs** has hiked **Fair and Remunerative Price (FRP) of sugarcane** for sugar season 2022-23 (October - September) by Rs 15 per quintal.

➢ The Centre has also announced a premium of Rs 3.05 per quintal for each 0.1% increase in recovery of sugar over and above 10.25% and reduction in FRP by Rs 3.05 per quintal for every 0.1% decrease in recovery.

➢ **Recovery rate is the amount of sugar that sugarcane fetches** and higher the quantum of sugar derived from sugarcane, greater the price it fetches in the market.

How is Sugarcane Cultivated?

➢ **Temperature:** Between 21-27°C with hot and humid climate.

➢ **Rainfall:** Around 75-100 cm.

➢ **Soil** Type: Deep rich loamy soil.

➢ **Top Sugarcane Producing States:** Maharashtra>Uttar Pradesh > Karnataka

➢ It can be grown **on all varieties of soils ranging from sandy loam to clay loam** given these soils should be well drained.

➢ It needs **manual labour** from sowing to harvesting. It is the main source of **sugar, gur (jaggery),** khandsari and molasses.

➢ Scheme for Extending Financial Assistance to Sugar Undertakings (SEFASU) and **National Policy on Biofuels** are two of the government initiatives to support sugarcane production and the sugar industry.

How are the Prices of Sugarcane Determined?

➢ The **Prices** of Sugarcane are Determined by the **Central Government (Federal Government)** and the **State Governments.**

➢ **Central Government:** Fair and Remunerative Price (FRP)

❍ The Central Government announces **Fair and Remunerative Prices** which are determined on the recommendation of the **Commission for Agricultural Costs and Prices (CACP)** and announced by the Cabinet Committee on Economic Affairs (CCEA).

- CCEA is chaired by the Prime Minister of India.

❍ The FRP is based on the Rangarajan Committee report on reorganising the **sugarcane industry.**

➢ **State Government:** State Advised Prices (SAP)

❍ The SAP is announced by the **Governments of key sugarcane producing** states.

❍ SAP is generally **higher than FRP.**

What is the Status of the Sugarcane Sector in India?

➢ **Largest Producer:**

❍ India is the **largest producer of Sugarcane** in the World.

- India has surpassed Brazil in the sugar production **in the current sugar season 2021-22.**

Note:

- ❍ Factors like policies that incentivize production, including a minimum price, guaranteed sales of sugarcane and public distribution of sugar, **have helped India become the largest producer**.
- ❍ However, factors like rainfall deficit, depleting groundwater table, delayed payment to cane farmers, lower net income (for the farmer) compared to other crops, labour shortage and increasing cost of labour, followed by Covid-19 pandemic **are challenging the entire sugar sector.**

➤ **Second Largest Exporter:**
- ❍ India is the Second Largest exporter of Sugar after Brazil.
- ❍ India apart from meeting its requirement for domestic consumption has also **consistently exported sugar** which has **helped in reducing the fiscal deficit.**
- ❍ About 100 LMT of sugar has been exported till August.2022 in the c**urrent sugar season 2021-22 &** exports are likely to touch 112 LMT.

➤ **Becoming Self-Sustainable:**
- ❍ Earlier, sugar mills were dependent primarily on the **sale of sugar to generate revenues.** Surplus production in any season **adversely affects their liquidity leading to accumulation of cane price arrears of farmers.**
- ❍ However, in the **past few years the sugar industry has become self-sustainable.**
  - Since, 2013-14 about Rs**. 49,000 crore revenue generated by sugar mills from sale of ethanol to Oil Marketing Companies (OMCs)**.
  - In the current sugar season 2021-22, about Rs. **20,000 cr revenue is being generated by sugar mills from the sale of ethanol to OMCs;**
- ❍ The measures taken by the Central Government and FRP enhancement have **encouraged farmers to cultivate sugarcane and facilitated continued operation of sugar factories for domestic manufacturing of sugar.**

Why is the Government Encouraging Sugar Production?

➤ The government wants to reduce its Import Bill on Crude Oil by cutting oil imports and blending ethanol with Petrol under the **Ethanol Blended with Petrol programme.**

- ❍ Currently, India's 85% requirement of crude oil is met through imports.
➤ Also, to reduce pollution & to make India Atma Nirbhar in petroleum sector, Government is encouraging **sugar mills to divert excess sugarcane to ethanol** which is blended with petrol, which **not only serves as a green fuel but also saves foreign exchange** on account of crude oil import.
- ❍ In the current sugar season 2021-22, **about 35 LMT of sugar is estimated to be diverted & by 2025-26 more than 60 LMT of sugar is targeted to be diverted to ethanol**, which would address the problem of excess sugarcane as well as delayed payment issue because farmers would get timely payment.
➤ The government has fixed a target of **10% blending of fuel grade ethanol with petrol by 2022 & 20% blending by 2025.**

What are the Challenges Associated with the Sugar Industry?

➤ **Pricing Controls:** In order to plug the demand-supply mismatch, the union & state governments have been controlling sugar prices through various policy interventions like export duty, imposition of stock limit on sugar mills, change in meteorology rule etc.
- ❍ However, the government control of pricing is populist in nature and this often leads to price distortion.
- ❍ This has triggered that sugar cycle oscillating between massive surplus and severe shortage.
➤ **High Input and Low Output Cost:** The falling/stagnant price of sugar in recent years in the backdrop of continuous rise in sugarcane prices is t**he main source of troubles faced by the sugar industry in the last few years.**
- ❍ Due to this, the government **grappled with large cane arrears while the industry survived on periodic** government funded bail-outs and subsidies.
- ❍ It is because of the unviability of the business, no new private investments are being done in the sugar industry.
➤ **Unviability Sugar Exports:** Indian exports are unviability as the **cost of producing sugar (thanks to high cane price) is way above the international sugar price.**

Note:

❍ The government sought to bridge the price gap by providing export subsidies, but this was promptly contested by other countries in the WTO.

❍ Further, India under WTO's agreement on agriculture has been allowed to continue with the subsidies till December 2023. The fear is what will happen post-2023.

➢ **Dismal Performance of India's Ethanol Programme: Blending ethanol** with petrol for use as auto fuel, was first announced in 2003, but the problem never took off.

❍ The **poor pricing of ethanol supplied for blending**, periodic shortages of sugar and competing demand from the potable alcohol sector.

Ethanol Plant

Why in News?

On **World Biofuel Day 2022**, the government of India announced a **2nd generation (2G) ethanol plant** to be set up at the **Indian Oil Corporation's refinery** in Haryana.

➢ This ethanol plant will help reduce **air pollution** from the Delhi and the NCR region along with generating additional income and **green fuel**.

What is World Biofuel Day?

➢ **About:**
   ❍ It is celebrated every year on 10th of August.
   ❍ It is observed to **raise awareness** of the importance of **non-fossil fuels** as a substitute for **conventional fossil fuels**.

➢ **History:**
   ❍ This day is observed in honour of **Sir Rudolf Diesel.**
      ● He was the inventor of the **diesel engine** and was the first to predict the possibility of **vegetable oil** replacing fossil fuels.

What do we know about the Ethanol Plant?

➢ It will boost India's **waste-to-wealth** endeavours by utilising about **2 lakh tonnes of rice straw (parali)** annually to generate around 3 crore litres of ethanol annually.

❍ This plant will also utilize **maize and sugarcane waste** besides **paddy straw** to produce ethanol.

➢ The project will provide **direct employment to people** involved in the plant operation and **indirect employment will be generated** in the **supply chain** for **rice straw cutting, handling, storage**, etc.

➢ The project will have **zero liquid discharge.**

❍ Through **reduction in burning of rice straw**, the project will contribute to a **reduction of greenhouse gases** equivalent to about **3 lakh tonnes of carbon dioxide** equivalent emissions per annum, which can be understood as equivalent to **replacing nearly 63,000 cars annually on the country's roads.**

What Is Ethanol?

➢ **About:**
   ❍ It is one of the principal **biofuels**, which is **naturally produced** by the **fermentation of sugars** by yeasts or via **petrochemical processes** such as ethylene hydration.
   ❍ It is a **domestically produced** alternative fuel **most commonly made from corn**. It is also made from **cellulosic feedstocks**, such as crop residues and wood.

➢ **Ethanol as Fuel:**
   ❍ The use of ethanol as a fuel for **internal combustion engines**, either alone or in combination with other fuels, has been given much attention mostly because of its possible **environmental and long-term economical advantages over fossil fuel.**
   ❍ **Ethanol can be combined with petrol** in any concentration up to pure ethanol (E100).
      ● **Anhydrous ethanol** (ethanol without water) can be blended with petrol in **varying quantities** to reduce the consumption of petroleum fuels, as well as to reduce **air pollution.**

What are India's Other Initiatives regarding Biofuels?

➢ **Ethanol Blending Programme:**
   ❍ It is aimed at reducing the country's dependence on **crude oil imports**, cutting carbon emissions and **boosting farmers' incomes**.
   ❍ The Government of India has advanced the target for **20% ethanol blending in petrol** (also called E20) to 2025 from 2030.
   ❍ India has already achieved the target of **10% ethanol blending in petrol** with the country's ethanol production increasing to 400 crore litres.

- ➢ **The National Policy on Biofuels–2018:**
  - ❍ It provides an indicative target of 20% ethanol blending under the Ethanol Blended Petrol (EBP) Programme by 2030.
- ➢ **E-100 Pilot Project:**
  - ❍ TVS Apache two-wheelers are designed to run on E80 or pure ethanol (E100).
- ➢ **Pradhan Mantri JI-VAN Yojana, 2019:**
  - ❍ The scheme aims to create an ecosystem for setting up commercial projects and boost Research and Development in the 2G Ethanol sector.
- ➢ **Repurpose Used Cooking Oil (RUCO):**
  - ❍ The Food Safety and Standards Authority of India (FSSAI) has launched this initiative that will enable collection and conversion of used cooking oil to biodiesel.

Outbound Travel and Tourism - An Opportunity Untapped

Why in News?

Recently a report was released titled 'Outbound Travel and Tourism - An Opportunity Untapped', which shows India's outbound tourism will surpass USD 42 billion by 2024.

- ➢ Outbound tourism is the **act of travelling 'out' of the home country** for the purposes of tourism.

What are the Findings of the Report?

- ➢ The Indian outbound travel market is **among the fastest growing markets globally with approximately 80 million passport levels of purchasing power**, especially among the middle class.
- ➢ With a growing economy, young population, and growing middle class, **India is ideally positioned to become one of the most lucrative outbound tourism markets** in the world.
- ➢ Europe sees 20% of the travellers from India's outbound traffic. 10 % travel to Australia and New Zealand, while the rest of the traffic is towards Southeast Asia.
- ➢ **In 2021, Indians spent approximately USD 12.6 billion in outbound trips**, compared to USD 22.9 billion in 2019. While the reason for decrease in spending could be due to the pandemic, these figures point out the huge value that can be captured from Indian outbound travellers.

What are the Recommendations?

- ➢ Government can look at steps like **increasing direct connections to popular and upcoming destinations,** allowing foreign cruise vessels to operate on Indian waters, besides taking concerted and **coordinated efforts on multiple fronts** to propel the outbound tourism market.
- ➢ **Allowing foreign cruise vessels to include Indian destinations** as a stop would encourage **both inbound and outbound tourism** as well as increase revenue for Indian ports.
- ➢ With the positive response of foreign delegations and their policies, India can establish **bilateral relations with tourist-friendly countries** for both inbound and outbound tourists.

What is the Scenario of Tourism in India?

- ➢ **About:**
  - ❍ India attracted a lot of travellers in the past due to its fabled wealth. Visit of **Hieun-tsang, a devout Chinese Buddhist is an example of this.**
  - ❍ Pilgrim Travel got a boost when **Emperors like Ashoka and Harsha started building rest houses** for pilgrims.
  - ❍ Arthashastra' pointing out the **importance of the travel infrastructure for the state, which played an important role** in the past.
  - ❍ Post-Independence, Tourism continuously remained part of the **Five Year Plans (FYP).**
    - Different forms of Tourism like Business Tourism, Health Tourism, and Wildlife Tourism etc. were introduced in India after seventh FYP.
- ➢ **Status:**
  - ❍ India's Tourism is ranked at 10th position in terms of its contribution to World **GDP (Gross Domestic Product)** in the World Travel and Tourism Council's report in 2019.
    - During 2019, contribution of travel & tourism to GDP was 6.8% of the total economy, Rs. 13,68,100 crore (USD 194.30 billion).
  - ❍ India as of now in 2021 has 40 sites listed under **'World Heritage List',** 6th **highest (32 cultural, 7 natural and 1 mixed site)** in the world.

Note:

- **Dholavira** and **Ramappa Temple (Telangana)** are the latest ones.
○ In FY20, the tourism sector in India accounted for 39 million jobs, which was 8.0 % of the total employment in the country. By 2029, it is expected to account for about 53 million jobs.

➢ **Significance:**
○ **Service Sector:**
- It gives a push to the service sector. A large number of businesses engaged in the service sector such as airlines, hotel, surface transportation, etc. grows with the growth of the tourism industry.
○ **Foreign Exchange:**
- Foreign Travellers help India in getting **Foreign Exchange**.
- The foreign exchange earnings from 2016 to 2019 grew at a CAGR of 7% but dipped in 2020 due to the **Covid-19 pandemic.**
○ **Preservation of National Heritage:**
- Tourism helps in preservation of National Heritage and Environment by bringing in focus the importance of sites and the need to preserve them.
○ **Renewal of Cultural Pride:**
- Tourist spots being appreciated globally instils a sense of pride among Indian residents.
○ **Infrastructural Development:**
- Now-a-days, it is ensured that Travelers do not face any problem; multiple use infrastructures are getting developed at several tourist places.
○ **Recognition:**
- It helps in bringing India on the global map of tourism, earning appreciation, recognition and initiates cultural exchange.
○ **Promotes Cultural Diplomacy:**
- Tourism as a form of soft power, helps in promoting cultural diplomacy, people to people connect and thereby promotes friendship and cooperation between India and other countries.

➢ **Challenges:**
○ **Lacking in Infrastructure:**
- Tourists in India still face many infrastructure related problems like inadequate roads, water, sewer, hotels and telecommunications etc.

○ **Safety and Security:**
- Safety and security of tourists, especially of the foreign tourists, is a major hurdle to tourism development. Attacks on foreign nationals raise questions about India's ability to welcome tourists from far away countries.
○ **Lack of Skilled Manpower:**
- Lack of skilled manpower is another challenge to the Tourism Industry in India.
○ **Absence of basic Amenities:**
- Absence of basic amenities like drinking water, well maintained toilets, first aid, cafeteria etc. at tourist places.
○ **Seasonality:**
- Seasonality in Tourism, with the busy season being limited to six months from October to March and heavy rush in November and December.

What are the Initiatives Related to Tourism?
➢ **Swadesh Darshan Scheme**
➢ **National Mission on Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive**
➢ **Iconic Tourist Sites**
➢ **Buddhist Conclave**
   Dekho Apna Desh Initiative

India's Unique Job Crisis

Why in News?

As per a recent study, there are f**ewer people employed in agriculture today**, but the transformation has been weak.

➢ Those moving out of farms are **working more in construction sites and the informal economy than in factories.**

How much Employment does the Agriculture Sector provide?

➢ In 1993-94, agriculture accounted for close to **62% of the country's employed labour force.**

➢ The labour percentage in agriculture (based on data from the **National Statistical Office's Periodic Labour Force Surveys**), dropped almost 6% points by 2004-05 and 9% points over the next seven years.

Note:

drishti

❍ The declining trend continued, albeit at a slower pace, in the subsequent seven as well.

➢ Between 1993-94 and 2018-19, agriculture's share in India's workforce **came down from 61.9% to 41.4%**.

❍ It is estimated that given its level of **per capita GDP** in 2018, India's farm sector **should be employing 33-34% of the total workforce.**

● 41.4% may not be a substantial deviation from the average.

% SHARE OF WORKFORCE IN AGRICULTURE

SECTORAL EMPLOYMENT SHARES (IN PER CENT)

	2011-12	2018-19	2019-20	2020-21
Agriculture	47.0	41.4	44.3	44.8
Manufacturing	12.5	12.1	11.3	11.0
Mining	0.6	0.4	0.3	0.3
Construction	10.7	12.2	11.7	12.4
Services	28.6	33.2	31.8	30.9
Utilities	0.6	0.6	0.6	0.6
Total	100.00	100.00	100.00	100.00
Organised sector	24.1	23.3	22.9	23.2
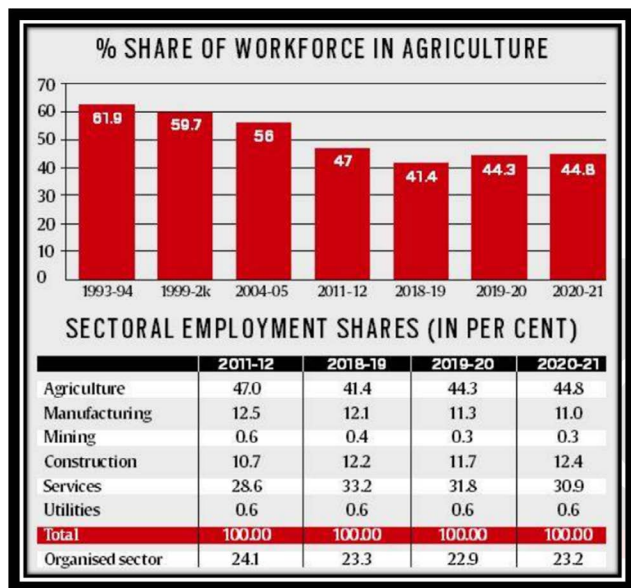
How has India's Employment Trends been?

➢ **Agriculture:**

❍ **Reversal of Trend:**

● There's been a **reversal of the trend** in the last two years, which has seen the share of those employed in farms **rise to 44-45% in 2020-21.**

■ This has primarily to do with the **Covid-induced economic disruptions.**

❍ **Structural Transformation:**

● Even the movement of workforce from agriculture that India has witnessed over the past three decades or more **does not qualify as what economists call "structural transformation".**

■ **Structural transformation** would involve the **transfer of labour from farming to sectors** – particularly **manufacturing and modern services** – where productivity, value-addition and average incomes are higher.

■ However, the share of manufacturing (and mining) in total employment **has actually fallen along with that of agriculture.**

■ The surplus labour pulled out from the **farms is being largely absorbed in construction and services.**

● The **structural transformation process in India has been weak** and deficient.

■ There is movement of labour taking place away from farms – even if stalled, possibly temporarily.

■ But that surplus labour **isn't moving to higher value-added non-farm activities,** specifically manufacturing and modern services.

■ The labour transfer is happening within the low-productivity informal economy.

➢ **Service Sector:**

❍ The services sector **does include relatively well-paying industries** such as **information technology**, business process outsourcing, telecommunications, finance, **healthcare**, **education** and **public administration**.

● The bulk of the jobs in this case are in **petty retailing, small eateries, domestic help, sanitation, security staffing, transport** and similar other informal economic activities.

● This is also evident from the low share of employment in **organised enterprises**, defined as those engaging 10 or more workers.

How is the Information Technology Sector Emerging as a Job Provider?

➢ Between 2020-22, the **combined employee headcount** at India's top five IT companies (Tata Consultancy Services, Infosys, Wipro, HCL Technologies and Tech Mahindra) has gone **up from 11.55 lakh to 15.69 lakh.**

❍ That's a jump of **4.14 lakh or nearly 36% in the period post the pandemic**, when most other sectors, barring agriculture, **were shedding jobs and slashing salaries.**

❍ These five companies, put together, have more employees than the **Indian Railways** and the **three defense services, respectively.**

➢ Much of the IT sector's recent success is courtesy of **exports**.

Note:

○ These have boomed due to **Covid's triggering increased demand for** digitisation even among businesses that were hitherto slow in adoption:

- **India's net exports of software services** have surged from $84.64 billion in 2019-20 to $109.54 billion in 2021-22.

What could be done to Curb Unemployment?

➢ **Skills of Agriculture Labours:**

○ Schemes for **upskilling the workforce involved in the agriculture** sector should be prioritized by the government.

- It would provide the **dual benefit** of enhancing the knowledge for efficient farming and also, in case the labour wants to switch careers, they can look for other superior areas of employment.

➢ **Promoting Labour Intensive Industries:**

○ There are a number of **labour-intensive manufacturing sectors in India** such as **food processing**, leather and footwear, wood manufacturers and furniture, textiles and apparel and garments.

- **Special packages**, individually designed for each industry are needed to create jobs.

➢ **Decentralisation of Industries:**

○ **Decentralisation of Industrial activities** is necessary so that people of every region get employment.

○ **Development of the rural areas** will help mitigate the migration of the rural people to the urban areas thus decreasing the pressure on the urban area jobs.

➢ **Government's Initiatives:**

○ **Support for Marginalized Individuals for Livelihood and Enterprise (SMILE)**

○ **PM-DAKSH (Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi)**

○ **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**

○ **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**

○ **Start Up India Scheme**

What are different types of Unemployment?

➢ **Disguised Unemployment:**

○ It is a phenomenon wherein **more people are employed than actually needed.**

○ It is primarily traced in the **agricultural and the unorganised sectors of India.**

➢ **Seasonal Unemployment:**

○ It is an unemployment that occurs during **certain seasons of the year.**

○ **Agricultural labourers** in India rarely have work throughout the year.

➢ **Structural Unemployment:**

○ It is a category of unemployment arising from the **mismatch between the jobs available in the market and the skills of the available workers in the market.**

➢ **Cyclical Unemployment:**

○ It is a result of the **business cycle, where unemployment rises during** recessions and **declines with** economic growth.

➢ **Technological Unemployment:**

○ It is the loss of jobs due to **changes in technology.**

➢ **Frictional Unemployment:**

○ The Frictional Unemployment also called as **Search Unemployment**, refers to the time lag between the jobs when an individual is searching for a new job or is switching between the jobs.

➢ **Vulnerable Employment:**

○ This means, **people working informally,** without proper job contracts and thus sans any legal protection.

○ These persons are deemed 'unemployed' since records of their work are never maintained.

Decline in Counterfeit Notes

Why in News?

Recently, the Ministry of finance has informed Lok Sabha that the value of counterfeit currency in the banking system reduced from Rs 43.47 crore in 2016-17 to about Rs 8.26 crore in 2021-22.

What is Counterfeit Money?

➢ Counterfeiting, manufacture of false money for gain, **a kind of forgery in that something is copied so as to defraud** by passing it for the original or genuine article.

➢ Because of the value conferred on money and the high level of technical skill required to imitate it, counterfeiting is singled out from other acts of forgery and is treated as a separate crime under **section 489A of the Indian Penal Code.**

➢ Counterfeiting is the oldest technique used by **fraudsters to cheat unsuspecting individuals of their money.**

What are the Threats of Counterfeiting?

➢ **Economic Terrorism:**
  ○ **FICN (Fake Indian Currency Notes)** can be seen as a form of **"economic terrorism" practiced by external sources** to damage India's economy.
  ○ Economic terrorism refers to the **behind-the-scenes manipulation of a nation's economy by state or non-state actors**.
  ○ The circulation of FICN threatens **India's economy while the profit that is earned from doing so is used to fund covert activities** targeting India.

➢ **Inflation:**
  ○ The circulation of a large amount of fake currency **increases the amount of money in circulation,** which may lead to high demand for goods and commodities.
  ○ The rise in demand in turn creates **a scarcity of goods, leading to a rise in the price** of the goods.
  ○ This leads to **currency devaluation.**

➢ **Non-Reimbursement of Loses:**
  ○ The non-reimbursement policy of banks is another issue that occurs when banks reject the fake notes and do not reimburse the losses.
  ○ Firms which are involved in daily cash transactions **face heavy losses in the long run thanks to the infiltration of FICN into the economy.**

➢ **Loss of Public Confidence:**
  ○ Other effects of counterfeit currency include the loss of public confidence, **black marketing** of products, illegal stocking of products, etc.

What are the Measures to Control Fake Currency?

➢ **Demonetisation:**
  ○ On 8th November 2016 Rs. 500 and Rs. 1,000 notes were withdrawn from the system in 2016, to discourage the use of high-denomination notes for illegal transactions and to **curb Counterfeiting.**
  ○ **Demonetisation** is the act of **stripping a currency unit of its status as legal tender.**

➢ **Bi-Luminescent Security Ink:**
  ○ The **Council of Scientific and Industrial Research (CSIR)**-National Physical Laboratory has developed **a bi-luminescent security ink** which glows in **red and green colours** when illuminated by two different excitation sources.

➢ **Terror Funding and Fake Currency (TFFC) Cell:**
  ○ A Terror Funding and Fake Currency (TFFC) Cell has been constituted in **National Investigation Agency (NIA)** to conduct focused investigation of terror funding and fake currency cases.

➢ **FICN Coordination Group:**
  ○ **FICN Coordination Group (FCORD)** has been formed by the Ministry of Home Affairs to share intelligence/information among the security agencies of the states/centre to counter the problem of circulation of fake currency notes.

➢ **MoU between India-Bangladesh to Counter Fake Currency:**
  ○ Memorandum of Understanding (MoU) has been signed between India and Bangladesh **to prevent and counter smuggling and circulation of fake currency notes.**
  ○ Also, security at the international borders has **been strengthened by using new surveillance technology**.

RBI's Surveys & Indian Economy

Why in News?

Recently, the **RBI** unveiled its latest **monetary policy review** and **seven surveys**, ranging from consumer confidence to **GDP growth** expectations, that help it ascertain how the economy is doing.

➢ Widening Trade Deficit & Falling Rupee are also areas of major concern for Indian Economy.

Which Surveys were Unveiled by RBI?

➢ **Consumer Confidence Survey (CCS):**
  ○ **About:**
    ● The CCS asks people across 19 cities about their current perceptions (in comparison with a

Note:

year ago) and one-year ahead expectations on the **general economic situation, employment scenario, overall price situation and own income and spending.**

- ○ **Indices:**
  - • **The Current Situation Index (CSI)**
    - ■ CSI has been recovering since falling to a historic low in July 2021.
  - • **The Future Expectations Index (FEI)**
    - ■ The FEI is in the positive bracket but even now it stays below the pre-pandemic levels.
  - • An index **below the 100 mark** implies **people are pessimistic** and **a value higher than 100 conveys optimism.**

➤ **Inflation Expectations Survey (IES):**
- ○ **About:**
  - • It tracks people's expectations of **inflation**.
- ○ **Findings:**
  - • Households' inflation perception for the current period has moderated by 80 bps to 9.3%.

➤ **OBICUS Survey:**
- ○ **About:**
  - • OBICUS stands for "**Order Books, Inventories and Capacity Utilisation Survey**"
  - • It covered **765 manufacturing companies** in an attempt to provide a snapshot of demand conditions in **India's manufacturing sector** from January 2022 to March 2022.
- ○ **Capacity Utilisation (CU):**
  - • **A low level of CU** implies that manufacturing firms **can meet the existing demand** without needing to boost production.
    - ■ It has **negative implications** for job creation and the chances for **private sector investments** in the economy.
- ○ **Findings:**
  - • The CU is well **above the pre-pandemic level**, suggesting India's **aggregate demand** is recovering steadily.

➤ **Industrial Outlook Survey (IOS):**
- ○ This survey **tries to track the sentiments of the businessmen and businesswomen.**

- ○ The survey encapsulates qualitative assessment of the business climate by Indian manufacturing companies.

➤ **Services and Infrastructure Outlook Survey (SIOS):**
- ○ This survey does a qualitative assessment of **how Indian companies in the services and infrastructure sectors** view the current situation and the future prospects.
- ○ The companies in the services space are **far more optimistic than the companies in the infrastructure sector**.

➤ **Bank Lending Survey (BLS):**
- ○ It captures the mood (qualitative assessment and expectations) of major **scheduled commercial banks (SCBs)** on credit parameters (**loan demand and terms & conditions of loans**) for major economic sectors.

➤ **Survey of Professional Forecasters (SPF):**
- ○ It is a survey of 42 professional forecasters **(outside the RBI)** on key **macroeconomic indicators** such as **GDP growth rate** and **inflation rate** in the current year and the next financial year.

Chart 1: Probability distribution of GDP growth forecast for 2022-23
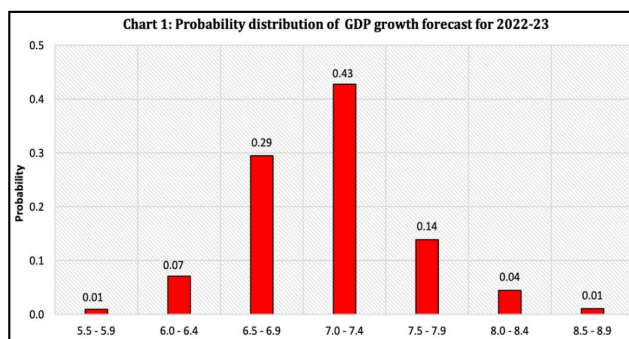
- ○ **GDP Expectations:**
  - • India's **real GDP** is expected to **grow by 7.1% in 2022-23**, projections revised down by 10 basis points from the last survey round and it is **expected to grow by 6.3% in 2023-24**.
- ○ **Findings:**
  - • The highest probability is that **GDP growth will range between 7%-7.4%**, the second most probable outcome is that the **growth rate will decelerate to 6.5%-6.9% range**.

Note:

What is the Current State of Trade Deficit & Indian Rupee?

➢ **Trade Deficit:**

Annual Trade Deficit (in $ billion)
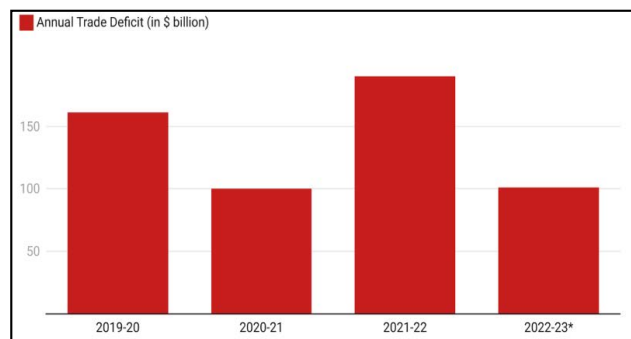
○ **About:**
- The trade data details **what goods** (only goods, and not services) **India imported and exported in July 2022.** It presents this in value terms (in Indian rupees or US dollars).

○ **Findings:**
- The Trade Deficit in the first four months of FY 2022-23 is already more than 50% of FY 2021-22 full year deficit.
    - On a Year-on-Year (YoY) basis, exports dipped, while imports recorded a sharp rise in July 2022 on the back of higher commodity prices.
    - The $20 billion YoY rise in imports was led by petroleum products and coal, negating the relief offered by a fall in gold imports.

➢ **Indian Rupee:**

Rupee has weakened against the US $

Exchange Rate (Rs per US $)

○ Indian Rupee, in comparison to US Dollar, has fallen from Rs 74.2 in August 2021 to Rs 80 in July 2022.

Digital Currency

Why in News?

According to a recent study by the **United Nations Trade and Development Body (UNCTAD)**, over 7% of India's population owned **Digital Currency** in 2021.

➢ Also, **India was ranked seventh in the list of top 20 global economies** for digital currency ownership as share of population.

What are the Other Highlights of the Study?

➢ Developing countries **accounted for 15 of the top 20 economies** when it comes to the share of the population that owns cryptocurrencies.

➢ Ukraine topped the list which is followed by Russia, Venezuela, Singapore, Kenya, and the US.

➢ **Global use of cryptocurrencies has increased exponentially** during the **Covid-19** pandemic, including in developing countries.

What are the Issues Highlighted by the Study?

➢ **Unstable Financial Asset:**
○ Private digital currencies have rewarded some and facilitated remittances, but they are an **unstable financial asset** that can also **bring social risks and costs**.

➢ **Unregulated:**
○ As these Digital currencies are not regulated, there has been a rapid rise in their demand in developing countries as it also helps in facilitating remittances and act as a hedge against inflation.

➢ **Volatile System:**
○ The recent digital **currency shocks in the market suggest that there are private risks to holding crypto**, but if the central bank steps in to protect financial stability, then the problem becomes a public one.

➢ **Jeopardies the Monetary Sovereignty:**
○ If cryptocurrencies become a widespread means of payment and even replace domestic currencies unofficially (a process called cryptoisation), this could **jeopardies the monetary sovereignty of countries.**

Note:

➢ **Undermine Domestic Policies:**
- ○ Cryptocurrencies can undermine domestic resource mobilisation in developing countries.

What are the Suggestions Highlighted by the Study?

➢ The Government can facilitate remittances, they may also enable tax evasion and avoidance through illicit flows.

➢ The study urged authorities to take **steps to curb the expansion of cryptocurrencies in developing countries,** including ensuring comprehensive financial regulation of cryptocurrencies by **regulating crypto exchanges, digital wallets and decentralized finance**, and **by prohibiting regulated financial institutions from holding cryptocurrencies** (including stablecoins) or offering related products to **customers.**

➢ It also called for **restrictions on advertising related to digital currencies**, as with other high-risk financial assets.

➢ Further, providing a secure, **reliable and cost-effective public payment system** that is fit for the digital age; Implement global tax harmonization on digital currency tax practices, regulations and information sharing, and redesign capital controls to accommodate the decentralized, borderless and pseudonymous characteristics of digital currencies.

What is Digital Currency?

➢ **About:**
- ○ Digital currency is a form of currency that is available **only in digital or electronic form.**
- ○ It is also called digital money, electronic money, electronic currency, or cybercash.
- ○ It **does not have physical attributes** and is available only in digital form.
- ○ The transactions involving digital currencies are made **using computers or electronic wallets connected to the internet or designated networks**.
  - ● Whereas, physical currencies, such as banknotes and minted coins, are tangible, meaning they have definite physical attributes and characteristics.

➢ **Features:**
- ○ Digital currencies can be **centralized or decentralized**.
  - ● **Fiat currency**, which exists in physical form, is a centralized system of production and distribution by a **central bank and government agencies.**
    - ■ **Prominent cryptocurrencies**, such as **Bitcoin** and **Ethereum,** are examples of **decentralized digital currency systems**.

➢ **Types:** Different types of currencies exist in the electronic realm. Broadly, there are **three different types** of currencies:
- ○ **Cryptocurrencies:**
  - ● **Cryptocurrencies** are digital currencies that use cryptography to secure and verify transactions in a network.
    - ■ Cryptography is also used to manage and control the creation of such currencies.
      - ◆ Bitcoin and Ethereum are examples of cryptocurrencies.
- ○ **Virtual Currencies:**
  - ● Virtual currencies are **unregulated digital currencies** controlled by developers or a founding organization consisting of various stakeholders involved in the process.
  - ● Virtual currencies can also be algorithmically controlled by a defined network protocol.
    - ■ An example of a virtual currency is a **gaming network token whose economics is defined and controlled by developers.**
- ○ **Central Bank Digital Currencies:**
  - ● **Central bank digital currencies (CBDCs)** are r**egulated digital currencies issued by the central bank of a country**.
    - ■ A CBDC can be a **supplement or a replacement to traditional fiat currency**.
    - ■ Unlike fiat currency, which exists in both physical and digital form, a CBDC **exists purely in digital form.**
      - ◆ England, Sweden, and Uruguay are a few of the nations that are considering plans to launch a digital version of their native fiat currencies.

Digital Currencies	Virtual Currencies	Cryptocurrencies
Regulated or unregulated currency that is available only in digital or electronic form.	An unregulated digital currency that is controlled by its developer(s), its founding organization, or its defined network protocol.	A virtual currency that uses cryptography to secure and verify transactions as well as to manage and control the creation of new currency units.

➢ **Advantages:**

○ **Fast Transaction time:**

  ● Because digital currencies **generally exist within the same network and accomplish transfers without intermediaries,** the amount of time required for transfers involving digital currencies is extremely fast.

○ **Do not require Physical Manufacturing & Saves Cost:**

  ● Many requirements for **physical currencies**, such as the **establishment of physical manufacturing facilities, are absent for digital currencies**. Such currencies are also **immune to physical defects or soiling that are present in physical currency.**

○ **Ease Implementation of Monetary and Fiscal Policy:**

  ● Under the current currency regime, the Central bank works through a series of intermediaries—

banks and financial institutions—to circulate money into an economy. **CBDCs can help circumvent this mechanism and enable a government agency to disburse payments directly to citizens.**

○ **Make Transaction Costs Cheaper:**

  ● Digital currencies **enable direct interactions within a network.** For example, a customer can pay a shopkeeper directly as long as they are situated in the same network.

➢ **Disadvantages:**

○ **Susceptible to Hacking:**

  ● Their **digital provenance makes digital currencies susceptible to hacking.** Hackers can steal digital currencies from online wallets or change the protocol for digital currencies, making them unusable.

○ **Volatile Value:**

  ● Digital currencies used for **trading can have wild price swings**.

  ● For example, the decentralized nature of cryptocurrencies has resulted in a profusion of thinly capitalized digital currencies whose prices are prone to sudden changes based on investor whims.

■ ■ ■

Note:

International Relations

Highlights

- Iran Nuclear Deal Talks
- India-Uzbekistan Relations
- India Maldives Relations
- Critical Minerals Alliance
- India-Mauritius Joint Trade Committee
- India & its Neighbourhood
- US-China Tensions
- Ceasefire between Israel and Palestine
- New START Treaty
- UN Military Observer Group in India and Pakistan

Iran Nuclear Deal Talks

Why in News?

Recently, there has been a fresh round of talks over **Iran's nuclear programme** in Vienna to revive the 2015 nuclear deal which is also known as the **Joint Comprehensive Plan of Action(JCPOA).**

➢ Officials from various countries including Iran were meeting for the first time since March 2022.

Changes agreed under Iran deal to limit nuclear programme
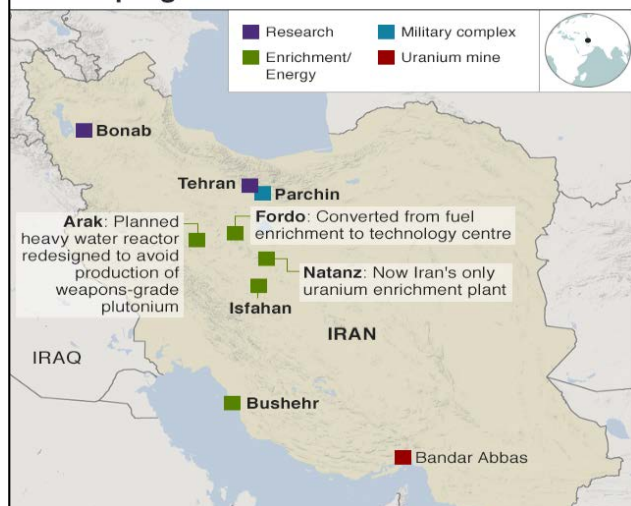
What is the Iran Nuclear Deal?

➢ **About:**
- ❍ The Joint Comprehensive Plan of Action aims to guarantee the civilian nature of Iran's nuclear programme in **exchange for a gradual lifting of sanctions**.

❍ Iran signed the agreement with the **five permanent members of the U.N. Security Council — theU.S., Russia, France, China, and the United Kingdom — as well as Germany and the European Union.**

❍ Under the deal, **Iran agreed to significantly cut its stores of centrifuges, enriched uranium and heavy-water,** all key components for nuclear weapons.

❍ Iran also agreed to implement a protocol that it would **allow inspectors from the International Atomic Energy Agency (IAEA)** to access its nuclear sites to ensure Iran would not be able to develop nuclear weapons in secret.

➢ **Issues:**
- ❍ Due to the unilateral withdrawal of the United States in 2018 under former president Donald Trump and the re-imposition of U.S. sanctions, Iran has backtracked on its obligations.
- ❍ Iran subsequently exceeded the JCPOA's uranium enrichment rate of 3.67%, rising to 20% in early 2021.
  - ● It then crossed an unprecedented 60% threshold, getting closer to the 90 percent needed to make a bomb.
- ❍ **Opposing countries:**
  - ● **Israel,** America's closest ally in the Middle East, strongly rejected the deal, and other countries like Iran's great regional rival **Saudi Arabia**, complained that they were not involved in the negotiations even though Iran's nuclear programme **posed security risks for every country in the region.**

Note:

What is the significance of JCPOA for India?

➢ **Enhance regional connectivity:**
  ○ Removing sanctions may revive **India's interest in the Chabahar port,** Bandar Abbas port, and other plans for regional connectivity.
  ○ This would **further help India to neutralize the Chinese presence in Gwadar port**, Pakistan.
  ○ Apart from Chabahar, **India's interest in the International North-South Transit Corridor (INSTC),** which runs through Iran, and will improve connectivity with five Central Asian republics, may also get a boost.

➢ **Energy Security:**
  ○ Due to the pressure linked to the **US Countering America's Adversaries Through Sanctions Act (CAATSA), India has to bring down oil imports to zero.**
  ○ Restoration of ties between the US and Iran will **help India to procure cheap Iranian oil and aid in energy security.**

India-Uzbekistan Relations

Why in News?

Recently, the Union Minister for Commerce & Industry attended the 13th Session of the India-Uzbekistan Inter-Governmental Commission.

➢ Further, he highlighted **India-Uzbekistan** relations as key to India's vision of integrated extended neighbourhood.
  ○ IGC meeting is **an important platform to deliberate on ideas, discuss issues & strengthen bilateral relations** especially in the field of trade & investment.

What are the Key Highlights of the Session?

➢ **Minister Highlighted:**
  ○ That there is a need to take the relationship forward in newer areas like technology, digital payment solutions, and investment in start-ups.
  ○ The need for an integrated approach for regional connectivity and cooperation.
  ○ Further, there are seven emerging areas of cooperation between both nations namely **Digital Payments**, Space Cooperation, Agri and Dairy, Pharma, Gems and Jewellery, MSME, and Inter-regional cooperation.

How has been India-Uzbekistan Relations?

➢ **About:**
  ○ India and Uzbekistan have a long history of cooperation.
  ○ After Uzbekistan's independence, India was one of the first countries to acknowledge its state sovereignty.
  ○ Bilateral relations now encompass a wider canvas, including political and strategic issues, defense and security, trade and investment, energy, agriculture, S&T, education, and people-to-people ties.

➢ **Initiatives:**
  ○ **Defense Cooperation:**
    • The first-ever **joint military exercise** held between India and Uzbekistan was named **Dustlik**.
      ■ India has also assisted in setting up an India Room at the Armed Forces Academy of Uzbekistan in Tashkent.
  ○ **Security Cooperation:**
    • India and Uzbekistan share common perspectives on a number of **security issues, including terrorism, trans-national organized crime, illegal trafficking, smuggling, etc**.
    • The main focus of engagement in this sphere has been to **provide assistance to Uzbek security agencies through training and capacity building.**
  ○ **Trade:**
    • It has increased from USD 247 million in 2019-20 to USD 342 million in 2021-22, a growth of 38.5%.

○ **Investments:**

- Indian investments by Indian companies include those in the **field of pharmaceuticals, amusement parks, automobile components, and the hospitality industry.**

- **Amity University and Sharda University have opened campuses in Tashkent** and Andijan respectively.

- Indian institutions like **iCreate** are actively cooperating with Uzbek counterparts for **promoting a start-up ecosystem in Uzbekistan and training entrepreneurs in setting up incubators.**

○ **Tourism:**

- The Uzbek government has extended the **e-Visa facility to Indian tourists**.

- Uzbekistan has also emerged as a significant **source of medical tourism** with about 8,000 Uzbeks annually seeking medical treatment in India.

○ **Solar Power:**

- Uzbekistan has expressed interest in joining the **International Solar Alliance**.

- There is interest in Indian participation in the development of the solar power sector through competitive bidding.

➢ **Bilateral Mechanism:**

○ **National Coordination Committees**: India and Uzbekistan have set up National Coordination Committees to **oversee the implementation of mutually agreed projects and initiatives.**

➢ **Multilateral Initiatives:**

○ **India-Central Asia Business Council:** The dialogue brought together Business Councils of all five Central Asian countries to take the trade and investment partnership forward with a special focus on energy, pharmaceuticals, automotive, agro-processing, education, and urban infrastructure, transport, civil aviation, IT and tourism.

○ **India- Central Asia Dialogue:** It enables the issues of further strengthening ties between India and the countries of Central Asia in the spheres of politics, economics, digitalization, and cultural and humanitarian direction.

What are the Challenges in India-Uzbekistan Relations?

➢ There is a very low amount of trade and commerce between the two countries.

➢ Lack of connectivity, as Uzbekistan is a landlocked country, and the air connectivity is not up to the mark.

➢ China has made in-roads with Belt and Road Initiative in all the central Asian countries including Uzbekistan.

India Maldives Relations

Why in News?

 Recently, the Prime Minister of India held bilateral talks with the visiting **Maldives President.**

➢ The Prime Minister while highlighting the threat of **transnational crime, terrorism and drug trafficking** in the **Indian Ocean** said that the coordination between India and Maldives in the field of **defence** and security is vital for peace and stability.

What are the Outcomes of the Bilateral Talks?

➢ **Security:**

○ To counter the threat of **transnational crime, terrorism and drug trafficking** in the Indian Ocean region, India will give **24 vehicles and one naval boat** to the **Maldives Security Force** and help **train the island-nation's security personnel.**

○ India will also cooperate in building **police facilities in 61 islands of Maldives.**

➢ **Male connectivity project:**

○ The two leaders also welcomed the launch of the **Greater Male Connectivity Project**, a USD 500 million project funded by New Delhi.

Note:

- Both leaders participated in the virtual "pouring of the first concrete" ceremony of the USD500-million Greater Male Connectivity Project, being **built under grant and concessional loan support from India.**

➢ **Agreements:**
  ○ The countries signed six agreements to expand cooperation in a range of areas in Maldives, including:
    - **Cybersecurity**
    - Capacity Building
    - Housing
    - **Disaster Management**
    - **Infrastructure Development**
      ▪ India announced USD100 million financial aid to help the island-nation **complete certain infrastructure projects.**

How has India's Relations with Maldives been?

➢ **Security Partnership:**
  ○ Recently, the **National College for Policing and Law Enforcement (NCPLE)** was inaugurated by India's External Affairs Minister during his two day visit to Maldives in 2022.

➢ **Rehabilitation Centre:**
  ○ Signing of an **USD80-million contract for the Addu reclamation and shore protection** project.
  ○ A **drug detoxification and rehabilitation centre** in Addu built with Indian assistance.
    - The centre is **one of 20 high impact community development projects** being implemented by India in areas such as **healthcare**, **education**, **fisheries**, **tourism**, **sports** and **culture**.

➢ **Economic Cooperation:**
  ○ **Tourism** is the mainstay of Maldivian economy. The country is now a **major tourist destination** for some Indians and a job destination for others.
  ○ In August 2021, **Afcons, an Indian company**, signed a contract for the **largest-ever infrastructure project in Maldives** which is the **Greater Male Connectivity Project (GMCP)**.
  ○ India is Maldives **2nd largest trading partner** – rising up from its 4th position in 2018.
    - In 2021, **bilateral trade registered a growth of 31%** over the previous year – overcoming the pandemic-related challenges.

What are the Challenges in India Maldives Relations?

➢ **Political Instability:**
  ○ India's major concern has been the impact of **political instability in the neighbourhood** on its security and development.
  ○ **The February 2015 arrest** of Maldives' opposition leader Mohamed Nasheed on **terrorism charges** and the consequent **political crisis** have posed a real diplomatic test for **India's neighbourhood policy**.

➢ **Radicalisation:**
  ○ In the past decade or so, the number of Maldivians **drawn towards terrorist groups** like the **Islamic State (IS)** and **Pakistan-based jihadist** groups has been increasing.
    - This gives rise to the possibility of Pakistan based terror groups using **remote Maldivian islands** as a **launch pad for terror attacks** against India and Indian interests.

➢ **China Angle:**
  ○ China's **strategic footprint in India's neighbourhood** has increased. The Maldives has emerged as an important **'pearl' in China's "String of Pearls"** construct in South Asia.
  ○ Given the uncertain dynamics of **Sino-Indian relations**, China's strategic presence in the Maldives **remains a concern.**
  ○ Also, the Maldives have **started using the China card to bargain with India.**

Critical Minerals Alliance

Why in News?

There is growing concern in the Government over India not finding a place in the **Minerals Security Partnership.**

➢ Minerals Security Partnership is an **ambitious new US-led partnership** to secure supply chains of **critical minerals**, aimed at reducing dependency on China.

➢ **Demand for critical minerals**, which are essential for **clean energy** and other technologies is projected to **expand significantly in the coming decades.**

Note:

What are Critical Minerals?

➢ **About:**
- ❍ Critical minerals are elements that are the **building blocks of essential modern-day technologies** and are at **risk of supply chain disruptions.**
- ❍ These **minerals are now used everywhere** from making mobile phones, computers to batteries, **electric vehicles** and green technologies like **solar panels** and wind turbines.

➢ **Major Critical Minerals:**
- ❍ **Graphite, Lithium and Cobalt** are used for making EV batteries.
- ❍ **Aerospace, communications and defence industries** also rely on several such minerals as they are used in manufacturing **fighter jets, drones, radio sets** and other critical equipment.
- ❍ While **Cobalt, Nickel and Lithium** are required for batteries used in electric vehicles, rare earth minerals are critical, in trace amounts, in the **semiconductors** and **high-end electronics manufacturing**.

➢ **Significance:**
- ❍ As countries around the world scale up their transition towards **clean energy** and **digital economy**, these critical resources are key to the ecosystem that fuels this change.
  - ● Any **supply shock** can severely imperil the economy and strategic autonomy of a country over-dependent on others to procure critical minerals.

What is Minerals Security Partnership (MSP)?

➢ **About:**
- ❍ It is an initiative by the United States to bolster critical mineral supply chains.

➢ **Partners:**
- ❍ Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea, Sweden, the United Kingdom, the United States, and the European Commission.

➢ **Objective:**
- ❍ The goal of the MSP is to ensure that **critical minerals are produced, processed, and recycled** in a manner that supports the ability of countries to **realize the full economic development benefit of their geological endowments.**
- ❍ **Focus** would be on the supply chains of minerals such as **Cobalt, Nickel, Lithium** and also the 17 "rare earth" minerals.

➢ **Significance:**
- ❍ The MSP will help **catalyze investment from governments** and the **private sector** for strategic opportunities across the full value chain that adhere to the highest **environmental, social, and governance standards.**

Why Exclusion from MSP is a Concern for India?

➢ **Supply of Critical Minerals:**
- ❍ One of the key elements of India's growth strategy is powered by an **ambitious shift in the mobility space** through the conversion of a large part of public and private transport to electric vehicles.
  - ● This, alongside a **concerted electronics manufacturing push**, underlines the **need to secure the supply of critical minerals.**

➢ **Dependency on Other Countries:**
- ❍ Rare earth comprises seventeen elements and are classified as **light RE elements** (LREE) and **heavy RE elements** (HREE).
  - ● **Some RE are available in India** such as Lanthanum, Cerium, Neodymium, Praseodymium and Samarium, while others such as Dysprosium, Terbium, Europium that are classified as HREE **are not available in Indian deposits** in extractable quantity.
    - ■ India would require **supply support for such elements.**

➢ **Technology Status:**
- ❍ Industry watchers say that one reason India would not have found a place in the grouping is because the **country does not bring much expertise to the table.**
  - ● In the group, countries like **Australia and Canada** have reserves and also technology to extract them and countries like Japan have the technology to process them.

What has India done regarding Critical Minerals?

➢ **Lithium Agreement:**
- ❍ In mid-2020, India, through a newly floated state-owned company, **had signed an agreement with an Argentinian firm** to jointly **prospect lithium in**

Note:

the South American country that has the third largest reserves of the metal in the world.

➢ **India-Australia Critical Minerals Investment Partnership**:

   ○ India and Australia decided to strengthen their partnership in the field of **projects and supply chains for critical minerals.**

   ○ **Australia has the resources** to help India fulfil its ambitions to **lower emissions** and meet the **growing demand for critical minerals** to help **India's space and defence industries, and the manufacture of solar panels, batteries and electric vehicles.**

India-Mauritius Joint Trade Committee

Why in News?

Recently, India hosted the 1st Session of **"India-Mauritius High-Powered Joint Trade Committee"** under the **"India-Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA)".**

What are the Outcomes of the Session?

➢ **Trade:**

   ○ **Bilateral merchandise trade** between India and Mauritius rose to **USD 786.72 million in 2021-22** from USD 690.02 million in 2019-20.

• Both sides agreed to **enhance bilateral collaboration** to further increase bilateral trade and realize the true potential of the bilateral relationship especially under the CECPA.

➢ **CECPA:**

   ○ Inclusion of the **General Economic Cooperation (GEC)** Chapter and **Automatic Trigger Safeguard Mechanism (ATSM)** in CECPA.

   • **The GEC chapter** will enable enhancement of **export competitiveness** and enlarging the existing scope for collaboration in the fields of Investments, Financial Services, Textile, **Small and Medium Enterprises**, Handicrafts, Gems and Jewellery etc.

   • ATSM protects the country from any sudden or dramatic increase in imports.

      ▪ Under this mechanism, if the imports of a product are rising alarmingly, then after reaching a certain threshold, India can impose safeguard duties on imports from Mauritius automatically.

      ▪ The same provision applies to Mauritius as well against Indian imports.

➢ **Skilled Professional:**

   ○ Interactions were held between both the sides in the **Services sector** with regard to **establishing equivalence** in certification, skills and licensing requirements of various professional bodies arrangement between the **Ministry of Skill Development & Entrepreneurship and its counterpart in Mauritius** on developing skill-sets.

   ○ The Mauritian side, while conveying the shortage of professionals in Mauritius in various sectors such as Information and communication technologies (ICT), Financial Services, Film production, Engineering, Health etc., welcomed movement of high skilled professionals from India to Mauritius.

What is India - Mauritius CECPA?

➢ **About:**

   ○ It is a kind of **free trade pact** that aims to provide an institutional mechanism to **encourage and improve trade** between the two countries.

   ○ It is a limited agreement that will **cover only select sectors.**

- It will cover sectors such as Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, etc.

➤ **Benefit to India:**
  ○ More than 300 domestic goods from **agriculture, textiles, electronics and other sectors** will get market access at concessional customs duties in Mauritius.
  ○ **Indian service providers** will have access to around 115 sub-sectors from the 11 broad service sectors, such as professional services, computer related services, research & development, other business services, etc.

➤ **Benefit to Mauritius:**
  ○ It will benefit from **preferential market access** into India for its 615 products, including frozen fish, speciality sugar, biscuits, fresh fruits, juices, mineral water, beer, alcoholic drinks, soaps, bags, medical and surgical equipment, and apparel.
  ○ India has offered around **95 sub-sectors from the 11 broad services sectors**, including professional services, R&D, other business services, telecommunication, environmental, health, etc.

How has India's relations with Mauritius been?

➤ **Economic:**
  ○ **Social Housing Units:**
    • In May 2016, India had extended a grant of USD 353 million to Mauritius as **Special Economic Package (SEP)** to execute **five priority projects identified by Mauritius, among others:**
      ▪ Metro Express Project
      ▪ Supreme Court Building
      ▪ New ENT Hospital
      ▪ Supply of Digital Tablets to Primary School Children
      ▪ Social Housing Project.
    • With the inauguration of the Social Housing Project, all the high-profile projects under the SEP have been implemented.
  ○ **Construction of a State-of-the-Art Civil Service College**:
    • It is being financed through a **grant support of USD 4.74 million**, under an MoU signed

in 2017 during the visit of **Prime Minister of Mauritius to India.**
  ○ **8 MW Solar PV Farm:**
    • It involves the installation of **25,000 PV cells to generate approximately 14 GWh of green energy annually**, to electrify approximately 10,000 Mauritian households.
  ○ **Foreign Direct Investment**:
    • Mauritius was the **third top source** (15.98%) of **Foreign Direct Investment (FDI)** into India in 2021-22.

➤ **Recent Developments:**
  ○ India has signed a contract with Mauritius for the **export of an Advanced Light Helicopter Mk III.**
    • The helicopter will be used by the Mauritius Police Force.
  ○ India and Mauritius signed a USD 100 million **Defence Line of Credit agreement.**
  ○ The two sides also discussed the **Chagos Archipelago dispute**, which was an issue of **sovereignty and sustainable development** before the **United Nations (UN).**
    • In 2019, India voted at the UN General Assembly **in support of the Mauritian position** on the issue. India was one of the 116 countries that voted demanding that the **UK end its "colonial administration"** from the group of islands.
  ○ India also delivered **1,00,000 Covishield vaccines to Mauritius**.

India & its Neighbourhood

Why in News?

Recently, Indian External Affairs Minister met with Maldives President stating that **India's 'Neighborhood First' policy and the Maldives' 'India First' policy complement each other,** advancing the special partnership.

What is India's Neighbourhood First Policy?

➤ **About:**
  ○ Under its '**Neighbourhood First' policy**, India is committed to **developing friendly and mutually beneficial relations** with all its neighbours.

Note:

- India is an **active development partner** and is involved in several projects in these countries.
  - India's policy of 'Neighbourhood First' focuses on **creating mutually beneficial**, **people-oriented**, **regional frameworks** for stability and prosperity.
  - India's engagement with these countries is based on a consultative, non-reciprocal and outcome-oriented approach, which focuses on delivering benefits like **greater connectivity, improved infrastructure, stronger development** cooperation in various **sectors, security and broader people-to-people contacts.**

➢ **Purpose:**
  - **Connectivity:**
    - India has entered into **MoU (Memorandum of Understanding)** with members of the **South Asian Association for Regional Cooperation (SAARC)**.

➢ These agreements ensure a **free flow** of **resources, energy, goods, labour, and information across borders.**
  - **Improving Relations with Neighbours:**
    - Priority is to **improve the relations** with immediate neighbours as **peace and tranquillity in South Asia** is essential for realising development agenda.
  - **Dialogue:**
    - It focuses on **vigorous regional diplomacy** by engaging with neighbouring nations and building political connectivity through dialogue.
  - **Economic Cooperation:**
    - It focuses on **enhancing trade ties** with neighbours.

➢ India has participated and invested in SAARC as a vehicle for development in the region.
    - One such example is the **Bangladesh-Bhutan-India-Nepal (BBIN)** grouping for energy development i.e. motor vehicles, waterpower management and inter-grid connectivity.
  - **Disaster Management:**
    - The policy also focuses on cooperating on **disaster response**, **resource management**, **weather forecasting and communication** and also capabilities and expertise in disaster management for all South Asian citizens.

- **Military and Defence Cooperation:**
  - India is also focusing on **deepening security** in the region through **military cooperation** by conducting as well as participating in **various defence exercises.**

How has India's Relations with its Neighbours been?

➢ **India - Maldives:**
  - **Security Partnership:**
    - Recently, the **National College for Policing and Law Enforcement (NCPLE)** was inaugurated by India's External Affairs Minister during his two day visit to Maldives in 2022.
  - **Rehabilitation Centre:**
    - Signing of an **USD80-million contract for the Addu reclamation and shore protection** project.
    - A **drug detoxification and rehabilitation centre** in Addu built with Indian assistance.
      - The centre is **one of 20 high impact community development projects** being implemented by India in areas such as **healthcare**, **education**, **fisheries**, **tourism**, **sports** and **culture**.
  - **Economic Cooperation:**
    - **Tourism** is the mainstay of Maldivian economy. The country is now a **major tourist destination** for some Indians and a job destination for others.
    - In August 2021, **Afcons, an Indian company**, signed a contract for the **largest-ever infrastructure project in Maldives** which is the **Greater Male Connectivity Project (GMCP)**.

➢ **India - Bhutan:**
  - **Indo-Bhutan Treaty of Peace and Friendship, 1949:**
    - The Treaty provides for, among other things, **perpetual peace and friendship**, **free trade** and **commerce** and equal justice to each other's citizens.
      - In 2007 the treaty was re-negotiated, and provisions were included to **encourage Bhutan's sovereignty**, abolishing the need to take India's guidance on foreign policy.
  - **Hydropower Cooperation:**

Note:

- This **hydropower cooperation** comes under the **2006 Agreement on Cooperation in Hydropower.**
  - Under a protocol to this agreement, India has agreed to assist Bhutan in the development of a minimum of **10,000 MW of hydropower and import of surplus electricity** from the same by 2020.
- **Economic Assistance:**
  - India is Bhutan's **leading development partner.**
  - Since the launch of the **First Five Year Plan of Bhutan in 1961**, India has been extending financial support to Bhutan's FYPs.
  - India has allotted **Rs 4500 crore to Bhutan's 12ᵗʰ FYP (2018-23)**.

> **India - Nepal:**
  - **High Level Visit:**
    - Recently, the Indian Prime Minister has visited **Lumbini, Nepal**, the birthplace of **Buddha**, where he laid a **foundation stone** along with **Nepalese Prime Minister** for a **Buddhist Vihara**, being built with **Indian assistance.**
  - **Treaty of Peace and Friendship of 1950:**
    - The treaty talks about **reciprocal treatment of Indian and Nepali citizens** in the two countries, in residence, property, business and movement.
      - It also establishes **national treatment for both Indian and Nepalese businesses** (i.e. once imported, **foreign goods would be treated no differently than domestic goods**).
  - **Hydropower Projects:**
    - The two countries **signed five agreements**, including one between the **Satluj Jal Vidyut Nigam (SJVN) Ltd and the Nepal Electricity Authority (NEA)** for development and implementation of 490.2 megawatts Arun-4 hydropower project.
      - Nepal also **invited Indian companies** to invest in the West Seti hydropower project in Nepal.

> **India - Sri Lanka:**
  - **Hybrid Power:**
    - India & Sri Lanka signed a MoU that provided India to **set up hybrid power projects in three Islands** (Nainativu , Delft or Neduntheevu , and Analaitivu) off Jaffna.

- **Maritime Rescue Coordination Center:**
  - India and Sri Lanka have also agreed to set up a **Maritime Rescue Coordination Center (MRCC)**, signaling greater **defence sector collaboration** between the neighbours.
- **Unitary Digital Identity framework:**
  - India has agreed to **provide a grant to Sri Lanka** to implement a **'Unitary Digital Identity framework'**, apparently modelled on the **Aadhaar card**.
    - It is similar to India's own Aadhaar and under the proposed **Unitary Digital Identity framework**, Sri Lanka is expected to introduce a:
      - Personal identity **verification device** based on **biometric data.**
      - **Digital tool** that can represent the identities of individuals in **cyberspace**.
      - **Identification of individual identities** that can be accurately verified in digital and physical environments by combining the two devices.

What are the Challenges in India's Neighbourhood First Policy?

> **Growing Chinese Pressure:**
  - It failed to take a meaningful direction and growing Chinese pressure has prevented the country from winning allies in the region.
    - On the maritime front, China is extending its influence across the **Indo-Pacific region**.

> **Interference in Domestic Affairs:**
  - India is **interfering in the domestic affairs of neighbouring countries** especially in Nepal in the violation of their sovereignty.
    - India is also creating **hurdles in free transit and free trade** within and beyond Nepal and keeps **suppressing its people and government.**

> **Impact of India's Domestic Politics:**
  - India's domestic policies are creating **problems in Bangladesh**, a Muslim-majority country, showing India's neighbourhood first policy faces serious challenges even in friendly territories like Bangladesh.

> **Impact of India's Tilt towards West:**

○ India draws closer to the West, particularly through the **Quad** and other **multilateral and mini-lateral initiatives.**

But Sri Lanka's connections with the West are **not moving in a good direction** as the country's current government **faces increasing criticism** from Western capitals on **human rights** issues and freedoms.

US-China Tensions

Why in News?

Recently, the Speaker of the House of Representatives of US visited Taiwan, the highest level American official to go to the island since 1997.

➤ This visit has raised tension between US and China.

What is the Taiwan-China issue?

➤ **About:**

○ **Taiwan** is an island about 160 km off the coast of southeastern China, opposite the Chinese cities of Fuzhou, Quanzhou, and Xiamen.

➤ **History:**

○ It was administered by the **Qing imperial dynasty**, but its control was passed to the Japanese in 1895.

● After the defeat of Japan in **World War II,** the island passed back into Chinese hands.

○ After the communists led by Mao Zedong won the civil war in mainland China, Chiang Kai-shek, the leader of the **nationalist Kuomintang party**, fled to Taiwan in 1949.

● Chiang Kai-shek set up the government of the Republic of China on the island and remained President until 1975.

○ Following the split of China and Taiwan in the civil war, the Republic of China (ROC) government was relocated to Taiwan. On the other hand, The Communist Party of China (CPC) established the People's Republic of China (PRC) in the mainland.

● Since then, the PRC observes Taiwan as a traitor province and awaits reintegration with Taiwan, if possible, by peaceful means.

➤ **Present status:**

○ China has never recognized the existence of Taiwan as an independent political entity, arguing that it was always a Chinese province.

● But China and Taiwan have had economic ties.

● Many migrants from Taiwan work in China, and China has investments in Taiwan.

What is USA's Policy toward Taiwan?

➤ **About:**

○ It has maintained a '**One China' policy** since the 1970s, under which it recognizes Taiwan as a part of China.

● '**One China' policy means** that the nations who want to have diplomatic relations with the People's Republic of China (PRC) have to recognize the PRC but not the ROC as China, breaking the relations with **Republic of China (ROC).**

● It established that the communist government in mainland China was the legitimate representative and Taiwan was a breakaway part of it.

● But it also has unofficial ties with Taiwan.

➤ And do support Taiwan in the form of defending the island from external aggression by providing military equipment and intelligence.

➤ **China's Concern with the Recent Visit:**

○ As China considers Taiwan as a part of its territory, it claimed that the visit would severely undermine China's sovereignty and territorial integrity.

● It could gravely impact the foundation of **China-US relations** and send a seriously wrong signal to Taiwan's independence forces.

● According to China, the presence of a senior American figure in Taiwan would indicate some kind of US support for Taiwan's independence.

Note:

What is Indian Policy towards Taiwan?

➢ India also follows One China Policy and it doesn't have formal diplomatic ties with Taiwan. But it has an office in Taipei for diplomatic functions.

  ❍ **India-Taipei Association (ITA)** is headed by a senior diplomat.

  ❍ whereas, Taiwan has the **Taipei Economic and Cultural Center (TECC)** in New Delhi.

➢ The Indo-Taiwanese ties basically **focused on trade, commerce, culture, and education**.

➢ In recent times, after China's belligerence in **Galwan**, India has stepped up its relationship with Taiwan.

  ❍ The Indian government had handpicked diplomat to become its envoy in Taipei.

  ❍ Also, the ruling party's two MPs attended the swearing-in ceremony of Taiwan President through virtual mode.

What is the Importance of Taiwan?

➢ Semiconductors are critical components that power electronics from computers and smartphones to brake sensors in cars.

  ❍ The production of chips involves a complex network of firms that design or make them, as well as those that supply the technology.

➢ The majority of semiconductors are produced in Taiwan and it dominates the outsourcing of semiconductor manufacturing.

➢ Further, its contract manufacturers together **accounted for more than 60% of total global semiconductor revenue** last year.

Ceasefire between Israel and Palestine

Why in News?

After three days of violence between Israel and Palestine, which resulted in killing of dozens of populations in both the countries, a ceasefire took place recently.

➢ Earlier this year as well, tensions flared up at **Jerusalem's al-Aqsa Mosque** between the **Palestinians and Israeli police.**

➢ These recurring clashes are part of the ongoing **Israeli–Palestinian conflict.**

Areas which came under Israeli control after the 1967 war.

What do we know about the Recent Conflict?

➢ **Reason for Conflict:**

  ❍ **Israeli aircraft** pummelled targets **(Islamic Jihad Leaders)** in **Gaza**.

    ● In response, **Iran-backed Palestinian Jihad militant group** fired hundreds of rockets at Israel.

    ● Islamic Jihad has fewer fighters and supporters than **Hamas**.

➢ **Actions from Israel:**

  ❍ Israel launched its operation with a **strike on a leader of the Islamic Jihad and** followed up on with **another targeted strike** on a second prominent leader.

➢ **Actions from Gaza:**

  ❍ As per the Israeli army, **militants in Gaza fired about 580 rockets toward Israel.**

  ❍ Israel had intercepted many of them, with two of those shot down being fired toward Jerusalem.

➢ **UNSC Meeting:**

  ❍ **The U.N. Security Council** scheduled an **emergency meeting** on the violence.

Note:

- **China**, which holds the council presidency for August 2022, scheduled the session in response to a request from the **United Arab Emirates**, which represents **Arab nations** on the council, as well as **China, France, Ireland and Norway.**

What is Conflict between Israel and Palestine?

➤ **Conflict Over Jerusalem:**

○ **Jerusalem** has been at the **center of the Israeli-Palestinian conflict.**

○ According to the original 1947 **United Nations (UN)** partition plan, **Jerusalem was proposed to be an international city**.

- However, in the first **Arab Israel war of 1948**, the **Israelis captured the western half of the city**, and **Jordan took the eastern part**, including the Old City that houses **Haram al-Sharif**.

○ Following the **Six-Day War in 1967**, **an armed conflict** between Israel and a coalition of Arab states primarily comprising **Jordan, Syria and Egypt, the Waqf Ministry of Jordan** that had till then held control of the al-Aqsa Mosque, **ceased to oversee the mosque.**

- Israel captured **East Jerusalem from Jordan in the Six-Day War 1967** and **annexed it later.**

○ Since its annexation, Israel has **expanded settlements in East Jerusalem.**

- Israel sees the whole city as its "**unified**, **eternal capital**", whereas the Palestinian leadership across the political spectrum have maintained that they would **not accept any compromise formula** for the future Palestinian state unless **East Jerusalem is its capital.**

➤ **Recent Developments:**

○ **Al-Aqsa Mosque & Sheikh Jarrah:**

- In May 2021, **Israeli armed forces attacked Al-Aqsa Mosque** in the **Haram esh-Sharif in Jerusalem**, ahead of a march by **Zionist nationalists** commemorating Israel's capture of the eastern half of the city in 1967.

➤ The threatened **eviction of dozens of Palestinian families in the East Jerusalem** neighborhood of Sheikh Jarrah escalated the crisis further.

○ **West Bank Settlement:**

- Israel's Supreme Court has rejected a petition **against the eviction of more than 1,000 Palestinian inhabitants** of a rural part of the occupied **West Bank in an area which Israel has designated for military exercises**.

➤ The judgment paved the way for the **demolition of eight small villages** in a rocky, arid area near Hebron known to **Palestinians as Masafer Yatta** and to **Israelis as the South Hebron Hills.**

➤ **India's Stand on the Crisis:**

○ India in the recent years has been **following a dehyphenation policy between Israel and Palestine**.

- India's policy on the longest running conflict in the world **has gone from being unequivocally pro-Palestine** for the first four decades, to a **tense balancing act with its three-decade-old friendly ties with Israel.**

○ In 2017, in an unprecedented move, **India's PM visited only Israel** and not Palestine.

- Then, the recent visit of the **Prime Minister to Palestine (2018)**, **Oman and the UAE** is again a continuation of similar policy.

New START Treaty

Why in News?

Recently, Russia suspended United Stated of America's on-site inspections under **New START Treaty** with Washington due to Western sanctions and coronavirus infections.

What is New START Treaty?

➤ **New START (Strategic Arms Reduction Treaty)** was the last remaining arms reduction pact between the former Cold War rivals and caps to 1,550 the number of nuclear warheads that can be deployed by **Russia and United States of America.**

➤ It entered into force on 5th February, 2011.

➤ It continues the bipartisan process of verifiably reducing U.S. and Russian strategic nuclear arsenals by limiting both sides to 700 strategic launchers and 1,550 operational warheads.

➤ Its duration was **for ten years** that is till 2021, but it was extended by five more years till 2026.

Note:

What are the various Treaties signed Between USA & Russia?

- ○ **Strategic Arms Limitation Talks-1(SALT):**
  - It began in 1969, Under the Interim Agreement, **both sides pledged not to construct new Intercontinental Ballistic Missile (ICBM) silos**, not to increase the size of existing ICBM silos significantly, and capped the number of S**ubmarine-Launched Ballistic Missile (SLBM)** launch tubes and SLBM-carrying submarines.
- ○ **Strategic Arms Reduction Treaty-1 (START):**
  - Signed in 1991, the agreement required the destruction of excess delivery vehicles which was verified using an intrusive verification regime that involved on-site inspections, the regular exchange of information (including telemetry), and the use of national technical means (i.e., satellites).
- ○ **Strategic Arms Reduction Treaty-2:**
  - Signed in 1993, called for reducing deployed strategic arsenals to 3,000-3,500 warheads and banned the deployment of destabilizing multiple-warhead land-based missiles.
- ○ **Strategic Offensive Reductions Treaty (SORT):**
  - Signed in 2004, under which the United States and Russia reduced their strategic arsenals to 1,700-2,200 warheads each.
- ○ **Strategic Arms Reduction Treaty (START):**
  - Signed in 2010, **a legally binding, verifiable agreement that limits each side to 1,550 strategic nuclear warheads deployed on 700 strategic delivery systems** (ICBMs, SLBMs, and heavy bombers) and limits deployed and nondeployed launchers to 800.

Why Russia Suspended the Inspection?

- ➤ It is difficult for Russia to carry out inspections on American soil due to Western sanctions including the closure of air space for Russian planes and visa restrictions.
- ➤ It also pointed to a new spike in coronavirus cases in the United States.

UN Military Observer Group in India and Pakistan

Why in News?

Recently, **U.N. Secretary General** has appointed **Rear Admiral Guillermo Pablo Rios** of Argentina as the **Head of Mission and Chief Military** Observer for the **United Nations Military Observer Group in India and Pakistan (UNMOGIP).**

What is UNMOGIP?

- ➤ It was established in January 1949.
- ➤ After the first war in Kashmir (1947-1948), India approached the **United Nations Security Council (UNSC)** to bring the conflict in Kashmir to the notice of Security Council members.
- ➤ In January 1948, the **UNSC adopted Resolution 39**, establishing the three-member **United Nations Commission for India and Pakistan (UNCIP)** to investigate and mediate the dispute.
- ➤ In April 1948, by its Resolution 47, the UNCIP was reconstituted as UNMOGIP.

What is the Function of UNMOGIP?

- ➤ The **Karachi Agreement** of July 1949 firmed up the role of UN-level military observers and **permitted supervision of the Ceasefire Line** established in Jammu and Kashmir.
  - ○ After the **1ˢᵗ Indo-Pak armed conflict in 1948** under the supervision of the UNCIP, military representatives of both Pakistan and India met in Karachi and signed the Karachi Agreement on 27ᵗʰ July 1949.
  - ○ It established **a Cease-Fire Line (CFL) in Kashmir.**
- ➤ UNMOGIP has **six field stations in Pakistan-administered Kashmir (PAK)** and four field stations in **Indian-administered Kashmir (IAK)** to monitor ceasefire.
- ➤ Following renewed hostilities of 1971, UNMOGIP has **remained in the area to observe developments pertaining to the strict observance** of the ceasefire of 17 December 1971 and report thereon to the UN Secretary-General.

Note:

drishti

Why does the UNMOGIP seem Contentious for India?

➤ India officially maintains that the **UNMOGIP's role was "overtaken" by the Simla Agreement of 1972** that established the **Line of Control (LoC)**.

- ❍ In the **Shimla Agreement**, India and Pakistan agreed to move the ceasefire line to the Line of Control and t**o resolve their disputes bilaterally, without the intervention of a third party.**

- ❍ Kashmir and the Pakistan-sponsored terrorism **within now is largely an internal matter of India.**

➤ Since 1972 India has not gone to UNMOGIP with complaints against Pakistan.

➤ In 2014, **India requested that UNMOGIP cease operations in Kashmir**, and the Ministry of External Affairs (MEA) reiterated in 2017 that **UNMOGIP has no mandate to monitor the situation in Kashmir.**

➤ Pakistan, on the other hand, does not accept the **Indian argument and continues to seek cooperation from the UNMOGIP.**

➤ As a result of these divergent policies, Pakistan continues to lodge complaints with the UNMOGIP against **alleged Indian ceasefire violations.**

What is United Nations Security Council Resolution 47?

➤ **About:**

- ❍ It is concerned with the **resolution of the Kashmir conflict.**

- ❍ According to it, Pakistan was to **withdraw its nationals who had entered the State for the purpose of fighting** and to prevent future intrusions.

- ❍ The f**ive member UNMOGIP reconstituted** through this resolution urged India and Pakistan to hold a plebiscite after the restoration of law and order.

- ❍ The UN Military Observer Group in India and Pakistan (UNMOGIP) was meant to supervise the Cease Fire Line (CFL) established in Jammu and Kashmir in July 1949 under the Karachi Agreement.

- ❍ UNMOGIP is funded **through the UN's regular budget.**

➤ **India's stand on Resolution 47:**

- ❍ India rejected the **UNSC Resolution 47 and maintained that the resolution ignored the military invasion by Pakistan** and placed both nations on an equal diplomatic ground as a dismissal of Pakistan's aggression.

- ❍ The Instrument of Accession (IoA) signed by the Maharaja of Kashmir was ignored in the resolution.

➤ **Pakistan's stand on Resolution 47:**

- ❍ It objected to even the minimum presence of Indian forces in Kashmir, as mandated by the resolution.

- ❍ It wanted equal representation in the state government for the dominant party in Pakistani-held Kashmir i.e the Muslim Conference.

■■■

Note:

Social Issues

Highlights

- *World Tribal Day*
- *Digital Gap in Education*
- *Saksham Anganwadi and Poshan 2.0*

- *Food Security and Gender Equality: CARE*
- *Global Employment Trends for Youth: ILO*

World Tribal Day

Why in News?

The **International Day of the World's Indigenous People** is observed on **9 August each year** to raise awareness and protect the rights of the **world's indigenous population.**

➤ On 9ᵗʰ August 2018, the first **National Report on the State of India's Tribal People's Health** was submitted to the Government of India by the Expert Committee on **Tribal Health.**

What is World Tribal Day?

➤ **About:**
  ○ The day recognizes the f**irst meeting of the United Nations Working Group** on **Indigenous Populations in Geneva in 1982.**
    ● It has been celebrated every year since 1994, in accordance with the declaration by the **United Nations**.
  ○ To date, numerous indigenous peoples experience extreme **poverty, marginalization, and other human rights violations**.

➤ **Theme:**
  ○ The theme for 2022 is **"The Role of Indigenous Women in the Preservation and Transmission of Traditional Knowledge".**

What do we need to know about the Report?

➤ **About:**
  ○ The **13-member committee** was jointly appointed by the Ministry of Health and Family Welfare and the Ministry of Tribal Affairs.

  ○ It took **five years of research** for the committee to bring out the evidence and provide a **true picture of the state of tribal people of the country.**

➤ **Findings:**
  ○ **Geographical Location:**
  ○ Tribal people are concentrated in **809 blocks in India**.
    ● Such areas are designated as the **Scheduled Areas**.
  ○ Unexpected finding was that **50% of India's tribal population (**around 5.5 crore) live **outside the Scheduled Areas**, as a scattered and marginalised minority.
  ○ **Health:**
    ● The health status of tribal people has certainly improved during the last 25 years.
    ● **Mortality Rate:**
    ● **Under-five child mortality rate** has declined from **135 (Deaths per 1000) in 1988 (National Family Health Survey NFHS-1)** to **57(Deaths per 1000) in 2014 (NFHS-4).**
      ■ The % of **excess of under-five mortality** among **STs compared to others has widened.**
    ● **Malnutrition:**
      ■ **Child malnutrition** is 50% higher in tribal children (42% compared to 28% in others).
    ● **Malaria and Tuberculosis:**
      ■ **Malaria** and **tuberculosis** are **three to eleven times** more common among the tribal people.
        ◆ Though the tribal people constitute **only 8.6% of the national population**, 50% malaria deaths in India occur among them.
    ● **Public Health Care:**
      ■ Tribal people heavily depend on government-run public health care institutions, such as primary health centres and hospitals.

Note:

drishti

◆ There is a 27% to 40% deficit in the number of such facilities, and 33% to 84% deficit in medical doctors in tribal areas.

◆ Government health care for the tribal people is starved of funds as well as of human resources.

● **Tribal Sub-Plan (TSP) Audit**:

■ It is an official policy of allocating and spending an additional financial outlay equal to the percentage of the ST population in the State.

■ As estimated for 2015-16, annually Rs 15,000 crore should be additionally spent on tribal health.

◆ However, it has been completely flouted by all States.

◆ No accounts or accountability exist on policy.

◆ No one knows how much was spent or not spent.

What were the Major Recommendations of the Committee?

➢ **Firstly**, the committee suggested launching a **National Tribal Health Action Plan** with a goal to bring the **status of health and healthcare** at par with the respective State averages in the next 10 years.

➢ **Second**, the committee suggested **nearly 80 measures to address the 10 priority health problems**, the **health care gap**, the **human resource gap** and the **governance** problems.

➢ **Third**, the committee suggested **allocation of additional money** so that the per capita **government health expenditure** on tribal people becomes **equal to the stated goal of the National Health Policy (2017)**, i.e., **2.5% of the per capita GDP**.

What Steps has the Government of India taken for Tribal Welfare?

➢ **Anamaya**
➢ **1000 Springs Initiative**
➢ **Pradhan Mantri Adi Adarsh Gram Yojna (PMAAGY)**
➢ **TRIFED**
➢ **Digital Transformation of Tribal Schools**
➢ **Development of Particularly Vulnerable Tribal Groups**
➢ **Pradhan Mantri Van Dhan Yojana**
➢ **Eklavya Model Residential Schools**

Digital Gap in Education

Why in News?

Recently, the Ministry of Education informed Lok Sabha that less **than 10% of schools are equipped** with **Information and Communication Technology (ICT) tools or Digital Tools**, in at least 10 states of India.
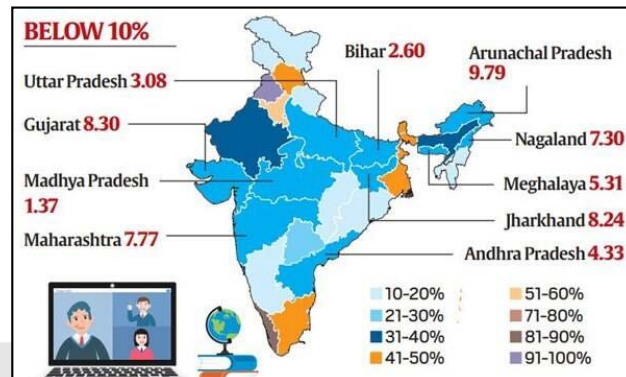
What are the ICT Tools?

➢ ICT tools for teaching and learning cover **everything from digital infrastructures such as printers, computers, laptops, tablets, etc., to software tools** such as Google Meet, Google Spreadsheets, etc.

➢ It refers to all communication technologies that are the tools to access, retrieve, store, transmit and modify information digitally.

➢ ICTs are also **used to refer to the convergence of media technology** such as audio-visual and telephone networks with computer networks, by means of a unified system of cabling (including signal distribution and management) or link system.

➢ However, there is no universally accepted definition of ICTs considering that the concepts, methods, and tools involved in ICTs are steadily evolving on an almost daily basis.

What is a Digital Gap?

➢ **About:**

❍ It is a **gap between demographics and regions** having access to modern information and communications technology (ICT) and **those not having access.**

❍ It exists between **developed and developing countries, urban and rural populations, young and educated versus older and less-educated** individuals, and men and women.

Note:

- ○ In India the **urban-rural divide is the single biggest factor** in the Digital Gap.
- ➢ **Status:**
  - ○ A study in 2021 by the Azim Premji Foundation showed that almost **60 % of school children in India cannot access online learning opportunities.**
  - ○ A study by Oxfam India found that even among students of urban private schools, **half of the parents reported issues with Internet signal and speed.** A third struggled with the cost of mobile data.
- ➢ **Impact:**
  - ○ **Causes Dropouts and Child Labour:**
    - ● Children belonging to the Disadvantaged Groups may suffer the **consequence of not having to fully pursue their education** or worse still drop out because of the **lack of access to ICT.**
    - ● They even run the danger of being drawn into **child labour or worse**, child trafficking.
  - ○ **Deprivation of Quality Education:**
    - ● It will deprive **people of higher/quality education and skill training that could help them contribute** to the economy and become leaders on a global level.
  - ○ **Unfair Competitive Edge:**
    - ● The poor **will remain void of crucial information** presented online concerning academia, and thus they will always lag, and this may be summed up by poor performance.
    - ● Hence superior students who can access the internet have **an unfair competitive edge** over their less privileged counterparts.
  - ○ **Learning Disparity:**
    - ● The people in lower socio-economic classes are disadvantaged and have **to undergo long hours of cumbersome studies** in meeting the objectives of the course.
    - ● While the **rich can easily access schooling materials online** and work on their programs in a flash.

What are the Constitutional Provisions for Right to Education?

- ➢ Originally Part IV of Indian Constitution, Article 45 and Article 39 (f) of **DPSP (Directive Principles of State Policy),** had a provision for state funded as well as equitable and accessible education.

- ➢ The 86th Constitutional Amendment in 2002, provided Right to Education as a fundamental right in Part-III of the Constitution.
  - ○ It inserted **Article 21A** which made Right to Education a fundamental right for children between 6-14 years.
  - ○ It provided for a follow-up legislation **Right to Education Act 2009.**

What are the Related Initiatives?

- ➢ **National Education Policy, 2020.**
- ➢ **Digital Infrastructure for Knowledge Sharing (DIKSHA).**
- ➢ **PM eVidya.**
- ➢ **Swayam Prabha TV Channel**
- ➢ **SWAYAM portal**

Saksham Anganwadi and Poshan 2.0

Why in News?

Recently, **Ministry of Women and Child Development** has issued Operational Guidelines regarding implementation of **Saksham Anganwadi and Poshan 2.0.**

- ➢ It will also promote Aadhaar seeding of beneficiaries to ensure last-mile tracking of take-home rations and tracking of migration of pregnant women and lactating mothers.

What is Saksham Anganwadi and Poshan 2.0?

- ➢ **About:**
  - ○ In Financial Year (FY) 2021-22, the Government of India (GoI) **restructured the Integrated Child Development Services (ICDS) and POSHAN** (Prime Minister's Overarching Scheme for Holistic Nourishment) Abhiyaan into **Saksham Anganwadi and POSHAN 2.0**
  - ○ The restructured scheme consists of the following **sub-schemes**:
    - ● **ICDS**
    - ● **POSHAN Abhiyaan**
    - ● **Scheme for Adolescent Girls (SAG)**
    - ● **National Creche Scheme**
- ➢ **Fund:**

○ Poshan 2.0 is an ongoing **Centrally-sponsored programme** being implemented through the State Governments/ UT administrations based on a cost sharing ratio between the Central Government and the State Government.

➢ **Vision:**

○ It seeks to address the **challenging situation of malnutrition among children up to the age of 6 years, adolescent girls (14-18 years) and pregnant and lactating women**.

○ It is **crucial for India's development as women and children comprise over two thirds of India's population**.

○ The achievement of the **Sustainable Development Goals** lies at the fore-front of this programme design.

○ It shall contribute to the SDGs, specifically, **SDG 2 on Zero Hunger and SDG 4 on Quality Education.**

○ The Mission will focus on the **fundamental importance of nutrition and early childhood care and education** for the well-being, growth and development of children into healthy and productive adults.

➢ **Objectives:**

○ To prepare a **comprehensive strategy to address the challenge of malnutrition, the Supplementary Nutrition Programme under Anganwadi Services**.

○ Scheme for Adolescent Girls and Poshan Abhiyaan have been aligned under **Poshan 2.0 as an Integrated Nutrition Support Programme.**

○ The objectives of Poshan 2.0 are as follows:

● To contribute to human capital development of the country.

● Address challenges of malnutrition.

● Promote nutrition awareness and good eating habits for sustainable health and wellbeing.

● Address nutrition related deficiencies through key strategies.

● AYUSH systems shall be integrated under Poshan 2.0 for wellness and nourishment.

➢ **Components:**

○ Nutrition Support for POSHAN through **Supplementary Nutrition Programme (SNP)** for children of the age group of 06 months to 6 years, **pregnant women and lactating mothers (PWLM)**.

● For Adolescent Girls in the age group of 14 to 18 years in Aspirational Districts and North Eastern Region (NER).

○ Early Childhood Care and Education (3-6 years) and early stimulation for (0-3 years).

○ Anganwadi Infrastructure including modern, **upgraded Saksham Anganwadi;** and

○ **Poshan Abhiyaan.**

What are the Guidelines?

➢ The scheme is **open to all eligible beneficiaries** and the only pre-condition is that the beneficiary has to be registered at the nearest Anganwadi centre with Aadhaar identification.

➢ The beneficiaries for the scheme will be **adolescent girls in the age group of 14-18 years** who will be identified by the states concerned.

➢ AYUSH shall propagate the campaigns of '**Yoga at Home, Yoga with Family**' and AWCs and households to encourage beneficiaries to practice yoga and stay healthy.

➢ The **Ministry of AYUSH** shall extend **technical support for scheme implementation.**

➢ Efforts shall be made for 100% measurement of the children.

➢ It **promotes the Use of jaggery, Fortification with indigenous plants like moreng (sahjan/drumstick)** and ingredients that provide higher energy intake in smaller volume of food.

Ministry of Women and Child Development
Government of India

#AatmaNirbharBharatKaBudget

MISSION POSHAN 2.0 & SAKSHAM ANGANWADI

1 2 lakh Anganwadis to be upgraded as 'Saksham Anganwadis'

2 Nutritional norms and standards to be improved

3 Quality and testing of Take-home Ration to be strengthened

4 Traditional community food habits to be promoted

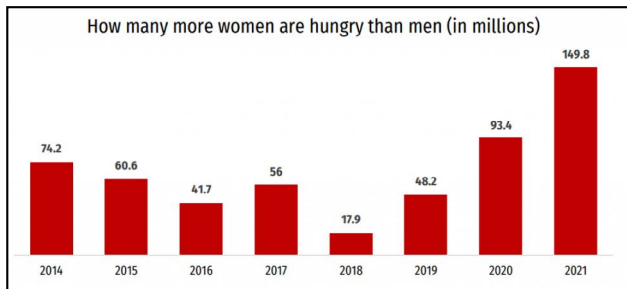5 Delivery of food under the Supplementary Nutrition Program to be optimised

Note:

drishti

Food Security and Gender Equality: CARE

Why in News?

Recently, a report was released named **"Food Security and Gender Equality: A synergistic understudied symphony",** which highlighted **a global link between Gender Inequality** and **Food Insecurity.**

➢ The Report was released by CARE, which is an international humanitarian organisation **fighting global poverty and world hunger** by working alongside women and girls.

How many more women are hungry than men (in millions)

Year	Value
2014	74.2
2015	60.6
2016	41.7
2017	56
2018	17.9
2019	48.2
2020	93.4
2021	149.8

What are the Findings of the Report?

➢ **Growing Gender Gap in Food Security:**
  ○ The gap between men and women's **food security is growing worldwide.**
    ● As many as 828 million people were affected by hunger in 2021. Among them, 150 million more women were food insecure than men.
  ○ **Across 109 countries**, as gender inequality goes up, **food security goes down.**
    ● Between 2018 and 2021, the number of hungry women versus hungry men **grew 8.4 times, with a staggering 150 million more women** than men hungry in 2021.
➢ **Gender Inequality and Malnourishment:**
  ○ Gender equality is **highly connected to food and nutrition security at a local, national, and global level.**
  ○ The more gender inequality in a country, the **hungrier and more malnourished people are**.
  ○ Nations with high gender inequality, such as **Yemen, Sierra Leone and Chad,** experienced the **lowest food security and nutrition.**

➢ **Women Bear Bigger Burdens:**
  ○ Even when both men and women are technically food insecure**, women often bear bigger burdens**, in this situation men are found eating smaller meals and women are found skipping meals.
    ● In Lebanon, at the beginning of the **Covid-19 pandemic**, 85% of people reduced the number of meals they ate. At the time, 85% of women were eating smaller portions, compared to only 57 % of men.
➢ **Women Employed Experienced less Food Insecurity:**
  ○ When women are employed and earning money or when they are directly involved in farming, **they are less likely to experience food insecurity.**
➢ **Women more Likely to Live in Poverty:**
  ○ Women are more likely than men to live in extreme poverty, because their work is **underpaid or not paid at all.**
  ○ Even before the Covid-19 pandemic, women took on **three times as much unpaid work as men.**

What are the Recommendations?

➢ As women keep feeding the world, they must be **given the right space in the data collection methods** and analysis to **make the gaps they encounter visible** and work with women themselves to find solutions to those gaps.

➢ It is time to update **global understanding of food security and gender inequality**, and local actors, including women's organisations in crisis-affected communities, need to get the flexible funding and support desperately needed to protect women and girls from hunger-associated gender-based-violence and protection risks.

➢ All the **SDGs** depend on the achievement of **Goal 5: Achieve gender equality and empower all women and girls.** Gender equality by 2030 **requires urgent action to eliminate the many root causes of discrimination** that still curtail women's rights in private and public spheres.

What are the Initiatives Related to Food Security and Gender Equality?

➢ **Global:**
  ○ **International Women's Day (8th march)**
  ○ **UN Women**

Note:

- UN Decade of Action on Nutrition (2016-2025)
- Sustainable Development Goal (2) of 'Zero Hunger'.
- World Food Programme (WFP)
- Global Hunger Index
- **Indian:**
  - POSHAN Abhiyaan
  - Antoydaya Anna Yojana (AAY)
  - Integrated Child Development Scheme (ICDS)
  - Mid-day Meal (MDM)
  - Pradhan Mantri Matru Vandana Yojana
  - Mahila Sabhas in Gram Panchayat
  - Rashtriya Gram Swaraj Abhiyan (RGSA)
  - Vigyan Jyoti Scheme
  - KIRAN Scheme
  - Beti Bachao Beti Padhao Scheme
  - Mahila e-haat
  - National Creche Scheme
  - One Stop Centre Scheme

Global Employment Trends for Youth: ILO

Why in News?

Recently, the **International Labour Organisation (ILO)** has released a report titled "**Global Employment Trends for Youth 2022: Investing in transforming futures for young people**".

What is the International Labour Organization?

- **About:**
  - It is the only tripartite **United Nation (UN) agency.** It brings together governments, employers and workers of 187 member States (India is a member), **to set labour standards, develop policies and devise programmes promoting decent work for all women and men.**
    - Received the **Nobel Peace Prize** in 1969.
- **Establishment:**
  - **Established** in 1919 by the **Treaty of Versailles** as an affiliated agency of the **League of Nations.**
  - Became the first affiliated specialized agency of the UN in 1946.

- **Headquarters:** Geneva, Switzerland
- **Reports:**
  - World of Work Report
  - World Employment and Social Outlook Trends 2022
  - World Social Protection Report
  - Social Dialogue Report
  - Global Wage Report

What are the Findings Globally?

- **Gender Disparity in EPR:**
  - Young women exhibited **a much lower Employment-to-Population ratio (EPR),** showing that young men **are almost 1.5 times** more likely than young women to be employed.
    - In 2022, 27.4% of young women globally are projected to be in employment, compared to 40.3% of young men.
- **Pandemic Impacted Youth Employment:**
  - **Covid-19 Pandemic** has worsened the **numerous labour market challenges facing those aged between 15 and 24 years**, who have experienced a much higher percentage loss in employment than adults since early 2020.
    - The total global number of unemployed youths is estimated to reach 73 million in 2022, **a slight improvement from 2021** but still six million above the pre-pandemic level of 2019.
- **Regional Differences:**
  - The recovery in youth unemployment is projected to diverge between low- and middle-income countries on the one hand and **high-income countries on the other.**
  - High income countries are the only ones **expected to achieve youth unemployment rates close to those of 201**9 by the end of 2022.
  - Meanwhile, in the other country income groups, the r**ates are projected to remain more than 1%** above their pre-crisis values.
- **Benefits of Green and Blue Economies:**
  - Young people were **well-placed to benefit from the expansion of the so-called green and blue economies,** centred around the environment and sustainable ocean resources respectively.

Note:

- An additional **8.4 million jobs may be created** for young people by 2030 through green and blue investments, notably in clean and **renewable energies**, sustainable agriculture, **recycling and waste management.**

➢ **Broadband Coverage and Employment:**
  ○ Achieving universal broadband coverage by 2030 may lead to **a net increase in employment of 24 million new jobs** worldwide, of which 6.4 million would be taken by young people.
  ○ Investments in care sectors would create **17.9 million more jobs for young people by 2030.**

What are the Findings Related to India?

➢ **Decline in Youth Employment:**
  ○ The youth employment participation rate declined by **0.9% over the first nine months of 2021 relative to its value in 2020**, while it increased by 2% for adults over the same time period.
    - The situation is particularly severe for **very young people aged 15-20 years.**

➢ **Low Young Female Employment:**
  ○ Indian young women experienced **larger relative employment losses** than young men in 2021 and 2022.
  ○ In general, the high youth employment losses in India **drive up the global average employment losses.**
    - Young **Indian men account for 16%** of young men in the global labour market, while the corresponding share for **young Indian women is just 5%.**

➢ **Gap in Online Education:**
  ○ School closures lasted 18 months and among the 24-crore school-going children, only 8% of such children in rural areas and **23% in urban areas had adequate access to online education.**
  ○ Given the deeply unequal access to online resources in developing countries, children from socio-economically disadvantaged families, which are the large majority, had almost **no access to education.**

➢ **Learning Regression:**
  ○ School closures not only prevented new learning, but also led to the phenomenon of "learning regression", that is, children forgetting what they had learned earlier.
  ○ In India, 92% of children on average lost at least one foundational ability in language and 82% lost at least one foundational ability in mathematics.

➢ **Teachers are Paid Less:**
  ○ The study found out that teachers in **non-state schools are often paid significantly less** than those in state schools.
  ○ Teachers in low-fee private schools in India, Kenya, Nigeria and Pakistan are paid between **one eighth and one half of what their counterparts in the state sector receive**.

➢ **Domestic work is Highly Informal:**
  ○ Domestic work is **a highly informal sector in India**, and wages are extremely low and young women and girls are vulnerable to abuse.
  ○ Reports of **abuse suffered by young domestic workers are common**, including verbal and physical abuse, and sexual exploitation.

What are the Recommendations?

➢ Investment in various sectors must be accompanied by the **promotion of decent working conditions** for all young workers.
➢ Young workers should be ensured that they enjoy **fundamental rights** and protections including freedom of association, the right to collective bargaining, **equal pay for work** of equal value, and freedom from violence and harassment at work.
➢ Young people should be provided with well-**functioning labour markets with decent job opportunities** for those already participating in the labour market, along with **quality education and training opportunities** for those yet to enter it.

■ ■ ■

Note:

drishti

Science & Technology

Highlights

- Call for Applications for AIC and AICC: NITI Aayog
- African Swine Fever in India
- Booster Dose: Corbevax
- Small Satellite Launch Vehicle (SSLV)
- OTEC Plant in Lakshadweep
- Grain Shape and Its Liquefaction Potential
- Council of Scientific and Industrial Research
- Fungus for Pyrene Remediation
- Increasing Efficacy of Gene Therapy
- Alpha Fold & Protein
- Langya Virus

Call for Applications for AIC and AICC: NITI Aayog

Why in News?

Recently, **Atal Innovation Mission (AIM)**, **NITI Aayog** launched **Call for Applications for its two leading programs** Atal Incubation Centre (AIC) and Atal Community Innovation Centre (ACIC).

What is the Call for Applications?

➢ The call for applications is **a step to expand the current ecosystem of incubators** and to provide them with access to global benchmarks and best practices.

➢ Both the programs envision creating and supporting the innovative ecosystem in the country by establishing world-class institutions which shall help budding entrepreneurs of the country.

➢ These AICs and ACICs will play a pivotal role in enriching the **start-up** and entrepreneurship ecosystem of India and echo the anthem of **Atmanirbhar Bharat.**

What is Atal Incubation Centre?

➢ AIC is an initiative of the AIM, NITI Aayog to foster **innovation and entrepreneurial spirit while creating a supportive ecosystem for start-ups** and entrepreneurs in India.

➢ Each AIC is supported with **a grant of up to INR 10 crores over a period of 5 years.**
  - Since 2016, **AIM has established 68 Atal Incubation Centres across 18 states** and 3 UTs which have supported more than 2700 startups.

What is Atal Community Innovation Centre?

➢ ACIC is envisaged **to serve the unserved/underserved areas of the country** with respect to the start-up and innovation ecosystem.

➢ Each ACIC is supported with a grant of up to **INR 2.5 crores over a period of 5 years.**

➢ AIM has established **14 Atal Community Innovation Centres** across the country.

What is Atal Innovation Mission?

➢ **About:**
  - AIM is Government of **India's flagship initiative to promote a culture of innovation and entrepreneurship** in the country.
  - Its objective is to develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee the innovation ecosystem of the country.

➢ **Major Initiatives:**
  - **Atal Tinkering Labs:** Creating problem solving mindset across schools in India.
  - **Atal New India Challenges:** Fostering product innovations and aligning them to the needs of various sectors/ministries.
  - **Mentor India Campaign:** A national mentor network in collaboration with the public sector, corporates and institutions, to support all the initiatives of the mission.
  - **Atal Research and Innovation for Small Enterprises (ARISE):** To stimulate innovation and research in the MSME industry.

Note:

African Swine Fever in India

Why in News?

Recently, **African Swine Fever** has been confirmed for the first time, at a private pig farm in **in Kerala**, after **more than 15 pigs** on the farm had died due to the **disease in the last ten days.**

What is African Swine Fever?

African swine fever (ASF)

The virus is highly **resistant to low temperatures** and can survive for extended periods of time in the blood, feces and tissue of infected animals.

ASF is a **highly contagious**, transboundary viral disease (*Asfarviridae* family; *Asfivirus* genus).

It can affect both domestic and wild pigs (wild boars and peccaries). **It is harmless to humans.**

According to the OIE, **24%** of its member countries (48 out of 200) **have reported the disease** as present since 2016.

Typical clinical signs of ASF are similar to those of classical swine fever (which is endemic in several countries of the Americas); therefore, a **laboratory test** is required to distinguish them.

The **peracute** form of the virus causes sudden death with few signs.

African swine fever can be transmitted through **direct contact** between sick and healthy animals. It can also be transmitted **indirectly** through feed containing meat from infected animals (the virus can remain infectious for 3 to 6 months in uncooked pork products); **biological vectors** such as ticks of the genus *Ornithodoros*; and contaminated **inanimate objects** (fomites) that can transmit the virus.

Global alarms went off in August 2018, when an ASF outbreak was first reported in **China.** The disease swept through the entire Asian country and spread to **Mongolia, Vietnam, Cambodia and Hong Kong.**

According to official data for this period, more than **2.5 million domestic pigs** have died or been killed— 67.6% of them in Asia over the past 10 months.

Symptoms include **fever, loss of appetite**, low energy, abortion, internal hemorrhages, visible hemorrhages, and even death.

> **About:**
> ○ It is a **highly contagious and fatal animal disease** that infects and leads to an acute form of **hemorrhagic fever in domestic and wild pigs**.
> ○ **Other manifestations of the disease include:**
>   - High fever
>   - Depression
>   - Anorexia
>   - Loss of appetite
>   - Hemorrhages in the skin
>   - Vomiting and diarrhoea among others.
> ○ It was **first detected in Africa** in the 1920s.
>   - Historically, outbreaks have been reported in **Africa and parts of Europe**, **South America**, and the **Caribbean**.
>   - However, since 2007, the disease has been reported in multiple countries across **Africa, Asia and Europe**, in both **domestic and wild pigs.**

> ○ The mortality is close to 95% - 100% and since the fever has no cure, **the only way to stop its spread is by culling the animals.**
> ○ ASF is **not a threat to human beings** since it **only spreads from animals to other animals.**
> ○ ASF is a disease listed in the **World Organisation for Animal Health (OIE)'s** Terrestrial Animal Health Code.
> **Clinical Signs:**
> ○ The clinical signs of ASF may occur in **chronic, sub-acute or acute form.**
>   - In the acute form pigs develop a **high temperature** (40.5 degrees C or 105 degrees F), then **become dull and go off their food.**
>   - **Other symptoms can vary but will include some or all of the following:**
>   - Vomiting

drishti

- Diarrhoea (sometimes bloody)
- Reddening or darkening of the skin, particularly ears and snout
- Gummed up eyes
- Laboured breathing and coughing
- Abortion, still births and weak litters
- Weakness and unwillingness to stand

➢ **Transmission:**
  ❍ **Direct contact** with infected pigs, faeces or body fluids.
  ❍ **Indirect contact** via fomites such as equipment, vehicles or people who work with pigs between pig farms with ineffective biosecurity.
  ❍ **Pigs eating** infected pig meat or meat products.
  ❍ **Biological vectors** - ticks of the species **Ornithodoros.**

What is Classical Swine Fever?

➢ **CSF**, also known as **Hog Cholera**, is an important disease of pigs.
➢ It is one of the most **economically-damaging pandemic viral diseases** of pigs in the world.
➢ It is caused by a virus of the genus **Pestivirus of the family Flaviviridae**, which is closely related to the viruses that cause **bovine viral diarrhoea in cattle** and **border disease in sheep.**
➢ Mortality rate of Classical Swine Fever is 100%.
➢ Recently, the **Indian Council of Agricultural Research ICAR**-**Indian Veterinary Research Institute IVR**I developed a Cell Culture **CSF Vaccine** (live attenuated) using the **Lapinized Vaccine Virus** from foreign strain.
  ❍ The new vaccine has been found to **induce protective immunity** from day 14 of the Vaccination till 18 Months.

What is the World Organisation for Animal Health?
➢ WOAH was formerly called the **"Office International des Epizooties"**.
➢ OIE is an **intergovernmental organisation** responsible for **improving animal health worldwide.**
➢ It has **182 Member Countries**.
  ❍ **India** is one of the member countries.
➢ OIE develops **normative documents relating to rules that Member Countries can use** to protect themselves from the introduction of diseases and pathogens.
  ❍ One of them is the **Terrestrial Animal Health Code.**

➢ OIE standards are recognised by the **World Trade Organization** as reference **international sanitary rules.**
➢ It is headquartered in **Paris, France**.

Booster Dose: Corbevax

Why in News?

Recently, the government of India announced that those who have received **Covishield** or **Covaxin** as their first or second dose for **Covid-19** can take **Corbevax as the third booster shot.**
➢ Corbevax is still awaiting **World Health Organisation's Emergency Use Listing (EUL)**.
➢ Until now, the third dose **had to be the same vaccine** that was used for the first and second doses.
➢ The decision comes after **India's drug regulator** approved Corbevax as a **heterologous Covid booster dose** for individuals aged 18 years.

What is WHO's Emergency Use Listing (EUL)?
➢ EUL is a **risk-based procedure** for **assessing and listing** unlicensed vaccines, therapeutics and in-vitro diagnostics with the ultimate aim of **expediting the availability of products to people** affected by a **public health emergency**.
➢ **International travel in many countries** requires people to get a vaccine that's on the **WHO's approved list**.

What do we know about the Corbevax Vaccine?

➢ **About:**
  ❍ Corbevax is India's first **indigenously developed Receptor Binding Domain (RBD) protein sub-unit vaccine** against Covid, **with two doses scheduled 28 days apart.**
  ❍ It can be **stored at 2-8 degrees Celsius**, which is best suited for India's requirements.
➢ **Working Process:**
  ❍ Corbevax is a **"recombinant protein sub-unit"** vaccine, which means it is made up of a **specific part of SARS-CoV-2:** the **spike protein on the virus's surface**.
    ● The **spike protein allows the virus to enter the cells** in the body so that it can **replicate and cause disease.**

Note:

drishti

- However, when this **protein alone is given to the body**, it is not expected to be harmful as **the rest of the virus is absent.**
  - The body is **expected to develop an immune response against the injected spike protein.**
  ○ Once the **human immune system** recognises the **protein**, it produces **antibodies** as **white blood cells** to fight the infection.
- Therefore, when the **real virus attempts to infect the body**, it will **already have an immune response ready** that will make it **unlikely for the person to fall severely ill.**

What are other types of Vaccines?

- **Inactivated vaccines:**
  ○ **Inactivated vaccines** use the **killed version of the germ that causes a disease**.
  ○ Vaccines of this type are created by **inactivating a pathogen, typically using heat or chemicals such as formaldehyde or formalin.**
    - This destroys the **pathogen's ability to replicate**, but keeps it "**intact**" so that the **immune system can still recognize it.** ("Inactivated" is generally used rather than "killed" to refer to viral vaccines of this type, as viruses are generally not considered to be alive.)
- **Live-attenuated Vaccines:**
  ○ Live vaccines use a **weakened (or attenuated) form of the germ that causes a disease.**
  ○ Because these vaccines are so similar to the natural infection that they help prevent, **they create a strong and long-lasting immune response**.
- **Messenger (m) RNA Vaccines:**
  ○ mRNA vaccines make proteins in order to **trigger an immune response**. mRNA vaccines have **several benefits compared to other types of vaccines**, including **shorter manufacturing times**, because they do not contain a live virus, **no risk of causing disease in the person getting vaccinated.**
  ○ The vaccines are used to protect against: Covid-19.
- **Toxoid Vaccines:**
  ○ They use a **toxin (harmful product) made by the germ that causes a disease.**
    - They **create immunity to the parts of the germ that cause a disease** instead of the germ itself. That means the **immune response is targeted to the toxin instead of the whole germ.**

- **Viral Vector Vaccines:**
  ○ Viral vector vaccines use a **modified version of a different virus** as a vector to deliver protection.
  ○ Several different viruses have been used as vectors, including **influenza, vesicular stomatitis virus (VSV), measles virus, and adenovirus**, which causes the common cold.

Small Satellite Launch Vehicle (SSLV)

Why in News?

Recently, **Indian Space Research Organisation(ISRO)** launched the first flight of the **Small Satellite Launch Vehicle(SSLV)**, carrying an **Earth observation satellite EOS-02** and co-passenger students' satellite **AzaadiSAT**.

- However, the mission failed to place the satellites in their required orbits, and the satellites, as they were already detached from the launch vehicle, were lost.
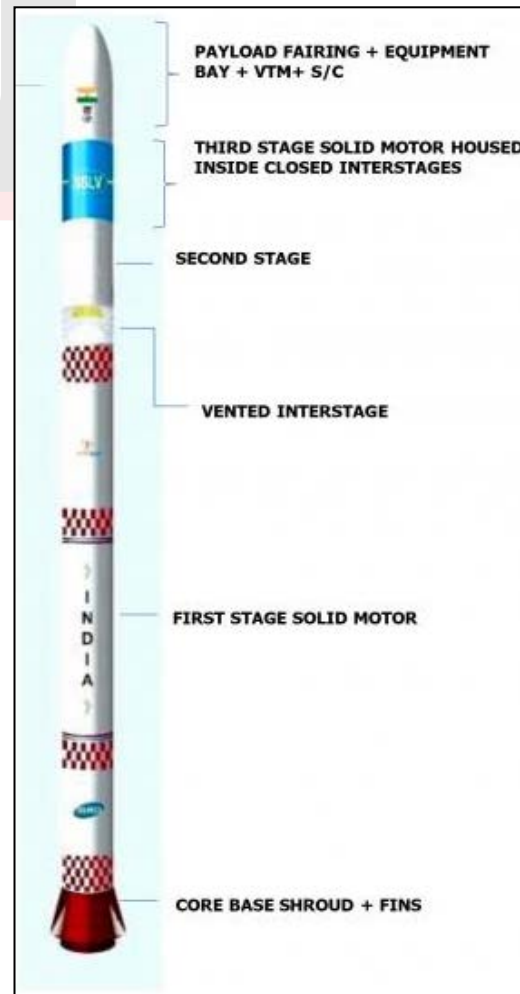
Note:

What is a Small Satellite Launch Vehicle?

➢ **About:**
  ○ **Small Satellite Launch Vehicle (SSLV)** is a **three stage Launch Vehicle** configured with **three Solid Propulsion Stages and a liquid propulsion**-based **Velocity Trimming Module (VTM)** as a terminal stage.
    ● SSLV is 2m in diameter and 34m in length with a lift-off weight of around 120 tonnes.
    ● SSLV is capable of launching 500kg satellites in 500km planar orbit from Satish Dhawan Space Centre (SDSC).

➢ **Key Features:**
  ○ Low cost,
  ○ Low turn-around time,
  ○ Flexibility in accommodating multiple satellites,
  ○ Launch demand feasibility,
  ○ Minimal launch infrastructure requirements, etc.

➢ **Significance:**
  ○ **The Era of small satellites:**
    ● Earlier, the bigger satellite payloads were given importance, but as the sector grew many players emerged like **Businesses, government agencies, universities, and laboratories began to send satellites.**
      ■ Mostly all of them fall in the category of small satellites.
  ○ **The Rise in Demand:**
    ● The demand for the launch of small satellites has increased at a rapid pace in the last eight to ten years, **due to the ever-growing need for space-based data, communication, surveillance, and commerce**.
  ○ **Saves cost:**
    ● Satellite manufacturers and operators do not have the luxury of waiting months for space on a rocket or paying exorbitant trip charges.
      ■ Therefore, Organizations are increasingly developing a constellation of satellites in space.
      ■ **Projects like SpaceX's Starlink and One Web are assembling a constellation of hundreds of satellites.**
  ○ **Business opportunity:**

    ● With the rise in demand, the rockets could be launched frequently with less cost, this provides a business opportunity for space agencies like ISRO to tap the potential of the sector as most of the demand comes from companies that are launching satellites for commercial purposes.

What is the SSLV-D1/EOS-02 Mission?

➢ It was aimed at garnering a larger pie in the small launch vehicles market, as it could place the satellites into **Low Earth Orbit**.

➢ It was carrying the two satellites on board the rocket –
  ○ **The primary EOS-2 Earth-observing satellite-** EOS-02 is an earth observation satellite designed and realised by ISRO.
    ● This microsat series satellite offers advanced optical remote sensing operating in infra-red band with high spatial resolution.
  ○ **The secondary AzaadiSAT student satellite-** It is an 8U Cubesat weighing around 8 kg.
    ● It carries 75 different payloads each weighing around 50 grams and conducts **femto-experiments.**

➢ It carried out tiny experiments which would have measured the **ionising radiation in its orbit** and also a transponder which worked in the **ham radio frequency to enable amateur operators to access it.**
    ● **Girl students from rural regions across the country were provided guidance to build these payloads**.
      ■ The payloads are integrated by the student team of "**Space Kidz India**".

What was the Issue?

➢ The problem appeared to be the SSLV's terminal stage, called the **velocity trimming module (VTM).**
  ○ According to the launch profile, the VTM was supposed to have burnt for 20 seconds at 653 seconds after launch.
    ● However, it burnt for only 0.1 seconds, denying the rocket the requisite altitude boost.

➢ The two satellites separated from the vehicle after the VTM burned, there was a malfunctioning of a sensor which resulted in placing the satellites **in an elliptical orbit, rather than a circular orbit.**

Note:

drishti

➢ According to **ISRO**, all the stages performed normally, both the satellites were injected. But the orbit achieved was less than expected, which makes it unstable.

What is the Difference between Circular and Elliptical Orbits?

➢ **Elliptical Orbits:**
  ○ Mostly objects such as s**atellites and spacecrafts are put in elliptical orbits only temporarily.**
  ○ They are then either pushed up to circular orbits at a greater height or the acceleration is increased until the trajectory changes from an ellipse to a hyperbola and the spacecraft escapes the gravity of the Earth in order to move further into space — for example, to the Moon or Mars or further away.

➢ **Circular Orbits:**
  ○ **Satellites that orbit the Earth** are mostly placed **in circular orbits.**
  ○ One reason is that if the satellite is used for imaging the Earth, it is easier if it has a fixed distance from the Earth.
  ○ If the distance keeps changing as in an elliptical orbit, keeping the cameras focused can become complicated.

OTEC Plant in Lakshadweep

Why in News?

Recently, the **National Institute of Ocean Technology,** an autonomous institute under the Union **Ministry of Earth Sciences (MoES)** is establishing an **Ocean Thermal Energy Conversion Plant** with a capacity of 65 kilowatts (kW) in Kavaratti, **Lakshadweep.**

➢ The plant will power the one lakh liter per day low temperature thermal desalination plant, which converts seawater into potable water.

➢ The plant is the first of its kind in the world as it will **generate drinking water from sea water using indigenous technology, green energy** and environmentally friendly processes.

What is Ocean Thermal Energy Conversion?

➢ **About:**
  ○ Ocean Thermal Energy Conversion (OTEC) is a **process for producing energy by harnessing the temperature differences (thermal gradients) between ocean surface waters and deep ocean waters.**
  ● Oceans are **huge heat reservoirs** as they **cover almost 70% of Earth's surface.**
  ○ Researchers focus on **two types of OTEC technologies-**
  ● **Closed cycle method -** where a working fluid (ammonia) is pumped through a heat exchanger for evaporation and the steam runs a turbine.
    ■ The vapour is turned back to fluid (condensation) by the cold water found at the depths of the ocean where it returns to the heat exchanger.
  ● **Open cycle method -** where the warm surface water is pressurized in a vacuum chamber and converted to steam which runs the turbine. The steam is then condensed using cold ocean water from lower depths.

➢ **Historical perspective:**
  ○ India initially had planned to set up an OTEC plant way back in 1980, off the Tamil Nadu coast. However, with the foreign vendor closing down its operation, it had to be abandoned.

➢ **India's OTEC Potential:**
  ○ As India is **geographically well-placed to generate ocean thermal energy, with around 2000 kms of coast length along the South Indian coast,** where a temperature difference of above 20°C is available throughout the year.
  ○ The total OTEC potential around India is estimated as **180,000 MW**, considering 40% of gross power for parasitic losses.

How does an OTEC Plant Work?

➢ **About:**
  ○ As the energy from the sun heats the surface water of the ocean. In **tropical regions, surface water can be much warmer than deep water**.
  ○ This temperature difference can be **used to produce electricity and desalinate ocean water**.
  ● Ocean Thermal Energy Conversion (OTEC) systems **use a temperature difference (of at least 77°F) to power a turbine to produce electricity**.
  ● Warm surface water is pumped through an evaporator containing a working fluid. The vaporized fluid drives a turbine/generator.

Note:

- Then the vaporized fluid is turned back to a liquid in a condenser cooled with cold ocean water pumped from deeper into the ocean.
- OTEC systems **use seawater as the working fluid** and can use **condensed water to produce desalinated water.**

➢ **Significance:**
- ❍ Two of the biggest advantages of OTEC are that it produces c**lean environmentally friendly renewable energy** and, unlike solar plants which can't work at night and wind turbines which only work when it's windy, **OTEC can produce energy at all times.**

What are the Related Recent Initiatives of the Government?

➢ **Deep Sea Mining:**
- ❍ The MoES is developing technologies for **mining deep sea** resources like polymetallic nodules from the **Central Indian Ocean** at a water depth of 5,500 meters.

➢ **Weather Forecasting:**
- ❍ The ministry is also working on introducing **ocean climate change advisory services** for climate risk assessment due to **sea level rise**; **cyclone intensity and frequency; storm surges and wind waves**; biogeochemistry, and changing **harmful algal blooms** in the coastal waters of India.

➢ **Deep Ocean Mission:**
- ❍ MoES is trying to design and develop a **prototype crewed submersible rated for 6,000 meters of water depth** under the **Deep Ocean Mission**.
- ❍ It will include technologies for underwater vehicles and underwater robotics.

➢ **DNA Bank:**
- ❍ There efforts are being made to improve the detection, sampling and **DNA storage** of benthic fauna of the northern Indian Ocean through systematic sampling using a remotely operated vehicle.

National Institute of Ocean Technology (NIOT)

➢ It was established in **November 1993** as an **autonomous society** under the **Ministry of Earth Sciences,** Government of India.

➢ It aims to develop reliable indigenous technologies to solve various engineering problems associated with harvesting of non-living and living resources in the **Indian Exclusive Economic Zone.**

Grain Shape and Its Liquefaction Potential

Why in News?

Recently, the Scientists have studied and highlighted the **important effects of** shape of Sand Grain **on the liquefaction potential of granular soils.**

➢ Liquefaction of sand is **a phenomenon in which the strength and stiffness of soil is reduced (Decreases Cohesive Forces) by** earthquake shaking or other rapid loading and leads to the collapse of structures resting on the liquefied ground.

What are the Findings?

➢ There is a strong relation between the grain shape of sands and its liquefaction potential;
- ❍ Liquefaction potential of sand is one of the major **factors behind the collapse of structures during earthquakes.**

➢ In the study conducted, the **glass beads, which have regular shape** with higher roundness and sphericity, **liquefied first**, while **river sand, whose roundness and sphericity fall between glass beads and manufactured sand, liquefied next**, followed by manufactured sand, **whose shape is relatively irregular.**

➢ As **natural sand with regular shape liquefies easily,** the natural sand used in structures like slopes and retaining walls **can be replaced with irregular manufactured sand to improve stability and sustainability.**

Why Irregular Grain Shape Improves Stability and Sustainability?

➢ **More Shear Force Required:**
- ❍ This is because the shear force (unaligned forces pushing one part of a body in one specific direction and another part of the body in the opposite direction) required to break the inter-particle locking is **more for the grains with relatively irregular shapes.**

➢ **Interlocking of Particles:**
- ❍ As the shape of the particles becomes irregular, they **get interlocked with each other during shearing.**

Note:

drishti

○ Interlocking provides **additional resistance to shear**, and hence the tendency to get separated from each other to float in the fluid becomes lesser for particles with irregular shapes.

➢ **Deviation in Fluid Path:**

○ Tortuosity or the **deviation in the fluid path increases with the irregular shape** of the particles.

○ **Greater tortuosity** decreases water flow through the pore network and **decreases the chance for water to separate** the particles, thus preventing collapse of structures/buildings.

What is Earthquake?

➢ An **earthquake** in simple words is **the shaking of the earth**. It is a **natural event**.

➢ It is caused **due to release of energy, which generates waves** that travel in all directions.

➢ The **vibrations called seismic waves** are generated from earthquakes that travel through the Earth and are recorded on instruments called seismographs.

➢ The location below the earth's surface where the earthquake starts is called the hypocenter, and the location directly above it on the surface of the **earth is called the epicenter.**

➢ **Types of Earthquakes:** Fault Zones, Tectonic Earthquakes, Volcanic Earthquake, Human Induced Earthquakes.

Council of Scientific and Industrial Research

Why in News?

Senior electrochemical scientist Nallathamby Kalaiselvi has become the **first woman director general** of the **Council of Scientific and Industrial Research**.

➢ Kalaiselvi's research work of more than 25 years is primarily focused on electrochemical power systems and in particular, development of electrode materials, and electrochemical evaluation of in-house prepared electrode materials for their suitability in energy storage device assembly.

➢ Kalaiselvi also made key contributions to the **National Mission for Electric Mobility.** She has more than 125 research papers and six patents to her credit.

What is CSIR?

➢ **About:**

○ Council of Scientific and Industrial Research (CSIR) is the **largest research and development (R&D) organisation in India**.

○ CSIR has a pan-India presence and has a dynamic network of **37 national laboratories, 39 outreach centres, 3 Innovation Complexes and 5 units.**

○ CSIR is funded by the Ministry of Science and Technology and it operates as an autonomous body through the Societies Registration Act, 1860.

➢ **Scope:**

○ CSIR **covers a wide spectrum of streams** – from radio and space physics, oceanography, geophysics, chemicals, drugs, genomics, biotechnology and nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology.

● It provides **significant technological intervention in many areas with regard to societal efforts which include the environment**, health, drinking water, food, housing, energy, farm and non-farm sectors.

➢ **Established:** September 1942

➢ **Headquarters:** New Delhi

What is the Structure of the Organisation?

➢ **President:** Prime Minister of India (Ex-officio)

➢ **Vice President:** Union Minister of Science and Technology (Ex-officio)

➢ **Governing Body:** The Director-General is the head of the governing body.

○ The other ex-officio member is the finance secretary (expenditures).

○ Other members' terms are of three years.

What are the Objectives?

➢ The objectives of the Council are **scientific and industrial/applied research** of national importance.

➢ The activities include:

○ **Promotion, guidance and coordination of scientific and industrial research** in India including the institution and the financing of specific researchers.

Note:

drishti

○ **Establishment and assistance to special institutions** or departments of existing institutions for the scientific study of problems affecting particular industries and trade.

○ Establishment and award of **research studentships and fellowships.**

○ Utilization of the results of the research conducted under the auspices of the Council towards the development of industries in the country.

● Payment of a share of **royalties arising out of the development of the results of research** to those who are considered as having contributed towards the pursuit of such research.

○ Establishment, maintenance and **management of laboratories, workshops, institutes and organisations** to further scientific and industrial research.

○ Collection and dissemination of information in regard not only to research but to industrial matters generally.

○ Publication of scientific papers and a journal of industrial research and development.

What is the Vision & Strategy 2022?

➢ **Vision:** Pursue science which strives for global impact, the technology that enables innovation-driven industry and nurtures trans-disciplinary leadership thereby catalyzing inclusive economic development for the people of India.

What are Awards Associated with the Organisation?

➢ **Shanti Swarup Bhatnagar (SSB) Prize** for Science and Technology is named after the founder Director of the CSIR, the late Dr Shanti Swarup Bhatnagar.

➢ It was instituted in 1957 as the most coveted and revered prize in the field of science and technology in the country.

Who was Dr Shanti Swarup Bhatnagar?

➢ He was the **Founder Director (and later first Director-General) of CSIR** who is credited with establishing twelve national laboratories.

➢ He played **a significant role in the building of post-independent Science and Technology infrastructure** and in the formulation of India's S & T policies. He concurrently held a number of important positions in the Government.

○ He was the **first Chairman of the University Grants Commission (UGC).**

➢ He was conferred with **Order of British Empire (OBE).** He was Knighted in 1941 and elected Fellow of the Royal Society, London in 1943.

➢ He was awarded the Padma Vibhushan in 1954 by the President of India.

What are the Initiatives taken by CSIR?

➢ **Covid-19:**

○ CSIR has set up five technology verticals for addressing the emerging situation due to **pandemic:**

● Digital and Molecular Surveillance.

● Rapid and Economical Diagnostics.

● Repurposing of Drugs, Vaccine and Convalescent Plasma Therapy.

● Hospital Assistive Devices and PPEs (Personal Protective Equipment).

● Supply Chain and Logistics Support Systems.

➢ **Strategic:**

○ Head-Up-Display (HUD): It developed indigenous Head-Up- display (HUD) for Indian Light Combat Aircraft, **Tejas.** HUD aids the pilot in flying the aircraft and in critical flight maneuvers including weapon aiming.

➢ **Energy & Environment:**

○ **Solar Tree:** It occupies minimum space to produce clean power.

○ **Lithium Ion Battery:** India's first **lithium ion battery** fabrication facility based on indigenous novel materials for making 4.0 V/14 h standard cells has been established.

➢ **Agriculture:**

○ **Samba Mahsuri Rice Variety:** It developed a Bacterial Blight Resistant Rice.

○ **Rice Cultivar (Muktashree):** A rice variety has been developed which restricts assimilation of Arsenic within permissible limits.

○ **White-fly resistant Cotton variety**: Developed a transgenic cotton line which is resistant to whiteflies.

➢ **Healthcare:**

○ **Genomics and other omics technologies for Enabling Medical Decision – GOMED:** It has been developed by the CSIR which provides a platform of disease genomics to solve clinical problems.

Note:

➤ **Food & Nutrition:**
  ○ **Ksheer-scanner:** It detects the level of milk adulteration and adulterants in 45 seconds at the cost of 10 paise.
  ○ **Double-Fortified Salt:** Salt fortified with iodine and iron having improved properties developed and tested for addressing **anaemia** in people.

Fungus for Pyrene Remediation

Why in News?

Researchers at the **Council of Scientific & Industrial Research (CSIR)** have identified a fungus capable of removing toxic, recalcitrant (Not easily controlled), and carcinogenic Pyrene or **Polycyclic Aromatic Hydrocarbons (PAHs)** from the environment.

➤ The researchers used **gas chromatographic-mass spectrometer and serotome analysis** for their study.

➤ Gas chromatographic-mass spectrometric identification of prominent metabolites helped determine the pyrene degradation pathway and **Serotome analysis** in pyrene degradation helped **understand the degradation mechanism of pyrene.**

What is Pyrene?

➤ **Pyrene,** possessing four benzene rings, **belongs to the highly toxic class of PAHs,** with **carcinogenic and mutagenic properties**.

➤ It gets **lodged into the environmental matrices** like soil, water and atmosphere, resulting in widespread environmental pollution, necessitating adequate remediation of contaminated environmental matrices.

➤ The rapid pace of economic development and industrialisation has resulted in the release of several PAHs into the environment.

➤ **PAHs are a class of chemicals** that occur naturally in coal, crude oil, and gasoline. These are **ubiquitous environmental pollutants** originating from multiple sources, including combustion of petrogenic fossil fuels, and incomplete incineration of municipal wastes and biomass.

What are the Findings?

➤ Identified a **white-rot fungus Trametesmaxima IIPLC-32**, which has the potential to cause microbial degradation of pyrene.

➤ Growing on dead plants, this fungus **causes pyrene degradation using special enzymes.**
  ○ The pyrene concentration decreased by 79.8%, 65.37% and 56.37% within 16 days from the initial levels of 10 mg per litre, 25 mg per litre and 50 mg per litre, respectively.

➤ This fungus **acts to decrease the pollution level** of the soil.

What are the Implications?

➤ The fungus can cause **microbial degradation, thereby improving the soil quality.**

➤ The fungus T.maxima may prove to be **helpful in the remediation of especially pyrene.**

What are the Recommendations?

➤ To combat pollution cause by the rapid pace of economic development and industrialisation, **resources are already present in the environment, which must be appropriately tapped** by us.

➤ T.maxima IIPLC-32 can be tried in the future for the **bioremediation of PAH-contaminated aquatic environments.**

What is Bioremediation?

➤ **Bioremediation** is **a branch of biotechnology that employs the use of living organisms, like microbes and bacteria to decontaminate affected areas.**

➤ It is used in the **removal of contaminants**, pollutants, and toxins from soil, water, and other environments.

➤ Bioremediation is **used to clean up oil spills or contaminated groundwater.**

➤ Bioremediation may be done **"in situ"–at the site of the contamination–or "ex situ"–away from the site.**

Note:

Increasing Efficacy of Gene Therapy

Why in News?

Recently, a study titled "**Secretion of functional α1-antitrypsin is cell type dependent"** has been published, which shows that the Efficacy of **Gene Therapy** can be increased by changing protein regulation networks in the body, helping treat genetic diseases.

What is Gene Therapy?

➢ Gene therapy is a way to **treat genetic diseases by correcting the source of the error in a patient's DNA (Deoxy-ribo Nucleic Acid).**

➢ Gene therapy techniques allow d**octors to treat a disorder by altering a person's genetic makeup** instead of using drugs or surgery.

➢ A harmless viral or bacterial vector is used to **carry a corrective gene into a patient's cells,** where the gene then directs the cell to produce the **proteins necessary to treat the disease**.

➢ Muscle cells are a common target because **gene therapies injected into the muscle are more accessible than introduction into the body by other routes**.

➢ But **muscle cells may not produce the desired protein** as efficiently as needed if the job the gene instructs it to do is very different from the one it specialises in.

What are the Findings?

➢ **Effectiveness of Gene Therapy:**

  ○ Developed **a strategy to use a harmless version of an adeno-associated virus as a vehicle to deliver AAT (Alpha-1 Antitrypsin) gene therapies** into the body via injection, allowing for sustained release of the protein over several years.

    ● AAT is a condition in which l**iver cells are unable to make adequate amounts of the protein** AAT.

    ● It results in **a breakdown of lung tissue that can cause serious respiratory problems**, including the development of severe lung diseases such as chronic obstructive pulmonary disease (COPD) or emphysema.

  ○ Adding a molecule called **suberoylanilide hydroxamic acid, or SAHA,** helps muscle cells make AAT at a production level **more like that of liver cells.**

    ● Proteostasis is the process that **regulates proteins within the cell in order to maintain the health** of both the cellular proteome and the organism itself.

    ● Proteostasis involves a highly complex interconnection of pathways that influence the fate of a protein from synthesis to degradation.

  ○ Adding SAHA or similar proteostasis regulators to gene therapies can help increase the **effectiveness of these treatments** for many genetic diseases.

    ● Patients are usually **treated by receiving AAT via infusion.** It requires patients to either make regular trips to the hospital or keep expensive equipment at home for the rest of their lives.

  ○ Replacing the faulty gene that causes AAT shortage in the first place can be a boon for patients.

    ● Current gene therapies inject the AAT-producing gene into muscle.

➢ **Implications:**

  ○ Increasing the protein production of muscle cells can potentially improve **vaccine immunity.**

  ○ Adding a protein homeostasis enhancer to the cell could optimize protein yield and increase the effectiveness of the drug.

    ● Many drugs are derived from natural sources that rely heavily on a given cell's protein production capabilities.

    ● But many of these drugs use cells that aren't specialized to make large amounts of protein.

  ○ Ways to improve the cellular machinery behind protein homeostasis can help **delay aging and open many new doors for treating a wide range of diseases**.

Alpha Fold & Protein

Why in News?

Recently, DeepMind, a company based in London, announced that it had predicted the **three-dimensional** structures of more than 200 million **proteins using AlphaFold.**

Note:
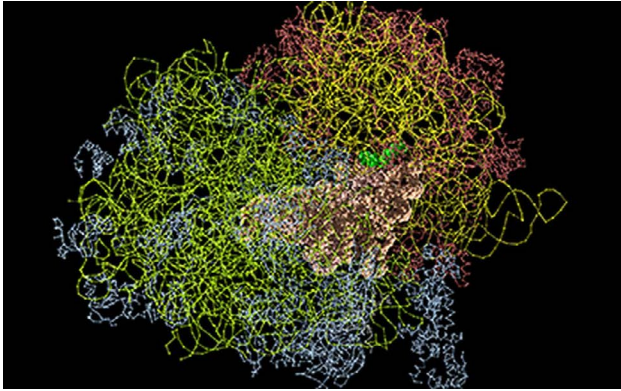
What do we need to know about AlphaFold?

➢ **About:**
   ○ **AlphaFold** is an Artificial Intelligence-**based protein structure** prediction tool.
   ○ It is based on a computer system called **Deep Neural Network.**
      ● **Neural networks** use a large amount of **input data** and provide the desired output exactly like how a human brain would.
      ● The real work is done by the **black box** between the input and the output layers, called the **Hidden Networks.**
   ○ AlphaFold is **fed with protein sequences** as input.
      ● When protein sequences enter through one end, the **predicted three-dimensional structures** come out through the other.

➢ **Mechanism:**
   ○ **The first step** uses the available structures of 1,70,000 proteins in the **Protein Data Bank (PDB)** to train the computer model.
      ● Then, it uses the results of that training to **learn the structural predictions of proteins not in the PDB**.
      ● Then, it uses the **high-accuracy predictions** from the first step to **retrain and relearn** to gain higher accuracy of the earlier predictions.
   ○ By using this method, AlphaFold has now predicted the structures of the entire **214 million unique protein sequences** deposited in the **Universal Protein Resource (UniProt)** database.

➢ **Implication:**
   ○ Knowing protein structure and function is essential to **understand human diseases.**

○ Proteins are generally structured using **x-ray crystallography**, **nuclear magnetic resonance spectroscopy**, or **cryogenic electron microscopy**.
      ● These techniques are not just time-consuming, **they often take years** and are based mainly on **trial-and-error methods.**
      ● AlphaFold makes the process of **protein structuring easier.**
         ■ It is a watershed movement in science and **structural biology** in particular.
   ○ AlphaFold has already helped hundreds of scientists accelerate their discoveries in **vaccine** and **drug development** since the first public release of the database nearly a year back.

➢ **Available Substitutes:**
   ○ AlphaFold is **neither flawless nor the only AI-based protein structure** prediction tool.
      ● **RoseTTaFold**, developed by University of Washington in Seattle, U.S., is another tool.
         ■ Although **less accurate than AlphaFold**, it can predict the structure of protein complexes.

How should India Benefit from it?

➢ India needs to quickly take advantage of the AlphaFold database and **learn how to use the structures to design better vaccines and drugs.**
   ○ Understanding the accurate structures of **Covid-19** virus proteins in days rather than years will **accelerate vaccine and drug development against the virus**.
➢ India should also speed up implementation of **public-private partnerships** in the sciences.
   ○ It should facilitate **joint collaborations with the prevalent hardware muscle** and **data science talent** in the private sector and specialists in academic institutions to pave the way for data science innovations.

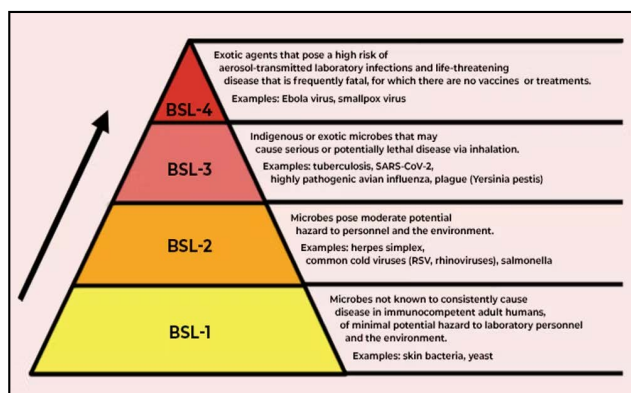# Langya Virus

Why in News?

Amid the **Covid-19** and **Monkeypox** cases around, the new zoonotic **Langya Henipavirus** has raised concerns.

Note:

➤ The first case of the Langya virus was reported in 2019. The Langya virus has been classified among **Biosafety Level 4 (BSL4) Pathogens.**

What are the Biosafety levels?

➤ BSL is used **to identify the protective me**asures needed in a laboratory setting to protect workers, the environment, and the public.

➤ Activities and projects conducted in biological laboratories are categorized by biosafety level.

➤ The four biosafety levels are BSL-1, BSL-2, BSL-3, and BSL-4, with BSL-4 being the highest (maximum) level of containment.

What is Langya Virus?

➤ **About:**
  ○ The Langya virus is a **zoonotic virus** which means **it can be transmitted from animals to humans.**
  ○ Langya is part of the **genus Henipavirus**, which has a **single-stranded RNA genome with a negative orientation.**

● Unique features of henipaviruses Paramyxovirinae are their larger genomes, longer untranslated regions that are over 100 amino acids longer than any other known phosphoprotein in the family.

● It is an **emerging cause of zoonosis in the Asia-Pacific region.**

➤ **Novel Langya Virus:**
  ○ The **newly discovered Langya virus is a 'phylogenetically distinct Henipavirus'.**
  ○ Other viruses of the type Henipavirus discovered earlier are the Mojiang, Ghanian, Cedar, **Nipah**, and Hendra.
    ● Of these, **Nipah and Hendra are known to have caused fatal illnesses** in humans.
  ○ Langya's genome organization is "**identical to that of other Henipaviruses",** and that it is closely related to the **"Mojiang Henipavirus**, which was discovered in southern China.

➤ **Symptoms:**
  ○ Fever, Fatigue, Cough, Nausea, Headache, Loss of appetite etc.

➤ **Treatment:**
  ○ There are no licensed drugs or vaccines meant for humans.

How Impactful is Langya Virus?

➤ The Langya virus may **potentially be fatal to humans in case of severe infections.**

➤ Langya belongs to the same family of viruses as the deadly Nipah virus that is typically found in bats.

■■■

Note:

Environment & Ecology

Highlights

- Electromagnetic Field (EMF) Emissions
- Wildlife (Protection) Amendment Bill 2021
- World Lion Day 2022
- Amendments to Biodiversity Bill, 2021
- Peninsular Rock Agama
- Clean, Healthy Environment as a Universal Human Right
- International Tiger Day
- Loktak Lake
- Natural Resource Accounting (NRA)
- Feasibility of Carbon Removal by Restoring Coastal Vegetation

- Aatmanirbhar in Diammonium Phosphate (DAP)
- New Addition to the Ramsar Sites List
- Stronger Climate Targets 2030
- Flood Situation in Kerala
- India and SDG 13
- India's Solar Power Dream
- Pre-Summit of Tiger Range Countries
- Soil Mapping
- Recovery of Coral Reefs in Great Barrier Reef
- Loss of Mangrove Cover on Katchal Island

Electromagnetic Field (EMF) Emissions

Why in News?

Recently, in a written reply to a question in **Rajya Sabha**, the Minister of State for Communications stated that there is no impact on the Environment due to Electromagnetic Field levels in India.

What are Electromagnetic Field (EMF) Emissions?

➢ **About:**
  ○ Electromagnetic fields are a **combination of invisible electric and magnetic fields of force.**
    ● Electric fields are **created by differences in voltage**: the higher the voltage, the stronger will be the resultant field.
    ● Magnetic fields are **created when electric current flows:** the greater the current, the stronger the magnetic field.
  ○ **Natural Sources of EMF:**
    ● Electromagnetic fields are **present everywhere in our environment but are invisible to the human eye.**

- Electric fields are produced by the local build-up of electric charges in the atmosphere associated with thunderstorms.
  ○ **Human-Made Sources of EMF:**
    ● Besides natural sources, the electromagnetic spectrum also includes **fields generated by human-made sources: X-rays** are employed to diagnose a broken limb after a sport accident.
    ● The **electricity that comes out of every power socket** is associated with low frequency electromagnetic fields.
    ● Various kinds of **higher frequency radio waves** are **used to transmit information –** whether via TV antennas, radio stations or mobile phone base stations.
➢ **Issues:**
  ○ **Impacts on Humans:**
    ● Numerous worldwide studies link EMFs to serious **health problems such as leukemia, miscarriages, chronic fatigue, weakened immune system, forgetfulness, depression, nausea and loss of libido**.
  ○ **Impacts on the Environment:**
    ● Radars are used for navigation, weather forecasting **emit pulsed microwave signals, which are detrimental to health of flora and fauna present around these radars.**

Note:

What are the Initiatives Taken by the Government to Curb EMF Emissions?

➢ As per the Government, **EMF emissions** from Mobile towers are non-ionizing Radio frequencies having very minuscule power and are **incapable of causing any adverse environmental impact.**

➢ The **International EMF Project** of the **World Health Organisation (WHO)** published an information sheet in 2005 on the effect of EMF emissions on animals, insects, vegetation, and aquatic life and has concluded that the **exposure limits in the Non-Ionizing Radiation Protection (ICNIRP) guidelines** for the protection of human health are also **protective of the environment.**

   ○ The present norms for Electromagnetic Field (EMF) emissions from mobile towers in **India are already ten times more stringent (even lower) than the safe limits prescribed by ICNIRP and recommended by WHO.**

➢ The government has put in place a **well-structured process and mechanism for monitoring any violation** so that **Telecom Service Providers (TSPs)** adhere to the prescribed norms including the submission of a self-certificate before the commercial start of the **Base Transceiver Station (BTS)** site.

➢ The field units of the **Department of Telecommunications (DoT)** regularly carry out the EMF audit of up to 10% of BTS Sites annually on a random basis.

   ○ DoT also **imposes a financial penalty on TSPs whose BTSs are found to exceed the prescribed EMF emission limits.**

➢ In addition, if emission levels of such non-compliant BTSs are not brought within prescribed limits within 30 days, the same is liable to be shut down as per the prescribed procedure.

Wildlife (Protection) Amendment Bill 2021

Why in News?

Recently, **Lok Sabha** passed by voice vote the **Wildlife (Protection) Amendment Bill, 2021** that seeks to provide for **implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).**

What is the Wildlife (Protection) Amendment Bill 2021?

➢ **About:**

   ○ It was introduced in Lok Sabha by the **Minister of Environment, Forest and Climate Change** on 17th December 2021.

   ○ It seeks to amend the **Wild Life (Protection) Act, 1972.**

   ○ The Bill seeks to **increase the species** protected under the law and implement the CITES.

➢ **Features:**

   ○ **CITES:**

      • CITES is an **international agreement** between governments to ensure that **international trade in specimens of wild animals and plants** does not threaten the survival of the species.

      • The Convention requires countries to **regulate the trade of all listed specimens through permits**. It also seeks to regulate the possession of live animal specimens.

         ▪ **The Bill seeks to implement these provisions of CITES.**

   ○ **Authority:**

      • **The Bill provides for the central government to designate a:**

         ▪ **Management Authority**, which grants **export or import permits** for trade of specimens.

            ◆ Every person engaging in trade of a **scheduled specimen** must report the details of the transaction to the **Management Authority.**

            ◆ The Bill **prohibits** any person from modifying or removing the identification mark of the specimen.

         ▪ **Scientific Authority**, which gives advice on aspects related to **impact on the survival of the specimens** being traded.

   ○ **Wildlife (Protection) Act, 1972:**

      • Currently, the Act has **six schedules** for specially protected plants (one), specially protected animals (four), and vermin species (one).

         ▪ **The Bill reduces the total number of schedules to four by:**

            ◆ **Schedule I** for species that will enjoy the **highest level** of protection.

Note:

- ◆ **Schedule II** for species that will be subject to a **lesser degree** of protection.
- ◆ **Schedule III** that covers plants.
- ◆ It removes the schedule for **vermin species**.
- ◆ Vermin refers to **small animals that carry diseases** and destroy food.
- ■ It **inserts a new schedule** for specimens listed in the Appendices under CITES (scheduled specimens).

○ **Invasive Alien Species:**
- It **empowers the central government** to regulate or prohibit the import, trade, possession or proliferation of **invasive alien species**.
  - ■ Invasive alien species refers to plant or animal species **which are not native to India** and whose introduction may adversely impact wildlife or its habitat.
- The central government may authorize an officer to **seize and dispose of the invasive species.**

○ **Control of Sanctuaries:**
- The Act entrusts the **Chief Wildlife Warden** to control, manage and maintain all sanctuaries in a state.
- The Chief Wildlife Warden is appointed by the **state government.**
  - ■ **The Bill specifies that actions of the Chief Warden must be in accordance with the management plans for the sanctuary.**
    - ◆ These plans will be prepared as per **guidelines of the central government**, and as **approved by the Chief Warden**.
    - ◆ For sanctuaries falling under **special areas**, the management plan must be prepared after due consultation with the **Gram Sabha** concerned.
    - ◆ Special areas include a Scheduled Area or areas where the **Scheduled Tribes and Other Traditional Forest Dwellers** (Recognition of Forest Rights) Act, 2006 is applicable.
    - ◆ Scheduled Areas are economically backward areas with a predominantly tribal population, notified under the **Fifth Schedule to the Constitution.**

○ **Conservation Reserve:**

- State governments may declare areas adjacent to **national parks** and **sanctuaries** as a **conservation reserve**, for protecting flora and fauna, and their habitat.
  - ■ **The Bill empowers the central government to also notify a conservation reserve.**

○ **Penalties:**
- **The WPA Act 1972** prescribes imprisonment terms and fines for violating the provisions of the Act.
  - ■ **The Bill increases these fines.**

Type of Violation	1972 Act	2021 Bill
General violation	Up to Rs 25,000	Up to Rs 1,00,000
Specially protected animals	At least Rs 10,000	At least Rs 25,000

What is the Wildlife (Protection) Act,1972?
- ➤ **Wild Life (Protection) Act, 1972** provides a legal framework for the **protection** of various species of wild animals and plants, the **management** of their habitats, and the **regulation** and **control** of trade in wild animals, plants and products made from them.
- ➤ The Act also lists schedules of plants and animals that are **afforded various degrees of protection and monitoring** by the government.
- ➤ The Act has been **amended several times**, with the last amendment having been made in 2006.

World Lion Day 2022

Why in News?

World Lion Day is observed on 10th August annually to spread awareness and educate people about lions and their conservation.

What is World Lion Day and its Significance?

- ➤ **About:**
  - ○ World Lion Day aims at **spreading awareness of lions and the urgent need to strive toward their conservation** and to make everyone aware of the significance of lions in their natural habitat.

○ The initiative to protect the big cats **started in 2013 and the first World Lion Day was celebrated that year.**

➢ **Significance:**

○ An opportunity to understand **the place of lions in the ecological cycle and why their extinction can be an alarming sign** for humans.

○ Lions supposedly wandered through Asia, Africa, Europe, and the Middle East some three million years ago, however, their numbers have significantly decreased by about 95% over the course of five decades.

What are the Key Points Related to Lion?

➢ **Scientific Name:** *Panthera leo*

○ The lion is divided into **two subspecies:** the African lion (*Panthera leo leo)* and the **Asiatic lion (*Panthera leo persica*).**

● Asiatic lions are slightly smaller than African lions.

● The most striking morphological character, which is always seen in Asiatic lions, and rarely in African lions, is a longitudinal fold of skin running along its belly.

➢ **Role in the Animal Kingdom:**

○ Lions hold an **indispensable place in the ecosystem**, they are an apex predator of their habitat, responsible for checking the population of grazers, thus helping in maintaining the ecological balance.

○ Lions also **contribute to keeping the population of their prey healthy and resilient as they target the weakest members** of the herd. Thus, indirectly helping in disease control in the prey population.

➢ **Threats:**

○ Poaching, genetic inbreeding arising from a single population inhabiting one place, diseases such as plague, canine distemper or a natural disaster.

➢ **Protection Status:**

○ **IUCN Red List:** Vulnerable

● Asiatic Lion - **Endangered.**

○ **CITES:** Appendix I for populations of India, all other populations are included in Appendix II.

○ **Wildlife (Protection) Act 1972:** Schedule I

➢ **Status in India:**

○ India is home to the majestic Asiatic Lion, who inhabit the protected territory of **Sasan-Gir National Park** (Gujarat).

○ According to the data from 2020, there are 674 lions in India, which were 523 in 2015.

What are Conservation Efforts?

➢ **Project Lion**

➢ **Asiatic Lion Conservation Project**

Amendments to Biodiversity Bill, 2021

Why in News?

Recently, a Joint Parliamentary Committee (JPC) that examined the **Biological Diversity (Amendment) Bill 2021,** has submitted its suggestions on the Bill.

➢ The JPC has **accepted several amendments** made by the Ministry of Environment & Climate Change (MoEFCC).

What is the Biodiversity Act, 2002 (BDA)?

➢ **About:**

○ The **Biological Diversity Act (BDA), 2002** was enacted to provide for the **conservation of biological diversity, sustainable use of its components**, and fair and equitable sharing of the benefits arising out of the use of biological resources and traditional knowledge.

➢ **Features:**

○ The Act prohibits any person or organisation from obtaining any biological resource, occurring in India for its research or commercial utilisation, without prior approval from the **National Biodiversity Authority.**

○ The act envisaged a three-tier structure to regulate the access to biological resources:

● **The National Biodiversity Authority** (NBA)

● **The State Biodiversity Boards** (SBBs)

● **The Biodiversity Management Committees** (BMCs) (at local level)

○ The act stipulates all offences under it as **cognizable and non-bailable.**

What are the Amendments Made in Biodiversity Bill 2021?

➢ **Boosting Indian Medicine System:** It seeks to give a fillip to **"Indian system of medicine"**, and facilitate

Note:

fast-tracking of research, patent application process, transfer of research results while utilising the biological resources available in India.

- ❍ It seeks to empower local communities to be able to utilise resources, particularly of medicinal value, such as seeds.
- ❍ The Bill looks to encourage farmers to **increase cultivation of medicinal plants.**
- ❍ These objectives to be achieved without compromising the objectives of the United Nation Convention on Biological Diversity.

➢ **Decriminalising Certain Provisions:** It seeks to decriminalise certain provisions in the chain of biological resources.
- ❍ These changes were brought in consonance with **India's ratification of** Nagoya Protocol (Access to generic resources and the fair and equitable sharing of benefits arising from their utilisation) in 2012.

➢ **Allowing Foreign Investments:** It also allows for **foreign investment in research into biodiversity.** However, this investment will necessarily have to be made through Indian companies involved in biodiversity research.
- ❍ For foreign entities approval from the **National Biodiversity Authority** is necessary.

➢ **Exempting AYUSH Practitioners:** The Bill seeks to exempt registered **AYUSH medical practitioners** and people accessing codified traditional knowledge, among others, from giving prior intimation to State biodiversity boards for accessing biological resources for certain purposes.

What are the Major concerns Raised Against the Proposed Amendments?

➢ **Trade over Conservation**: Concerns were raised that the bill **prioritised intellectual property and commercial trade at the expense of the act's key aim** of conserving biological resources.

➢ **Threat of Bio-piracy:** The exemptions to **AYUSH Practitioners** from giving prior intimation to State biodiversity boards would pave the way for **"bio piracy".**
- ❍ **Biopiracy** is the practice of exploiting naturally occurring genetic or biochemical material in commerce.

➢ **Marginalising Biodiversity Management Committees (BMCs):** The proposed amendments allow for state biodiversity boards to represent BMCs to determine terms of benefit sharing.

- ❍ Under the BDA 2002, national and state biodiversity boards are required to consult the BMCs **(constituted by every local body)** while taking any decision relating to the use of biological resources.

➢ **Sidelining Local Communities:** The bill also exempts cultivated medicinal plants from the purview of the Act. However, it is practically impossible to **detect which plants are cultivated and which are from the wild.**
- ❍ This provision could allow large companies to **evade the requirement for prior approval or share the benefit** with local communities under the access and benefit-sharing provisions of the Act.

What are the Recommendations Made by the Committee?

➢ **Conserving Biological Resources:**
- ❍ The JPC recommended that biodiversity management committees under the proposed law and indigenous communities should be **empowered by clearly defining benefit claimers to be conservers of biological resources.**

➢ **Promoting Indigenous Medicine:**
- ❍ Reduce the pressure on wild medicinal plants by encouraging cultivation of medicinal plants.
- ❍ Indian system of medicine should be encouraged by clearly defining codified traditional knowledge.
- ❍ **Promoting indigenous research and Indian companies through facilitating fast-tracking of research, patent** application process, **transfer of research results while utilising the biological resources** available in India without compromising the **objectives of Internation biodiversity convention.**

➢ **Promote Sustainable Use:**
- ❍ To **develop national strategies for conservation**, promotion and sustainable use of biological resources in consultation with the state government.

➢ **Civil Offence:**
- ❍ Being a civil offence, the committee has further recommended that in contravention of the Biological Diversity Act, 2002 any offence should **attract civil penalties with proportionate fine structure so that the violators do not escape,**

➢ **FDI Inflows:**
- ❍ Further, there is a need to **attract more foreign investments** in the chain of biological resources,

Note:

including research, patent, and commercial utilisation, without compromising national interest by defining foreign companies as per the **Companies Act** and by defining a protocol for utilisation of biological resources from India.

➢ **Exemption of AYUSH Practitioners:**
  ○ The committee clarified that AYUSH practitioners who have been practising indigenous medicine, including Indian systems of medicine, **as a profession for sustenance and livelihood are exempt from prior intimation** to state biodiversity boards to access biological resources.

Peninsular Rock Agama

Why in News?

Recently, a study has been carried out by researchers from **Indian Institute of Science (IISc)**, Bengaluru to understand several **environmental factors** (including urbanisation) that could affect the **presence of the Peninsular Rock Agama/ South Indian Rock Agama.**

What are Important Facts about Peninsular Rock Agama?

➢ **About:**
  ○ The **Peninsular Rock Agama (Psammophilus dorsalis)** which is a type of **garden lizard** has a strong presence in **southern India.**
  ○ This lizard is a **large animal**, strikingly coloured in **orange and black**.
  ○ They **do not generate their own body heat**, so they need to seek **warmth from external sources** like a warm rock or a sunny spot on the wall.

➢ **Geography:**
  ○ It is majorly found in India (Asia).
    ● Indian states of **Tamil Nadu, Chhattisgarh, Kerala, Andhra Pradesh, Karnataka, Bihar** hosts the population of the lizard.

➢ **Habitat:**
  ○ It belongs to the **Precocial Species.**
    ● Precocial species are those in which the young are relatively mature and mobile from the moment of birth or hatching.

➢ **Protection Status:**
  ○ **IUCN Red List:** Least Concern
  ○ **CITES:** N/A
  ○ **Wildlife Protection Act 1972:** N/A

What has the Study Revealed about the Lizard?

➢ Rock Agama can indicate **which parts of the city are warming**, and their numbers **show how the food web is changing**.
  ○ Lizards need to **seek warmth from external sources** like a warm rock or a sunny spot on the wall as they do not generate their own body heat.

➢ These lizards **eat insects and are in turn eaten by raptors**, **snakes** and **dogs**, they **cannot live** in places where there are no insects.
  ○ Insects are **critical components** of a healthy **ecosystem** as they provide many services, including **pollination**.
  ○ Hence, the presence of rocky agamas **presents a good model system** to understand **other aspects of the ecosystem**.

Clean, Healthy Environment as a Universal Human Right

Why in News?

The United Nations declares access to a **clean, healthy environment** as a **universal human right.**

➢ India **voted for the resolution** and pointed out that the **resolutions do not create binding obligations.**
  ○ Only through **conventions and treaties** do state parties undertake obligations for such rights.

Note:

drishti

What is the Provision for Clean Environment in Indian Constitution?

➢ The **right to life (Article 21)** has been used in a diversified manner in India. It includes, inter alia, the right to survive as a species, quality of life, the right to live with dignity and the right to livelihood.

   ○ **Article 21** of the Indian Constitution states: 'No person shall be deprived of his life or personal liberty except according to procedures established by law.'

What do we need to know about the Resolution?

➢ **About:**

   ○ **Every person on the planet** has the right to live in a **clean, healthy environment.**

   ○ **Climate change** and **environmental degradation** are the most critical threats awaiting humanity in the future.

   ○ It demonstrates that the **member states can unite** in the collective fight against the triple planetary crisis of **climate change, biodiversity loss and pollution**.

   ○ The declaration adopted by over 160 UN member nations, including India, **is not legally binding.**

      ● But, it will **encourage countries** to incorporate the **right to a healthy environment** in national constitutions and regional treaties.

   ○ Russia and Iran **abstained from voting.**

➢ **Benefits:**

   ○ It will help to **reduce environmental injustices and protection gaps.**

   ○ It can **empower** people, especially those in vulnerable situations, including environmental human rights defenders, children, youth, women and indigenous people.

   ○ This right (Access to Clean, Healthy Environment) **was not included in the Universal Declaration of Human Rights, 1948.**

      ● This is a historic resolution that will change the very nature of **international human rights law**.

What are Human Rights?

➢ **About:**

   ○ **Human rights** are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status.

   ○ **Human rights include:**

      ● The **right to life and liberty**, **freedom from slavery and torture**, **freedom of opinion and expression**, the **right to work and education** etc.

      ● Everyone is entitled to these rights, **without discrimination.**

➢ **International Human Right Law:**

   ○ International human rights **law lays down the obligations of Governments** to act in certain ways or to **refrain from certain acts**, in order to promote and protect **human rights and fundamental freedoms of individuals or groups.**

   ○ **Body of Human Rights:**

      ● **A Comprehensive body of human rights law** consists of a **universal and internationally protected code** to which all nations can subscribe and all people aspire.

         ■ **The United Nations** has defined a broad range of internationally accepted rights, **including civil, cultural, economic, political and social rights**.

         ■ It has also established **mechanisms to promote and protect these rights** and to assist states in carrying out their responsibilities.

         ■ The foundations of this body of law are the **Charter of the United Nations** and the **Universal Declaration of Human Rights**, adopted by the **General Assembly** in 1945 and 1948

What is Climate Change, Biodiversity & Pollution?

➢ **Climate Change:**

   ○ Climate change refers to **long-term shifts in temperatures and weather patterns.**

      ● These shifts may be **natural**, such as through **variations in the solar cycle**.

      ● But since the 1800s, **human activities have been the main driver** of climate change, primarily due to **burning fossil fuels** like coal, oil and gas.

   ○ **Burning fossil fuels** generates **greenhouse gas emissions** that act like a **blanket wrapped around the Earth**, trapping the sun's heat and raising temperatures.

      ● Examples of greenhouse gas emissions that are causing climate change include **carbon dioxide and methane.**

Note:

➢ **These come from** using gasoline for driving a car or coal for heating a building.

  ❍ **Clearing land and forests** can also release carbon dioxide.

    ● **Landfills for garbage** are a major source of methane emissions.

    ● **Energy, industry, transport, buildings, agriculture and land use** are among the main emitters.

➢ **Biodiversity:**

  ❍ Biodiversity is **all the different kinds of life you'll find in one area**—the variety of animals, plants, fungi, and even microorganisms like bacteria that make up our natural world.

  ❍ Each of these species and organisms work together in ecosystems, like an **intricate web, to maintain balance and support life.**

  ❍ Biodiversity supports everything in nature that we need to survive: **food, clean water, medicine, and shelter.**

➢ **Pollution:**

  ❍ Pollution is the **introduction of harmful materials into the environment.**

    ● These harmful materials are called **pollutants**.

➢ Pollutants can be natural, such as **volcanic ash.**

➢ They can also be created by human activity, such as **trash or runoff produced by factories.**

    ● Pollutants damage the quality of air, water, and land.

International Tiger Day

Why in News?

29th July is observed as **International Tiger Day (ITD)** to promote the conservation of the striped cat as well as **to advocate a global system for protecting its natural habitats.**

➢ ITD was established in 2010 at St Petersburg Tiger Summit in Russia in order to raise awareness about the decline of wild tiger numbers, leaving them on the brink of extinction, and to encourage the work of Tiger Conservation.

➢ The **Manas Tiger Reserve** in Assam has **2.4 tigresses for every tiger**, the annual wildlife monitoring results of the trans-boundary wildlife preserve has revealed.

What are the Key Points Related to Tiger?

➢ **Scientific Name:** *Panthera tigris*

➢ **Indian Sub Species:** *Panthera tigris tigris.*

➢ **About:**

  ❍ It stretches from Siberian temperate forests to subtropical and tropical forests on the Indian subcontinent and Sumatra.

  ❍ It is the **largest cat species** and a member of the genus Panthera.

  ❍ Traditionally **eight subspecies of tigers have been recognized, out of which three are extinct.**

    ● **Bengal Tigers:** Indian Subcontinent

    ● **Caspian tiger:** Turkey through central and west Asia (extinct).

    ● **Amur tiger:** Amur Rivers region of Russia and China, and North Korea

    ● **Javan tiger:** Java, Indonesia (extinct).

    ● **South China tiger:** South central China.

    ● **Bali tiger:** Bali, Indonesia (extinct).

    ● **Sumatran tiger:** Sumatra, Indonesia.

    ● **Indo-Chinese tiger:** Continental south-east Asia.

➢ **Threats:**

  ❍ Habitat destruction, habitat fragmentation and poaching.

➢ **Protection 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.

➢ **Tiger Reserves in India**

  ❍ **Total Number:** 53

  ❍ **Largest: Nagarjunsagar Srisailam Tiger Reserve, Andhra Pradesh**

  ❍ **Smallest:** Bor tiger reserve in Maharashtra

Note:

What is the Status of Tiger Population in India?

➤ There are currently between 3,726 and 5,578 tigers in the wild worldwide, according to the latest figures by the International Union for Conservation of Nature (IUCN).

○ Tiger populations are stable or increasing in India, Nepal, Bhutan, Russia and China.

➤ India is home to **over 70 % of the global tiger population.**

➤ India has achieved the remarkable feat of doubling the tiger population in 2018 itself, 4 years ahead of the targeted year 2022 of the **St. Petersburg Declaration on tiger conservation.**

○ According to the tiger census (2018) – conducted once every four years – India has a tiger population of 2,967.

What is the Significance of Tiger Conservation?

➤ Tiger conservation is a **symbol of conservation of forests.**

➤ The tiger is **a unique animal which plays a pivotal role in the health and diversity** of an ecosystem.

➤ It is a top predator which is at the **apex of the food chain and keeps the population of wild ungulates** (primarily large mammals) in check.

○ Thus, Tiger helps in **maintaining the balance between prey herbivores and the vegetation** upon which they feed.

➤ Therefore, Tiger Conservation is not just about saving a beautiful animal.

○ It is about **making sure that we live a little longer as the forests are known to provide ecological services** like clean air, water, pollination, temperature regulation etc.

What are the Related Steps Taken?

➤ **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.

➤ **National Tiger Conservation Authority (NTCA):** It is a statutory body under the MoEFCC and was established in 2005 following the recommendations of the Tiger Task Force.

➤ **Conservation Assured | Tiger Standards:** CA|TS is a set of criteria which allows tiger sites to check if their management will lead to successful tiger conservation
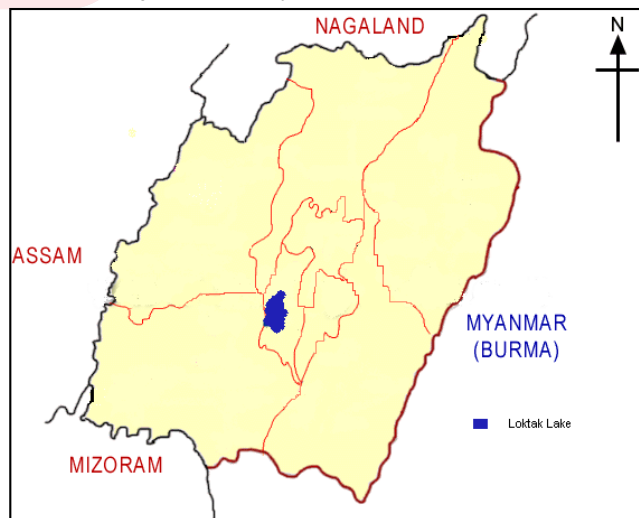
Loktak Lake

Why in News?

Recently, Loktak Lake Authority of Manipur recently issued a notice to remove all floating houses and fishing structures on Loktak lake.

➤ This has evoked a sharp reaction from the local Fishing Community & Homestay Operators.

What are the Issues?

➤ There is a **Lack of regulation**.

➤ There is a growing number of homestays and huts that are constructed and have put the lake at risk, and **impacted the environment.**

➤ There has been a sharp **reduction in fish production** and the traditional fisheries due to a **major hydropower projec**t that was started in 1983.

○ Also, there is a **loss of agricultural land due to inundation and increased levels of sediments and pollutants** by untreated rivers.

What do we Know About Loktak lake?

➤ **About:**

○ It's located about 40 kilometres south of Imphal.

○ It's the **largest freshwater lake in Northeast India**, the pristine Loktak Lake is one of the most popular tourist attractions in Manipur.

- Known for its **floating circular swamps, which are called phumdis** in the local tongue,
- The lake invites tourists from far and wide for its ethereal beauty.
- These **swamps look almost like islands and are a mass of soil, organic matter, and vegetation**.
- The lake houses the **only floating national park in the world, the Keibul Lamjao National Park,** which is the last refuge of the **endangered brow-antlered deer or sangai**, Manipur's state animal.
- In addition, the lake shelters about **230 species of aquatic plants, 100 types of birds, and 400 species of fauna like barking deer, sambar, and Indian python.**
  - ○ **Loktak lake was initially designated as a wetland of international importance under the Ramsar Convention in 1990.**
  - ○ Later it was also listed under the **Montreux Record** in 1993.

Natural Resource Accounting (NRA)

Why in News?

➢ Recently, the **Comptroller and Auditor General of India** has stated that it would be coming up with **report on Natural Resource Accounting (NRA)** by November 2022.
  - ○ It is an attempt to develop accounting systems to help monitoring their responsible utilisation, which will in turn lead to sustainability.

What is Natural Resource Accounting (NRA)?

➢ **About:**
  - ○ Natural Resource Accounting is a process of estimating the value of natural resource depletion and environment degradation due to economic activities.
  - ○ The concept of NRA was emerged to capture the intimate **interplay between the various components of the natural environment and the economic progress of a country.**
  - ○ It is based on the concept - **'measurement of a resource leads to its better management'**.

➢ **Historical Perspective:**
  - ○ The need for NRA took its **first step at the United Nations (UN) conference on Human Environment in 1970 (Stockholm Conference)** when the relationship between economic development and environmental degradation was discussed for the first time.
  - ○ The **Brundtland Commission**, set up by the UN, articulated the idea of close association between the environment and economic activities in 1987, which was followed up by environmental accounting and the **Earth Summit at Rio de Janeiro in 1992.**

What are the Initiatives Taken to Promote NRA?

➢ **Initiative at Global Level:**
  - ○ UN General Assembly resolution titled, **"Transforming our world; the 2030 agenda for sustainable development"** (25th of September, 2016) which got the approval of more than 190 countries, **requires the preparation of Natural Resource Accounts.**
    - **India is a signatory to this resolution.**
  - ○ The UN, in 2012, adopted the **System of Economic and Environmental Accounting (SEEA).** It is the **latest internationally accepted framework for NRA.**
    - Around 30 nations like Australia, Canada, China, France, and Germany have attained various degrees of success in adopting environmental accounting.
  - ○ The **Natural Capital Accounting and Valuation of the Ecosystem Services (NCAVES) Project**, funded by the European Union, has been jointly implemented by the **United Nations Statistics Division** (UNSD), the **United Nations Environment Programme** (UNEP) and the **Secretariat of the Convention of Biological Diversity** (CBD).
    - **India** is one of the **five countries taking part in this project** - the other countries being **Brazil, China, South Africa and Mexico.**
    - It is an umbrella term covering efforts to make use of an **accounting framework** to provide a systematic way **to measure and report on stocks and flows of natural capital.**

➢ **India-Specific Initiatives:**
  - ○ The CAG established the **Government Accounting Standards Advisory Board** (GASAB) in 2002 with

Note:

the aim to improve standards of Governmental accounting and financial reporting to enhance the quality of decision-making and public accountability.

- It consists of **representatives of all accounting services in GoI, regulatory authorities like RBI, ICAI and State Governments.**
  - The CAG of India is also a **member of an international body of Supreme Audit Institutions, called WGEA (Working Group on Environmental Auditing)**, which suggested (2010) that the audit institutions should aid their countries to adopt Natural Resources Accounts.

What is the Significance of Natural Resource Accounting?

➢ **Interrelation between Economy and Environment –**
  - Quantifies the nonrenewal damage to the environmental resources and assists in determination of development in real terms.

➢ **Aid to policy framing: sound database –**
  - To help policy makers to understand the potential impact of their decisions.

➢ **Managing SDGs –**
  - NRA has deep inter-linkages with the **Sustainable Development Goals (SDGs)** as 4 out of the 17 goals directly relate to management of natural resources and their accounting.

➢ **Combating Climate change –**
  - Asset and flow accounts have been recognized as a useful framework for monitoring, measuring and analysing climate change.

➢ **International commitments –**
  - Besides fulfilling the SDGs, it would help India become a part of the group of elite countries in generating Asset Accounts.

What are the Challenges Related to Accounting of Natural Resources?

➢ There is lack of proper training and capacity building among state officers.

➢ Limitations in preparing the asset accounts - mapping the periodicity of data.

➢ Multiple agencies are involved in data collection for resources; it may give rise to the issues of data sharing/data conflict.

Feasibility of Carbon Removal by Restoring Coastal Vegetation

Why in News?

Recently, a study has been published, which has raised scepticism about the efficiency of restoring coastal habitats to offset carbon emissions.

What are the Findings?

➢ Restoring Coastal habitats is far from certain and unreliable. and there's a real risk that the scale at which they can mitigate emissions has been massively oversold.

➢ It is extremely **difficult to work out a reliable figure for carbon accumulation by coastal ecosystems** under current conditions.

➢ There is a very weak **basis for calculating the future carbon offsets** that restoration projects might provide over the next 50 to 100 years.

What are the Causes of Uncertainty?

➢ **Wide Variation in Estimates:**
  - Estimates of the rate at which **blue carbon** habitats remove CO_2 from the atmosphere vary widely.
    - **Blue Carbon refers to carbon sinks** held by coastal, aquatic, and marine vegetation, marine organisms, and sediments.
  - Across several hundred scientific studies, there was a **600-fold difference between the highest and lowest estimates for carbon burial** in salt marshes, a 76-fold difference for seagrasses and a 19-fold difference for mangroves.

➢ **Errors in Dating Process:**
  - Burrowing organisms disturb and mix younger and older layers, **causing errors in the dating process of fossil fuels by making sediments seem younger,** and carbon burial rates greater, than they really are.
    - **Carbon dating** is a **radiometric dating method.** It uses the naturally occurring radioisotope carbon-14 (14C) to estimate the **age of carbon-bearing materials up to about 58,000 to 62,000 years old.**

➢ **Imported Carbon More Resistant to Decay:**
  - Much of the carbon buried in coastal sediments comes from elsewhere, such as soil swept from the land and carried by rivers. This is called **Imported Carbon.**

Note:

○ In a study on one saltmarsh, the proportion of 50% imported carbon near the sediment **surface increased to 80% in deeper layers.**

- Since the deeper value represents the habitat's long-term **carbon burial** rate, the direct contribution of a restored habitat to removing carbon **may be much less important than thought.**

➤ **Release of Marsh Gas:**

○ Turning an **oil palm plantation** back into a **mangrove** forest or f**looding a coastal area** to make a saltmarsh should help the land accumulate carbon.

○ But that same **land could also release more methane (otherwise known as marsh gas) and nitrous oxide** – both powerful greenhouse gases – leaving **no net climate benefit.**

➤ **Calcifying Animals Contribute Emissions:**

○ There are calcifying animals and plants which grow in these habitats, particularly **seagrass meadows.**

○ The strap-like leaves of seagrass are often covered by a white crust of shelled worms and coralline algae.

○ When these organisms **make their calcium carbonate covering**, CO_2 **is produced.**

What are the Recommendations?

➤ Blue **carbon habitats should still be protected** and, where possible, restored, as they have benefits for climate adaptation, coastal protection, food provision and biodiversity conservation.

➤ Every effort should still be made to halt, and wherever possible reverse, the worldwide loss of coastal vegetation. Blue carbon habitats are, **after all, more than carbon sinks – they also protect communities from storms, nurture biodiversity** and species targeted for **fisheries**, and improve water quality.

➤ The priority must be to **double down on emission reductions**, only using carbon removal methods to help achieve **net zero** where their **success is certain.**

Aatmanirbhar in Diammonium Phosphate (DAP)

Why in News?

As a part of the Union Government **Aatma Nirbhar Bharat**'s initiative to promote self-sufficiency in Fertilizers, it is advising and supporting the Indian fertilizer companies to strengthen their backend supply chain.

What is the Status of Fertilizer Industry in India?

➤ **Importance of Fertilizer:**

○ **Agriculture**, including its allied sector, is the **largest source of income in India**, the sector contributes 19.9% to the country's GDP, with 54.6% of the population engrossed in agricultural activities.

○ The agricultural sector largely depends on the **fertilizer** industry, which manufactures some of the **most important raw materials required for the production of crops.**

○ **In addition,** the Indian **fertilizer** industry is **of great importance because** it produces **phosphorus fertilizers** such as **Diammonium Phosphate (DAP), monoammonium phosphate (MAP), nitrogen, phosphorus, and potassium (NPKs),** and **single superphosphate (SSP) which aids in the development of healthy crops.**

➤ **Issue:**

○ The country largely depends on **phosphate rock, a common and** key raw material sourced mainly from Rajasthan and Madhya Pradesh. However, **India imports 90% of its phosphate from other countries.**

➤ **Fertilizer Manufacturing in India:**

○ **Indian Farmers Fertiliser Cooperative Limited (IFFCO),** a multi-state cooperative society headquartered in the nation's capital, is the largest fertilizer manufacturer and marketer.

○ **National Fertilizers Limited,** a state-owned corporation, is another of the largest producer of urea with a share of about 15% of total urea production in the country.

➤ **Initiatives:**

○ **Neem Coating of Urea**

○ **New Urea Policy (NUP) 2015**

○ **The Nutrient Based Subsidy (NBS) Scheme.**

What is Diammonium Phosphate DAP?

➤ DAP is the **second most commonly used fertiliser in India after urea.**

➤ Farmers normally apply this fertiliser just before or at the beginning of sowing, as it is **high in phosphorus (P) that stimulates root development.**

Note:

➤ DAP (46% P, 18% Nitrogen) is the preferred source of Phosphorus for farmers. This is **similar to urea,** which is their **preferred nitrogenous fertiliser** containing 46% N.

What are the Initiatives taken to Resolve DAP Dependency?

➤ **Encourage joint ventures abroad:**
  ❍ India's leading phosphatic fertilizer player formalized the acquisition of a 45% equity share in Baobab Mining and Chemicals Corporation (BMCC); **a rock phosphate mining company based in Senegal.**
    ● Further, the mining will be done in Senegal, and production of DAP will be done in India
  ❍ The government of India has been partnering with the industry to enable such investments to achieve supply security goals for meeting the country's fertilizer needs.
➤ **Explore potential potassic ore resources Domestically**:
➤ The Department of Mining and Geological Survey planned to expedite exploration of potential potassic ore resources in Rajasthan's Satpura, Bharusari, and Lakhasar; and other states including Uttar Pradesh, Madhya Pradesh, Rajasthan, Gujarat, Andhra Pradesh, and Karnataka.

New Addition to the Ramsar Sites List

Why in News?

Recently, India has added 10 more Ramsar sites, or wetlands that are of international importance, taking the number of such sites to 64.
➤ Earlier, India designated **five new wetlands of international importance** – the Karikili Bird Sanctuary, Pallikaranai Marsh Reserve Forest and Pichavaram Mangrove in Tamil Nadu; Pala wetland in Mizoram and Sakhya Sagar in Madhya Pradesh.
➤ A Ramsar site is a **wetland of international importance** under the Ramsar Convention, which is also known as the 'Convention on Wetlands' — an intergovernmental environmental treaty established by UNESCO in 1971, and named after the city of Ramsar in Iran, where the convention was signed that year.

Which New Sites have been added?		
Name	**States**	**Specifications**
Koonthankulam Bird Sanctuary,	Tamil Nadu	➤ This is the largest reserve for breeding resident and migratory water birds in South India. ➤ It is an Important Bird and Biodiversity Area forming part of the Central Asian Flyway.
Gulf of Mannar Marine Biosphere Reserve,	Tamil Nadu	➤ It is the first Marine Biosphere Reserve in South & South-East Asia. ➤ It is one of the most biologically diverse regions in India.
Vembannur Wetland Complex,	Tamil Nadu	➤ It is a human-made inland tank. ➤ It forms the southernmost tip of peninsular India further it forms part of the **Important Bird and Biodiversity Area (IBA)** and hence part of **BirdLife International Data Zone.**
Vellode Bird Sanctuary,	Tamil Nadu	➤ The wetlands have been evaluated and prioritized considering factors like the ecology of the wetland, earlier bird counts, records of breeding, and roosting colonies.
Vedanthangal Bird Sanctuary,	Tamil Nadu	➤ It is one of the oldest bird-protected areas in Tamil Nadu.

Note:

		➤ This site is also recognized internationally as an Important Bird and Biodiversity Area (IBA).
Udhayamarth-andapuram Bird Sanctuary ,	**Tamil Nadu**	➤ The site is an important staging and breeding ground for several species of waterbirds. ➤ The notable species observed at the site are oriental darter, glossy ibis, grey Heron & Eurasian spoonbill.
Satkosia Gorge,	**Odisha**	➤ It spreads along the magnificent gorge over the mighty river **Mahanadi.** ➤ It was established in 1976 as a wildlife sanctuary and supports a rich ecosystem, representing a diverse population of floral and faunal species. ➤ Satkosia is the meeting point of **two biogeographic regions of India;** the **Deccan Peninsula and the Eastern Ghats**, contributing immense biodiversity.
Nanda Lake,	**Goa**	➤ It is considered to be critically significant for its ecosystem services and biodiversity values for the local communities and society at large.

Ranganathittu Bird Sanctuary,	**Karnataka**	➤ It has been enlisted as one of the Important Bird Areas (IBA) in Karnataka and India by Bombay Natural History Society. ➤ It is an ecologically important riverine wetland of India, rich in biodiversity.
Sirpur Wetland,	**Madhya Pradesh**	➤ It is not only important for its aesthetic value but it provides immense ecological services such as being an important source of water and helping groundwater recharge in the downstream areas.

Stronger Climate Targets 2030

Why in News?

Recently, India has enhanced its climate change targets for 2030.

➤ In **UNFCCC COP 26** at Glasgow in 2021, the Prime Minister of India had made a series of **new promises to strengthen climate action from India.**

What are India's Revised Targets?

➤ **About:**
  ○ **Emission Intensity:**
    ● India is now committing itself to at least **45% reduction** in **emissions intensity** of **GDP (emissions per unit of GDP)** from 2005 levels.
➤ The existing target was a **33% - 35% reduction**.
  ○ **Electricity Generation:**
    ● India is also promising to ensure that at least **50% of installed electricity generation** capacity in 2030 would be based on **non-fossil fuel-based sources.**
      ■ This is an increase from the **existing 40% target.**

Note:

drishti

- ➢ **Significance:**
  - ○ The updated **Nationally Determined Contributions (NDCs)** seek to enhance India's contributions towards the **achievement of the strengthening of global response** to the threat of **climate change**, as agreed under the **Paris Agreement**.
    - ● NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change.
  - ○ Such action will also help India usher in **low emissions growth pathways**.
  - ○ New NDCs will demonstrate **India's commitment at the highest level** for decoupling of **economic growth** from **greenhouse gas emissions**.
  - ○ As a result of the revised NDCs, the **Net Zero target** by 2030 by Indian Railways alone will lead to a **reduction of emissions by 60 million tonnes annually.**
- ➢ Other NDCs:
  - ○ Increase **non-fossil energy capacity** to 500 GW (gigawatts) by 2030.
  - ○ Reduce the **total projected carbon emissions** by 1 billion tonnes (BT) by 2030.
  - ○ Achieve **net zero carbon** by 2070.

INDIA'S CLIMATE TARGETS: EXISTING AND NEW

Target (for 2030)	Existing: First NDC (2015)	New: Updated NDC (2022)	Progress
Emission intensity reduction	33-35 per cent from 2005 levels	45 per cent from 2005 levels	24 per cent reduction achieved in 2016 itself. Estimated to have reached 30 per cent
Share of non-fossil fuels in installed electricity capacity	40 per cent	50 per cent	41.5 per cent achieved by the end of June this year
Carbon sink	Creation of 2.5 to 3 billion tonnes of additional sink through afforestation	Same as earlier	Not clear.

What are India's Initiatives towards Climate Change?

- ➢ **Reforms in Transport Sector:**
  - ○ India is accelerating its **e-mobility transition** with the Faster Adoption and Manufacturing of **(Hybrid &) Electric Vehicles Scheme**.
  - ○ A voluntary **vehicle scrapping policy** to phase out old and unfit vehicles complements the existing schemes.
- ➢ **India's Support to EVs:**

- ○ India is among a handful of countries that support the **global EV30@30 campaign**, which aims for at **least 30% new vehicle sales to be electric by 2030.**
- ○ India's advocacy of five elements for climate change "**Panchamrit**", at the **UNFCCC COP26 in Glasgow** is a commitment to the same.
- ➢ **Role of Government Schemes:**
  - ○ **The Pradhan Mantri Ujjwala Yojana** has helped 88 million households to **shift from coal-based cooking fuels to LPG connections.**
- ➢ **Role of Industries in Low-Carbon Transition:**
  - ○ **The public and private sectors** in India are already playing a key role in **meeting the climate challenge**, helped by growing customer and investor awareness, as well as increasing regulatory and disclosure requirements.
- ➢ **Hydrogen Energy Mission:**
  - ○ Focus on **generation of hydrogen from green power resources.**
- ➢ **Perform, Achieve and Trade (PAT):**
  - ○ It is a **market-based mechanism** to further accelerate as well as incentivize **energy efficiency in the large energy-intensive industries.**

What are the Important Highlights of UNFCCC COP 26?

- ➢ **About:**
  - ○ **The United Nations Framework Convention on Climate Change Conference of Parties 26** was held in Glasgow, UK in 2021.
- ➢ **Minutes of the meeting:**
  - ○ **New Global and Country Targets:**
    - ● The Glasgow Summit has urged countries to consider **strengthening their 2030 targets by COP27 to be held in Egypt in 2022**.
    - ● The summit targeted **global warming not to exceed +1.5°C** and got about 140 countries to announce target dates for bringing emissions down to net zero.
- ➢ The achievement is significant as in the Paris Agreement, the **developing countries did not agree to reduce emissions** but just the "emissions-intensity" of GDP.
  - ● India has also j**oined the consensus and announced its net-zero target of 2070.**

Note:

drishti

○ **Glasgow Breakthrough Agenda:**

● A potentially important development which emerged out of COP26 (but outside the COP process) is the **Glasgow Breakthrough Agenda** endorsed by 42 countries (including India).

➢ This is a cooperative effort to **accelerate the development** and deployment of clean technologies and **sustainable solutions** in areas such as **clean power, road transport, steel and hydrogen**.

○ **Phasing-Down Coal Consumption:**

● Coal **is the dirtiest of fossil fuels** and an early phasing out of coal is clearly desirable.

■ European countries have pushed hard for its phase out; however, **developing countries have resisted this.**

■ A middle path, as suggested by India, was referred to at the COP26 calling for a **"phase-down" of coal-based power.**

○ **Best Case Scenario:**

● An early assessment by **Climate Action Tracker (CAT)**, an independent organisation, suggests that the targets declared, if fully achieved, could limit global warming to around +1.8°C.

■ However, it also warns that the targets for 2030 are insufficiently ambitious. Unless significantly tightened, the world is more likely to end up seeing global temperatures rise by 2.1°C to 2.4°C.

Flood Situation in Kerala

Why in News?

Kerala once again stares at a flood-like situation, **similar to the one in 2018, with high intensity rain** triggered by **strong monsoon winds**.

➢ In addition, a low-pressure system is expected to form within 2-3 days over the **Bay of Bengal**, which is likely to aggravate the rains.

What Happened in 2018 Kerala Floods?

➢ In August 2018 following a torrential rainfall, Kerala witnessed its **worst floods since 1924.**

➢ The dams were stored to the brim. Too much water was stored and consequently, the gates had to be opened.

○ At least **35 of 50 large dams were opened** for releasing water onto the already flooded areas downstream.

➢ With time, **silt deposition** had considerably reduced the holding capacity of the dams and the nearby rivers, leading to flooding of embankments and levees.

○ **Encroachment,** which decreased the dam's built-in area (further reducing the capacity), **sand mining** and **rampant felling of trees** and **clearing of forest** in the **Western Ghats** also played a major factor in the Flood.

What do we know about Floods?

➢ It is an overflowing of water onto land that is normally dry. Floods can **occur during heavy rains**, when **ocean waves come on shore**, when **snow melts quickly**, or when **dams or levees break.**

➢ Damaging flooding may happen with only a few inches of water, or it may cover a house to the rooftop.

➢ Floods **can occur within minutes or over a long period**, and **may last days,** weeks, or longer. Floods are the **most common and widespread of all weather-related natural disasters.**

➢ Flash floods are the most dangerous kind of floods, because they combine the destructive power of a flood with incredible speed.

Why Frequent Floods in Urban Areas?

➢ **Unplanned Development:** Unplanned development, **encroachments** in riparian zones, **failure of flood control structures**, **unplanned reservoir operations**, **poor drainage** infrastructure, deforestation, **land use change** and sedimentation in riverbeds exacerbate floods.

○ When rainfall is heavy, the river breaches the embankments and destroys habitations along the banks and on the sandbars.

➢ **Unplanned Urbanisation:** Flooding in the cities and the towns has become a frequent phenomenon.

○ The reason for this is **indiscriminate encroachment of waterways and wetlands**, **inadequate capacity of drains** and **lack of maintenance** of the drainage infrastructure.

○ **Poor waste management** also exacerbates the problem by blocking drains, canals and lakes.

➢ **Neglecting Pre-Disaster Planning:** History of flood management shows that focus of disaster management has largely been on post-flood recovery and relief.

  ○ Many reservoirs and Hydro-electric plants do not have enough gauging stations for measurement of flood level, which is the principal component for flood prediction and forecast.

➢ **No Heed to Gadgil Committee Recommendations:** In 2011 the **Madhav Gadgil committee** recommended to declare roughly 1,30,000 sq. km area as environmentally sensitive zone (spanning Gujarat, Karnataka, Kerala, Maharashtra and Tamil Nadu).

  ○ However, none of the six states agreed with its recommendations with **Kerala particularly objecting** to the proposed ban on mining, restrictions on construction activities and embargoes on hydroelectricity projects.

  ○ The result of this negligence can now be clearly witnessed in terms of frequent floods and landslides.

India and SDG 13

Why in News?

Recently, in a written reply to Rajya Sabha Union Minister for State (Environment, Forest & Climate) said that India is constantly achieving its Sustainable Development Goals.

What are Sustainable Development Goals?

➢ The **Sustainable Development Goals (SDGs)**, also known as the Global Goals, were adopted by the **United Nations** in 2015 as a **universal call to action to end poverty, protect the planet**, and ensure that by 2030 **all people enjoy peace and prosperity.**

  ○ It is a set of 17 SDGs which recognize that action in one area will affect outcomes in others and that development must balance social, economic, and environmental sustainability.

  ○ Countries have committed to prioritizing progress for those who are furthest behind.

  ○ The SDGs are designed to end poverty, hunger, **AIDS,** and discrimination against women.

  ○ India in recent years has made significant efforts in achieving the **Goal 13th of the SDGs in particular.**

    ● The goal calls for **taking urgent action to combat climate change** and its impacts**.**

How has India Progressed in Achieving the Climate Action Goals?

➢ India achieved its pre-2020 voluntary goal. Despite having no binding obligation under the **United Nations Framework Convention on Climate Change (UNFCCC)**, in 2009 India announced its voluntary goal to reduce the emissions intensity of its GDP by 20-25% by 2020 in comparison to 2005 level.

  ○ India achieved a 24% reduction in emission intensity of its GDP between 2005 and 2016.

➢ As per the Paris Agreement, India submitted its **Nationally Determined Contributions (NDCs)** to UNFCCC in 2015 outlining eight targets for the period 2021-2030, including

  ○ Reducing the emissions intensity of its GDP by 33 to 35% by 2030 from the 2005 level,

  ○ To achieve about 40% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030 with the help of the transfer of technology and low-cost international finance including from the **Green Climate Fund (GCF),**

  ○ To create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030.

  ○ The other targets pertain to sustainable lifestyles; climate-friendly growth paths; climate change adaptation; climate finance; and technology and capacity building.

  ○ India's recent initiatives for combatting climate change (and thus achieving SDGs) - **include its goal to achieve net zero emissions by 2070**, and initiatives for **green energy transition**.

Note:

What is National Action Plan on Climate Change (NAPCC)?

➢ Besides the above-mentioned targets, the Government of India is also implementing the **National Action Plan on Climate Change** which provides an overarching policy framework for all climate actions including mitigation and adaptation.

➢ It comprises eight core Missions in specific areas of solar energy, enhanced energy efficiency, sustainable habitat, water, sustaining Himalayan ecosystems, Green India, sustainable agriculture, and strategic knowledge for climate change.

➢ 33 States and Union Territories have prepared **State Action Plan on Climate Change (SAPCC)** consistent with the objectives of NAPCC.

➢ The adaptation activities in the States and Union Territories of India are being supported through **National Adaptation Fund for Climate Change (NAFCC).**

  ○ NAFCC is implemented in project mode and to date, 30 adaptation projects have been approved under NAFCC in 27 States and UTs.

India's Solar Power Dream

Why in News?

Government of India has set the target to **expand India's renewable energy installed capacity to 500 GW by 2030**.

➢ India is also targeting to reduce India's total projected carbon emission by 1 billion tonnes by 2030, reduce the carbon intensity of the **nation's economy by less than 45% by the end of the decade**, achieve net-zero carbon emissions by 2070.

What is the Present Status of Renewable Energy in India?

➢ **The total installed capacity for renewable energy in India is 151.4 GW.**

  ○ The following is the breakup of total installed capacity for Renewables:

    ● Wind power: 40.08 GW

    ● **Solar Power: 50 GW**

    ● Biopower: 10.61 GW

    ● Small Hydro Power: 4.83 GW

    ● Large Hydro: 46.51 GW

  ○ **Present Solar Power capacity:**

    ● **45 solar parks** of aggregate capacity 37 GW have been approved in India.

      ■ Solar Parks in Pavagada (2 GW), Kurnool (1 GW) and Bhadla-II (648 MW) are included in the top 5 operational solar parks of 7 GW capacity in the country.

      ■ The **world's largest renewable energy park of 30 GW capacity solar-wind hybrid project is under installation in Gujarat**.

What are the Challenges?

➢ **Heavily Dependent on Imports:**

  ○ India doesn't have enough module and PV cell manufacturing capacity.

    ■ The current solar module manufacturing capacity is **limited to 15 GW per year, whereas the domestic production is around 3.5 GW only.**

      ◆ Further, out of the 15 GW of module manufacturing capacity, **only 3-4 GW of modules are technologically competitive** and worthy of deployment in grid-based projects.

➢ **Raw Material Supply:**

  ○ The **silicon wafer**, the most expensive raw material, is not manufactured in India.

  ○ It currently imports 100% **silicon wafers** and around 80% cells.

    ● Further, other key raw materials, such as **silver and aluminum metal pastes for making electrical contacts, are also almost 100% imported**.

What are Government Initiatives?

➢ **PLI scheme to Support Manufacturing:**

  ● The Scheme has provisions for **supporting the setting up of integrated manufacturing units of high-efficiency solar PV modules** by **providing Production Linked Incentive (PLI) on sales of such solar PV modules**.

➢ **Domestic Content Requirement (DCR):**

  ○ Under some of the current schemes of the **Ministry of New & Renewable Energy (MNRE)**, namely Central Public Sector Undertaking (CPSU) Scheme Phase-II, **PM-KUSUM**, and Grid-connected **Rooftop Solar Programme** Phase-II, wherein **government**

Note:

subsidy is given, it has been mandated to source solar PV cells and modules from domestic sources.

- Further, the government made it mandatory to procure modules only from an **Approved List of Manufacturers (ALMM)** for projects that are connected to state/ central government grids.

➢ **Imposition of Basic Customs Duty on import of solar PV cells & modules:**

○ The Government has announced the imposition of **Basic Customs Duty (BCD)** on the import of solar PV cells and modules.

- Further, it has imposed a 40% duty on the import of modules and a 25% duty on the import of cells.

- Basic custom duty is the **duty imposed on the value of the goods at a specific rate.**

➢ **Modified Special Incentive Package Scheme (M-SIPS):**

○ **It's a scheme** of the **Ministry of Electronics & Information Technology.**

- The scheme mainly provides a **subsidy for capital expenditure on Pv cells and modules – 20% for investments in Special Economic Zones (SEZs) and 25% in non-SEZ.**

Pre-Summit of Tiger Range Countries

Why in News?

India has hosted the Pre-Summit meeting of **Tiger Range Countries (TRCs)**.

➢ The **Tiger Range Countries Summit is scheduled to be held at Vladivostok, Russia** on 5th September 2022.

➢ In January 2022, the **4th Asia Ministerial Conference on Tiger conservation** was held.

➢ India's **National Tiger Conservation Authority** has also decided to introduce guidelines for the reintroduction of tigers that can be used by other Tiger Range Countries.

What are the Highlights of the Meeting?

➢ The meeting was attended by 12 tiger range countries **except for China and Indonesia.**

○ There are **13 Tiger Range Countries (TRC):** India, Bangladesh, Bhutan, Cambodia, Lao PDR (People's Democratic Republic), Malaysia, Myanmar, Nepal, Russia, Thailand, Viet Nam, China and Indonesia.

➢ India is committed to bringing all potential tiger habitats within the country under the tiger reserve network.

➢ The meeting aims to **finalise the declaration on tiger conservation to be adopted at the Summit.**

What is the Significance of Tiger Conservation:

➢ **Vital in Regulating Ecological Processes:**

○ Tigers, the top predators in the ecosystem, are vital in **regulating and perpetuating ecological processes.**

- Forests are known to provide **ecological services** like clean air, water, pollination, temperature regulation etc.

➢ **Maintaining Food Chain:**

○ It is a **top predator which is at the apex of the food chain** and keeps the population of wild ungulates (primarily large mammals) in check.

○ Thus, Tiger **helps in maintaining the balance between prey herbivores** and the vegetation upon which they feed.

What is the Conservation Status of Tiger?

➢ **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.

What is the Indian Scenario in Tiger Conservation?

➢ India is home to **52 Tiger Reserves covering approximately 75,000 Sq Km area in 18 States.**

➢ India is home to approximately **75% of the wild tigers at global level.**

➢ India achieved the **goal of doubling the tiger numbers in 2018 itself**, four years in advance **from the targeted year 2022.**

➢ 17 Tiger Reserves in the country **have got CA|TS international accreditation** and two Tiger Reserves (**Sathyamangalam** and **Pilibhit**) have got International **Tx2 Award.**

➢ India is having bilateral agreements and MoU with several **Tiger Range Countries and is working very closely with Cambodia, for technical assistance towards bringing back wild tigers**.

Note:

TIGER RESERVES
IN INDIA

Soil Mapping

Why in News?

Recently, **Food and Agriculture Organization (FAO)** started a project to digitally map soil nutrients in **sub-Saharan Africa (SSA)** and central America to increase efficiency in using fertilizers.

➢ Also, it will organize and improve existing soil maps.

What is Soil Mapping?

➢ **About:**
  ○ **Soil Mapping** is the process of **delineating natural bodies of soils, classifying and grouping the delineated soils into map units**, and capturing soil property information for interpreting and depicting soil spatial distribution on a map.

➢ **Benefits**:
  ○ It will enhance the understanding of what types of nutrients our soils and crops need.
  ○ Further, it will reduce waste when applying fertilizers and increase their effectiveness.

What is the Project all about?

➢ **About:**
  ○ A **United Nations** project is digitally mapping soil nutrients in sub-Saharan Africa (SSA) and central America to increase efficiency in using fertilisers.

The project is being carried out by **Food and Agriculture Organization (FAO).**

  ○ It would foster the creation of national **soil databases and soil information systems** as public goods to be used by policymakers.
  ○ Further, the private sector, and especially farmers can generate long-term benefits from it.
  ○ It will also improve short-term flexibility to adapt to trends in fertilizer markets and climate dynamics without compromising output.

➢ **Need:**
  ○ There were **unsustainable agricultural practices, a lack of resources and capacity development, and nutrient underuse** in sub-Saharan Africa (SSA), which has resulted in **significant soil nutrient depletion, low crop yields, and poverty**, leaving many farm families in a scenario of vulnerability and food insecurity.
  ○ Many African countries lack policies regulating soil as well as the capacity, knowledge and experience to plan and implement sustainable soil management programmes.
  ○ **Africa's Total Factor Productivity growth,** especially in the sub-Sahara region, **does not match up to the growth of other developing regions.**
    ● Total factor productivity growth is the difference between the growth of output and the growth of a combination of all factor inputs, usually labour and capital.

What is FAO?

➢ The **Food and Agriculture Organization (FAO)** is a specialized agency of the **United Nations** that leads international efforts to defeat hunger.

➢ Its goal is to **achieve food security** for all and make sure that people have **regular access to enough high-quality food to lead active healthy lives**.
  ○ With 195 members - 194 countries and the **European Union**, FAO works in over 130 countries worldwide.

Recovery of Coral Reefs in Great Barrier Reef

Why in News?

According to the **Australian Institute of Marine Science's (AIMS)** annual long-term monitoring report,

Note:

drishti

Australia's northern and central **Great Barrier Reef (GBR)** has experienced high levels of coral reef cover over the past 36 years.

➢ The researchers also warned that the gains could be quickly reversed due to rising global temperatures.

What are the Key highlights of Report?

➢ **Quick Recovery:**

○ It states that **reef systems are resilient and capable of recovering after disturbances** such as accumulated heat stress, **cyclones**, predatory attacks.

○ It shows record levels of **region-wide coral cover in the northern and central GBR since the first ever Australian Institute of Marine Science (AIMS) survey was done.**

● Coral cover is measured by determining the increase in the cover of hard corals.

➢ **Growth in Central & Northern:**

○ The hard coral cover in northern Great Barrier Reef had reached 36% while that in the central region had reached 33%.

○ Meanwhile, coral cover levels declined in the southern region from 38% in 2021 to 34% in 2022.

➢ **Dominated by Acropora corals**:

○ The high level of recovery is fueled by the increase in the fast-growing **Acropora corals**, which are a dominant type in the Great Barrier Reef.

○ Incidentally, these fast-growing corals are also the most susceptible to environmental pressures such as rising temperatures, cyclones, pollution, crown-of-thorn starfish (COTs) attacks which prey on hard corals and so on.

➢ **Less Natural Calamities:**

○ Also, behind the recent recovery in parts of the reef, are the low levels of acute stressors in the past 12 months — no tropical cyclones, lesser heat stress in 2020 and 2022 as opposed to 2016 and 2017, and a decrease in COTs outbreaks.

What are the Issues Highlighted by the Report?

➢ **Climate change:**

○ The biggest threat to the health of the reef is **climate change**-induced heat stress, resulting in coral bleaching.

○ Despite several global initiatives sea temperatures are predicted to increase by 1.5°C to 2°C by the time the century nears its end.

○ According to the United Nations assessment in 2021, the world is going to experience heating at 1.5°C in the next decade, **the temperature at which bleaching becomes more frequent and recovery less impactful.**

➢ **Frequent Mass bleaching:**

○ In recent times mass bleaching events have become more frequent.

○ **The first mass bleaching event occurred in 1998 when the El Niño weather pattern caused sea surfaces to heat, causing 8% of the world's coral to die.**

○ The second event took place in 2002. But the longest and most damaging bleaching event took place from 2014 to 2017.

○ The aerial surveys by AIMS included 47 reefs and coral bleaching was recorded on 45 of these reefs.

● While the levels were not high enough to cause coral death it did leave sub-lethal effects such as reduced growth and reproduction.

What are Coral Reefs?

➢ **About:**

○ **Corals** are marine invertebrates or animals which **do not possess a spine**.

○ They are the largest living structures on the planet.

Note:

○ **Each coral is called a polyp and thousands of such polyps live together to form a colony, which grow when polyps multiply to make copies of themselves.**

○ Further, they are of **two types**:

- **Hard corals:**
    - They extract calcium carbonate from seawater to build hard, white coral exoskeletons.
        - ◆ They are in a way the **engineers of reef ecosystems** and measuring the extent of hard coral is a widely-accepted metric for measuring the condition of coral reefs.
- **Soft corals:**
    - They attach themselves to such skeletons and older skeletons built by their ancestors.
        - ◆ Soft corals also add their own skeletons to the hard structure over the years.
        - ◆ These growing multiplying structures gradually form coral reefs.

➢ **Significance:**

○ They support over 25% of marine biodiversity even though they take up only 1% of the seafloor.

○ The marine life supported by reefs further fuels global fishing industries.

- Besides, coral reef systems generate USD 2.7 trillion in annual economic value through goods and service trade and tourism.

What is Australia's Great Barrier Reef?

➢ **About:**

○ It is the world's largest reef system stretching across 2,300 km and having nearly 3,000 individual reefs.

○ Further, it hosts 400 different types of coral, gives shelter to 1,500 species of fish and 4,000 types of mollusc.

➢ **Significance:**

In pre-**Covid-19** times, the Reef generated USD 4.6 billion annually through tourism and employed over 60,000 people including divers and guides econ

---

Loss of Mangrove Cover on Katchal Island

Why in News?

Recently, a study by the **National Aeronautics and Space Administration (NASA)**, highlighted the loss of **mangrove cover** on Katchal island, part of India's **Nicobar**

archipelago.

It showed the extent to which mangroves had been lost globally over the past two decades.

What are Mangroves?

➢ **About**:

○ Mangroves are tropical plants that are adapted to lose, wet soils, salt water, and being periodically submerged by tides.

➢ Features:

○ **Saline environment:** They can survive under extreme hostile environments such as high salt and low oxygen conditions.

○ **Low oxygen:** Underground tissue of any plant needs oxygen for respiration. But in a mangrove environment, the oxygen in soil is limited or nil.

- For the purpose of breathing, they develop special roots called **pneumatophores.**

○ **Survival in Extreme Conditions:** With their roots submerged in water, mangrove trees **thrive in hot, muddy, salty conditions** that would quickly kill most plants.

○ **Viviparous:** Their seeds germinate while still attached to the parent tree. Once germinated, the seedling grows into a propagule.

- A **propagule is a vegetative structure that can become detached from a plant and give rise to a new plant**. Examples include a bud, sucker, or spore.

➢ **Significance:**

○ Mangroves **trap and cycle various organic materials, chemical elements, and important nutrients in the coastal ecosystem**.

○ They provide one of the basic food chain resources for marine organisms.

○ They provide **physical habitat and nursery grounds for a wide variety of marine organisms,** many of which have important recreational or commercial value.

○ Mangroves also, **serve as storm buffers by reducing wind and wave action in shallow shoreline areas**.

➢ **Area Covered:**

○ **Global Mangrove Cover:**

- The total mangrove cover in the world is one 1,50,000 sq kms.
- **Asia has the largest number of mangroves worldwide.**
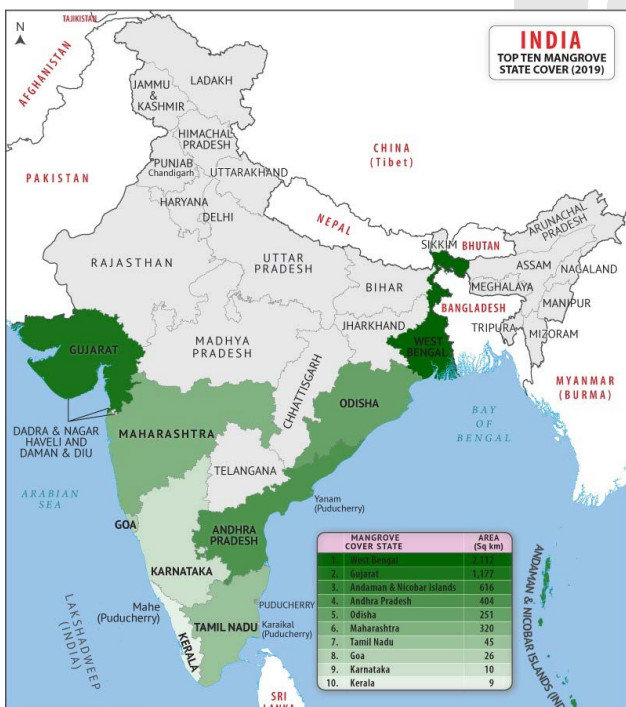   - South Asia comprises 6.8% of the world's mangrove cover.

- ○ **Indian Mangrove Cover:**
  - **India's contribution is 45.8%** total mangrove cover in South Asia.
  - According to the **Indian State Forest Report 2021,** Mangrove cover in India is 4992 sq. Km which **is 0.15% of country's total geographical area.**
  - **Largest Mangrove Forest: Sundarbans** in West Bengal are the largest mangrove forest regions in the world. It is listed as a **UNESCO World Heritage Site.**
    - The forest is home to the **Royal Bengal tiger**, **Gangetic dolphins** and **Estuarine crocodiles.**
  - **Bhitarkanika Mangroves:** The second largest mangrove forest in India is **Bhitarkanika** in Odisha created by the two river deltas of River **Brahmani and Baitarani.**
    - It is one of the most significant **Ramsar wetlands** in India.
  - **Godavari-Krishna Mangroves, Andhra Pradesh:** The **Godavari-Krishna mangroves** extend from Odisha to Tamil Nadu.

INDIA
TOP TEN MANGROVE STATE COVER (2019)

	MANGROVE COVER STATE	AREA (Sq km)
1.	West Bengal	2,112
2.	Gujarat	1,177
3.	Andaman & Nicobar Islands	616
4.	Andhra Pradesh	404
5.	Odisha	251
6.	Maharashtra	320
7.	Tamil Nadu	45
8.	Goa	26
9.	Karnataka	10
10.	Kerala	9

What are the Key Highlights of the Study?

➢ The study shows the real extent of tidal wetlands lost between 1992 and 2019 on Katchal Island in the Nicobar Islands in the eastern Indian Ocean.

➢ The mangroves had the **highest ratio of loss** to gain among the three types of tidal wetlands it studied.

  - ○ The other two were tidal flats and marshes.

➢ Mangroves showed an estimated net decrease of 3,700 square kilometers between 1999 and 2019.

  - ○ Despite the losses, there have been **gains of 2,100 square kilometers** indicating the considerable dynamism of these systems.

➢ Reasons for loss:

  - ○ **Natural cause:**
    - There was an earthquake with a magnitude of 9.2 during the **Tsunami** of 2004, during which the islands experienced up to 3 meters (10 feet) of land subsidence.
      - This **submerged many mangrove ecosystems,** resulting in a loss of more than 90% of mangrove extent in some areas.
  - ○ **Other Factors:**
    - **Sea level rise**, shoreline erosion, storms, altered sediment flow, and subsidence.

➢ Human Induce:

  - ○ Some 27% of the losses and gains were directly caused by human activity.
    - They alter wetlands through development, water diversion projects, or by converting the land to **agriculture** or aquaculture.

➢ Present Status:

  - ○ It's very difficult that the earlier mangrove cover will ever come back but there has been a rise in their numbers in other places since they propagate themselves through **propagules.**

■ ■ ■

Note:

History

Highlights

- *Quit India Movement*

Quit India Movement

Why in News?

On 8th Aug 2022, India completed **80 years of Quit India Movement** also known as **August Kranti.**

What was the Quit India Movement?

➢ On 8th August 1942, **Mahatma Gandhi** called to end **British rule and launched the Quit India Movement** at the session of the All-India Congress Committee in Mumbai.

➢ Gandhiji gave the call **"Do or Die" in his speech delivered at the Gowalia Tank Maidan**, now popularly known as **August Kranti Maidan.**

➢ Aruna Asaf Ali popularly known as the **'Grand Old Lady'** of the Independence Movement is **known for hoisting the Indian flag at the Gowalia Tank Maidan** in Mumbai during the Quit India Movement.

➢ The slogan **'Quit India' was coined by Yusuf Meherally,** a socialist and trade unionist who also served as Mayor of Mumbai.
  - ○ Meherally had also coined the slogan **"Simon Go Back".**

What caused the Movement?

➢ **Failure of Cripps Mission:** The immediate cause for the movement was the collapse of Cripps Mission.
  - ○ Under Stafford Cripps, the mission was sent **to resolve the Indian question of a new constitution and self-government.**
  - ○ It failed because it **offered India not complete freedom but the Dominion Status** to India, along with the **partition.**

➢ Indian Involvement in World War II without prior consultation:
  - ○ The British assumption of unconditional support from India to the British in **World War II** was not taken well by the **Indian National Congress.**

➢ **Prevalence of anti-British Sentiment:**
  - ○ The anti-British sentiments and **demand for full-independence had gained popularity** among indian masses.

➢ **Centralisation of Many Small Movements:**
  - ○ The two decades of mass movement which were being conducted on a much more radical tone under the leadership of the various associated and affiliated bodies of the Congress, like All India Kisan Sabha, Forward Bloc etc. **had already prepared the ground for the movement.**

➢ **Shortage of Essential Commodities:**
  - ○ The economy was **also in shatters as a result of World War II.**

What were the Demands of the Movement?

➢ The demand was **to end the British rule in India with immediate effect** to get the cooperation of Indians in World War-II against fascism.

➢ There was a demand **to form a provisional government** after the withdrawal of the Britishers.

What were the Phases of Movement?

➢ **First Phase:**
  - ○ **First Phase**, urban revolt, marked by strikes, boycott and picketing (protesting), which were quickly suppressed.
  - ○ There were **strikes and demonstrations all over the country** and workers provided the support by not working in the factories.
  - ○ Gandhiji was soon **imprisoned at Aga Khan Palace in Pune** and almost all leaders were arrested.

➢ **Second Phase:**
  - ○ The focus **shifted to the countryside, which witnessed a major peasant rebellion**, marked by destruction of communication systems, such as railway tracks and stations, telegraph wires and poles, **attacks on government buildings or any other visible symbol of colonial authority.**

➤ **Third Phase:**
- ❍ The last phase witnessed the **formation of national governments or parallel governments** in isolated pockets (Ballia, Tamluk, Satara etc.)

What were the Successes and Failures of the Movement?

➤ **Successes:**
- ❍ **Rise of Future Leaders:**
  - Underground activities were taken by leaders that included **Ram Manohar Lohia, J.P. Narayan, Aruna Asaf Ali, Biju Patnaik**, Sucheta Kriplani, etc which later emerged as prominent leaders.
- ❍ **Women Participation:**
  - **Women took active participation** in the movement. Female leaders like **Usha Mehta helped set up an underground radio station** which led to the awakening about the movement.
- ❍ **Rise of Nationalism:**
  - A greater **sense of unity and brotherhood emerged** due to the Quit India Movement. Many students **dropped out of schools and colleges, people gave up their jobs** and withdrew money from the banks.
- ❍ **Paved the way for Independence:**
  - While the Quit India campaign was crushed in 1944, with the **British refusing to grant immediate independence, saying it could happen only after the war had ended,** they came to the important realization that India was ungovernable in the long run due to the cost of World War II.

- It changed the **nature of political negotiations with the British**, **ultimately paving the way for India's independence.**

➤ **Failures:**
- ❍ **Brutal Repression:**
  - The movement **saw violence in some places** which was not premeditated.
  - The movement was **violently suppressed by the British** – people were shot, lathi-charged, villages burnt and enormous fines imposed.
  - Over 1,00,000 people were arrested and the **government resorted to violence in order to crush the agitation**.
- ❍ **Lack of Support:**
  - **Muslim League, the Communist Party of India and the Hindu Mahasabha did not support** the movement. The Indian bureaucracy also **did not support** the movement.
    - The League was **not in favour of the British leaving India** without partitioning the country first.
    - The Communist party **supported the British since they were allied with the Soviet Union.**
    - The Hindu Mahasabha **openly opposed the call for the Quit India Movement** and boycotted it officially under the apprehension that the movement would create internal disorder and would endanger internal security during the war.
  - Meanwhile, Subhas Chandra Bose, organised the **Indian National Army** and the **Azad Hind governmen**t from outside the country.
  - Many Congress members like **C Rajagopalachari resigned from the provincial legislature** as they did not favour Mahatma Gandhi's idea.

■■■

Note:

Geography

Aridity Anomaly Outlook Index: IMD

Why in News?

Recently, **Indian Meteorological Department (IMD)** has released the **Aridity Anomaly Outlook (AAO) Index** of July 2022, which says at least **85% of districts** face **arid conditions across India.**

What is the Aridity Anomaly Outlook Index?

➢ **About:**
  ○ The index monitors **agricultural drought, a situation when rainfall** and soil moisture are inadequate to support healthy crop growth till maturity, causing crop stress.
  ○ An anomaly from the normal value signifies **a water shortage in these districts that could directly impact agricultural activity.**
  ○ It is Developed by the **India Meteorological Department (IMD).**

➢ **Characteristics:**
  ○ A **real-time drought index in which water balance is considered.**
  ○ The Aridity Index (AI) is computed f**or weekly or two-week periods.**
    • For each period, **the actual aridity for the period is compared to the normal aridity for that period**.
  ○ Negative values indicate a surplus of moisture while positive values indicate moisture stress.

➢ **Parameters:**
  ○ **Actual evapotranspiration and calculated potential evapotranspiration**, which require temperature, wind and solar radiation values.

- **Actual evapotranspiration** is the quantity of water that is actually removed from a surface due to the processes of evaporation and transpiration.
- **Potential evapotranspiration** is the maximum attainable or achievable evapotranspiration for a given crop due to evaporation and transpiration.

➢ **Applications:**
  ○ Impacts of drought in agriculture, especially in the tropics where defined wet and dry seasons are part of the climate regime.
  ○ Both winter and summer cropping seasons **can be assessed using this method.**

What are the Findings?

➢ Only 63 of 756 districts are non-arid, while 660 are facing different degrees of aridity — **mild, moderate and severe.**

➢ Some 196 districts are in the grip of a 'severe' degree of **dryness** and **65 of these are in Uttar Pradesh (highest).**
  ○ **Bihar** had **the second highest number of districts** (33) experiencing arid conditions. The state also has a high rainfall deficit of 45%.

➢ Other districts facing '**severe arid' conditions** are Jharkhand, Haryana, Madhya Pradesh, Delhi, Telangana, Maharashtra, Andhra Pradesh, Jammu and Kashmir, Punjab, West Bengal, Rajasthan, Karnataka and Tamil Nadu.

➢ The SPI on the DEWS platform also **highlights a persisting rainfall deficit in these areas in the last six months**.

➢ Arid conditions have impacted the ongoing **kharif sowing**, as the area sown under different kharif crops as of July, 2022, was less by **13.26 million hectares compared to the corresponding period in 2021.**

Note:

What is the Standardised Precipitation Index (SPI)?

➢ The SPI is a widely used index to **characterize meteorological drought on a range of timescales.**

➢ On short timescales, the SPI is closely related to soil moisture, while at longer timescales, the SPI can be related to groundwater and reservoir storage.

➢ The SPI on the **Drought Early Warning System (DEWS), a real-time drought monitoring platform** managed by the Indian Institute of Technology, Gandhinagar (IIT-G) platform **highlights a persisting rainfall deficit in these areas in the last six months**.

➢ UP, Jharkhand, Bihar, West Bengal and some parts of the North East are under extreme drought situation and agriculture of these regions might be affected.

What is the India Meteorological Department (IMD)?

➢ IMD was **established in 1875.**

➢ It is an agency of the **Ministry of Earth Sciences.**

➢ It is the principal agency responsible for meteorological observations, weather forecasting and seismology.

■■■

Security

Highlights

- EX VINBAX 2022
- Exercise Pitch Black
- Exercise Al NAJAH
- MiG-21 Crash
- Anti-Tank Guided Missiles (ATGM)
- Tejas Jets for Delivery

EX VINBAX 2022

Why in News?

The 3rd edition of **Vietnam-India Bilateral Army Exercise "Ex VINBAX 2022"** is being conducted in India.

➢ India and Vietnam share a Comprehensive Strategic Partnership and defence cooperation is a key pillar of this partnership. Vietnam is an important partner in **India's Act East policy** and the **Indo-Pacific vision**.

What is Ex VINBAX?

➢ **About:**
  ❍ It is a **field training exercise with enhanced scope from previous editions of bilateral exercise.**
  ❍ A **Humanitarian Assistance & Disaster Relief (HADR)** Demonstration and equipment display will showcase **India's capacity to undertake rescue and relief operations** during natural and manmade disasters utilising indigenous solutions.
  ❍ It aims to strengthen mutual confidence, interoperability and **enable sharing of best practices between the Indian Army** and Vietnam People's Army.
  ❍ It will provide an **opportunity to the troops of both the Contingents to learn about the social and cultural heritage** of each other.

➢ **Theme:**
  ❍ Employment and deployment of an Engineer Company and a Medical Team as part of **United Nations** Contingent for Peacekeeping Operations.

Exercise Pitch Black

Why in News?

Indian Force will join 16 other nations later this month for **Exercise Pitch Black**, hosted by the Australian Air Force.

What do we know about Exercise Pitch Black?

➢ **About:**
  ❍ It's a **biennial exercise** to enhance interoperability and strengthen relationships among participants.
  ❍ It will provide **Indian Air Force a unique opportunity to exchange knowledge and experience** with these nations in a dynamic warfare environment.
    - It provides all nations' personnel with **experience in working with aircraft, systems, and work practices, in northern Australia's unique environment**, that would otherwise be unfamiliar.
  ❍ It will take place in the **Southern hemisphere** which is hosted by the **Royal Australian Air Force (RAAF).**
    - The participants nations this year are Australia, Canada, France, Germany, Indonesia, India, Japan, Malaysia, Netherlands, New Zealand, the Philippines, South Korea, Singapore, Thailand, UAE, the U.K, and the U.S.

➢ **Other Exercises:**
  ❍ **Bilateral:**
    - Ex AUSTRA HIND (Army)

Note:

drishti

- **Ex AUSINDEX** (Navy).
  - ○ **Multilateral:**
    - **Malabar Exercise** (With the Navies of USA, India, Australia and Japan)

Exercise Al NAJAH

Why in News?

Indian Army and Royal Army of Oman will conduct their joint Military Exercise AL NAJAH-IV from 1st to 13th of August 2022.

What do we Know about Exercise Al NAJAH?

- ➢ **About:**
  - ○ It's the fourth edition of the exercise.
  - ○ The scope of the exercise includes **professional interaction**, mutual understanding of drills & procedures, establishment of joint command & control structures and elimination of terrorist threats.
  - ○ The joint exercise would focus on **Counter Terrorism Operations, Regional Security Operations,** and **Peace Keeping Operations under United Nations charter** apart from organising joint physical training schedules, tactical drills, techniques and procedures.

- ➢ **Other exercises with Oman:**
  - ○ **Navy exercise:**
    - Naseem-Al-Bahr
  - ○ **Air Force:**
    - Eastern Bridge

What is the Strategic Significance of Oman for India?

- ➢ Oman is a strategic partner of India in the Gulf and an important interlocutor at the **Gulf Cooperation Council (AGCC)**, **Arab League** and **Indian Ocean Rim Association (IORA)** fora.
- ➢ Oman is at the gateway of **Strait of Hormuz** through which India imports one-fifth of its oil imports.
- ➢ The two countries across the **Arabian Sea** are linked by geography, history and culture and enjoy warm and cordial relations, which are attributed to historical maritime trade linkages.

MiG-21 Crash

Why in News?

Recently, **a MiG-21 Bison aircraft** of the **Indian Air Force (IAF)** crashed in Barmer, Rajasthan killing the two pilots aboard the trainer version of the fighter aircraft.

Currently, the IAF has around 70 Mig-21 aircraft and 50 Mig-29 variants.

There are **four squadrons of MiG-21 Bison aircraft** currently in service in the IAF with each squadron comprising 16-18 aircraft, including two trainer versions.

What drives the Phase out of Aircrafts?

- ➢ The Indian Air Force (IAF) plans to phase out the four MiG-21 fighter squadrons with one of them set to retire from service in September 2022.

➢ The IAF also plans to start the phasing out of the **three squadrons of MiG-29 fighter jets in the next five years.**

➢ It is part of the **IAF's modernization drive**.

➢ The plan is to retire **all four MiG-21 squadrons by 2025**.

What is MiG-21?

➢ The **Mikoyan-Gurevich MiG 21 is a supersonic jet fighter and interceptor aircraft,** designed by the **Mikoyan-Gurevich Design Bureau in the Soviet Union.**

　○ MiG is a product of the Soviet Union which entered into service in 1959.

➢ Approximately 60 countries on four continents have **flown the MiG-21, and it still serves many nations six decades after its maiden flight.**

➢ India inducted the **MiG-21 in 1963 and got full technology transfer and rights to license-build** the aircraft in the country.

➢ Russia stopped producing the aircraft in 1985, while India continued operating the upgraded variants.

Why so many MiG-21 crashes in India?

➢ Over the last ten years, **108 air accidents and losses have taken place involving all arms of the military – IAF, Navy, Army, and Coast Guard.**

➢ Out of these, **21 crashes have involved the Mig-21 Bison and its variants**, though the IAF flies mostly the former now.

　○ Th**e high rate of accidents** earned the aircraft the nickname of **'Flying Coffin".**

➢ There is no single, common reason for military aircraft crashes. They can range from **weather, human error, technical error to bird hits**.

➢ The MiG-21 is a single engine fighter, and that could also be a **cause for some of the crashes**.

　○ It is a single engine fighter and when it loses that engine, it needs to be re-started. More often than not **it re-lights but it takes a finite amount of time to re-light any engine**, so if you are below the minimum height, you have to leave the aircraft.

Anti-Tank Guided Missiles (ATGM)

Why in News?

Recently, **Defence Research and Development Organisation (DRDO)** has successfully test fired indigenously developed **Laser-Guided Anti-Tank Guided Missiles (ATGM)**.

What do we need to know about the ATGM?

➢ **Anti-Tank Guided Missiles:**

　○ ATGMs are primarily **designed to hit and destroy heavily armored military vehicles.**

　　● The missiles can be transported by a **single soldier, to larger tripod-mounted weapons**, which require a squad or team to transport and fire, to vehicle and aircraft mounted missile systems.

　○ This type of guided missiles rely on an **electro-optical imager (IIR)** seeker, a laser or a **W-band radar seeker** in the nose of the missile.

　　● These are **'fire-and-forget'** missiles where the **operator can retreat** right after firing as **there is no more guidance required**

➢ **Laser-Guided ATGM:**

　○ The all-indigenous Laser Guided ATGM employs a **tandem High Explosive Anti-Tank (HEAT)** warhead to defeat **Explosive Reactive Armour (ERA)** protected armoured vehicles.

　○ The ATGM has been developed with multi-platform launch capability and is **currently undergoing technical evaluation trials** from the 120 mm rifled gun of MBT Arjun.

What are some other Anti-tank Missiles?

➢ **Helina:**

　○ It has a **maximum range of seven kilometers** and has been designed and developed for integration on the weaponized version of the **ALH (Advanced Light Helicopter).**

　○ The missile system has **all-weather, day, and night capability** and can defeat **battle tanks with conventional armour as well as explosive reactive armour.**

Note:

> **The Nag:**
>   ○ It is a **third-generation fire-and-forget** missile developed for mechanized formations to engage **heavily fortified enemy tanks.**

> **MPATGM:**
>   ○ It stands for **Man-Portable Anti-Tank Guided Missile** which has a range of 2.5 kilometers, with **fire-and-forget and top attack capabilities** for infantry use.

> **SANT:**
>   ○ It is a **Smart Stand-off Anti-Tank Missile** being developed for launch from the **Mi-35 Helicopter** for the Air Force's anti-tank operations.

SANT (STANDOFF ANTI TANK)

A 12-km range version of the HELINA air to surface munition, the weapon is undergoing carriage trials on IAF Mi-35s.

> **ATGM for MBT Arjun:**
>   ○ **ATGM for MBT Arjun** is a laser-guided, precision-guided munition that is launched from the 120mm rifled gun of the Arjun tank to engage and defeat **Explosive Reactive Armour-protected armoured targets**.

Tejas Jets for Delivery

Why in News?

   The Government of India has offered to sell **18 Light-Combat Aircraft (LCA)** "**Tejas**" to **Malaysia**.

> **Argentina, Australia, Egypt, the United States, Indonesia, and the Philippines** were also interested in the single-engine jet.

> The Indian government gave a **USD6 billion contract to state-owned Hindustan Aeronautics Limited** in 2021 for 83 of the locally produced Tejas jets for delivery starting around 2023.

Note:

What is Tejas Aircraft?

- **About:**
  - **The Light Combat Aircraft (LCA)** programme was started by the Government of India in 1984 when they established the **Aeronautical Development Agency (ADA)** to manage the LCA programme.
  - It replaced the **ageing Mig 21 fighter planes.**
- **Designed by:**
  - Aeronautical Development Agency under the **Department of Defence Research and Development.**
- **Manufactured by:**
  - State-owned **Hindustan Aeronautics Limited (HAL).**

- **Features:**
  - The **lightest, smallest and tailless** multi-role supersonic fighter aircraft in its class.
  - Designed to carry a range of **air-to-air**, **air-to-surface, precision-guided, weapons**.
  - Air to air refuelling capability.
  - Maximum payload capacity of 4000 kg.
  - It can attend the maximum speed of Mach 1.8.
  - The range of the aircraft is 3,000km
- **Variants of Tejas:**
  - **Tejas Trainer:**
    - 2-seater operational conversion trainer for training air force pilots.
  - **LCA Navy:**
    - Twin- and single-seat carrier-capable for the Indian Navy.
  - **LCA Tejas Navy MK2:**
    - This is phase 2 of the LCA Navy variant.
  - **LCA Tejas Mk-1A:**
    - This is an improvement over the LCA Tejas Mk1 with a higher thrust engine.

■ ■ ■

Note:

Miscellaneous

Highlights

- *Lawn Bowls Sport*
- *ONGC Para Games 2022*

Lawn Bowls Sport

Why in News?

In **Commonwealth Games 2022**, Indian women's team scripted history by winning the **country's first-ever Gold Medal** in **"Women's Four Lawn Bowls"** Sport.

What is Lawn Bowls Sport?

- ➢ **About:**
  - ❍ Lawn bowls is often considered a mix of "**Ten-pin Bowling"** and the winter sport of **"Curling"**.
    - While in ten-pin bowling, **the goal is to take down all the pins at the end of a lane**.
      - ■ **In lawn bowling**, the team has to get the **'Bowl' (the Ball)** closest to a target, which is known as the **'Jack'.**
  - ❍ Bowls are **mostly spherical ball-like objects**, typically made of **wood, rubber or plastic resin**, having flattened sides.
- ➢ **Playing Process:**
  - ❍ Players stand on either side of a 600mm long and 360mm wide mat and take turns **rolling these bowls in an attempt to get closest to the jack**.

- The jack is either **white or yellow in colour** and is **smaller and lighter than the bowl.**
  - ❍ In the fours event, **the first bowler, called the lead**, is followed by the second and the third.
    - **The last bowler is called the 'skip'** and is the **leader of the team.**
    - Each team member **gets two bowls per round.**
  - ❍ Umpires use a device called **"Box Measure"** which uses a string to measure the distance between the jack and the bowls.

    India's Participation:
  - ❍ Since its inaugural edition in 1930, **lawn bowls has been a part of the Commonwealth Games.**
    - So far, **England, Australia and South Africa** have won the most medals in the game, having won 51, 50 and 44 medals respectively.
    - Scotland has won 20 gold medals at the Commonwealth Games so far.
  - ❍ **India has participated in lawn bowls events** at the 2010, 2014 and 2018 Commonwealth Games.
    - The country's previous best was at **fourth place in the 2010 women's triples lawn bowling event in Delhi** and in the **2014 men's fours event at the Commonwealth Games in Glasgow.**

What are Commonwealth Games?

- ➢ **About:**
  - ❍ **Commonwealth Games** is a multisport event contested by **athletes from the Commonwealth of Nations.**
  - ❍ **The Commonwealth Games Federation (CGF)** is the organisation responsible for the **direction and control** of the Commonwealth Games and Commonwealth Youth Games.
    - It is an organisation **headquartered and incorporated in the UK**, but working across **72 member nations and territories**.

Note:

- ➢ **Evolution:**
  - ❍ **Australian-born Astley Cooper** first broached the idea of such games in 1891, calling for **sports competitions** to be held so as to demonstrate the unity of the British Empire.
    - ● In 1911 a **"Festival of the Empire"** was organized, celebrating the coronation of King George V.
      - ■ Teams from the United Kingdom, Australasia (Australia and New Zealand), Canada, and South Africa participated in a series of events that included **athletics, boxing, wrestling, and swimming.**
  - ❍ The 1954 event, in Vancouver, marked the first time the **Games were contested by countries that were no longer part of the British Empire.**
- ➢ **Opening Ceremony:**
  - ❍ Akin to the Olympic Games, the **Commonwealth Games also begin with an opening ceremony.**
  - ❍ It typically starts with **hoisting the host country's flag** and a **performance of its national anthem.**
  - ❍ After an artistic performance, **athletes parade into the stadium**, starting with those from the **country that hosted the previous Games** and then the other countries, grouped first by region and then in alphabetical order.

ONGC Para Games 2022

Why in News?

Recently, the Government of India inaugurated the 4th Oil and Natural Gas Corporation (ONGC) Para Games in New Delhi.

What do we know about ONGC Para Games?

- ➢ **About:**
  - ❍ **ONGC Para Games** is a special Human Resource Initiative to provide **Equal Opportunities** to **Persons with Disabilities PwDs** in all walks of corporate life.
    - ● The intent is to contribute in the **holistic development of the Human Resources** of the **public enterprises**, who are our most valuable asset, in the pursuit of **Energy**.
- ➢ **Participants:**
  - ❍ Employees of **eight central oil and gas public enterprises** are participating in the **4th ONGC Para Games**, being organized by **Oil and Natural Gas Corporation Limited (ONGC)** during 2-4 August 2022.
- ➢ **International Level:**
  - ❍ ONGC organizes the Para Games in an international format **from its very first edition in 2017** with the help of the **Paralympic Committee of India**, where 120 ONGC PwD employees participated in games like **athletics, badminton, table tennis and wheelchair race.**

What is ONGC?

- ➢ ONGC is a **public sector petroleum company**.
- ➢ Under the leadership of **Pandit Jawaharlal Nehru**, the foundation stone of ONGC was laid in **1955 as the Oil and Gas Division** under the **Geological Survey of India**.
- ➢ It may be noted that on 14th August 1956, it was renamed as the **Oil and Natural Gas Commission** and in 1994 the **Oil and Natural Gas Commission was converted into a corporation.**
- ➢ In the year 1997 it was accepted as one of the **Navaratnas by the Government of India**, while in the year 2010 it was given the status of **Maharatna**.

What are the Paralympic Games?

- ➢ The **Paralympic Games or Paralympics** is the **largest international event** for **disabled athletes** and societal change and takes place **shortly after every Olympic Games** in the same host city.
- ➢ The Paralympic Games are held **every two years**, alternating between the summer and winter Paralympic Games.
- ➢ The Paralympics has grown from a small gathering of **British World War II** veterans in 1948 to become **one of the largest international sporting events** by the early 21st century.
- ➢ The first Paralympic Games was held in **1960 in Rome**.

■■■

Note:

Key Points

Details

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Summary

Key Points

Details

Summary