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Current Affairs (CONSOLIDATION)

**JULY 2021
(PART – II)**

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Polity and Governance

Highlights

- Provisions of 97th Amendment Struck Down: SC
- Challenge to Restitution of Conjugal Rights
- Plea Challenges Sedition Law
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- Right to be Forgotten
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- New Commission for Air Quality Management
- Essential Defence Services Bill, 2021

Provisions of 97th Amendment Struck Down: SC

Why in News

Recently, the **Supreme Court (SC)** upheld a 2013 judgment of the Gujarat High Court and struck down certain provisions of the **Constitution (97th Amendment) Act, 2011**.

- It gave a major boost for **federalism** as the **97th Amendment** shrank the exclusive authority of **States** over its **co-operative societies**, a sector considered as a massive contributor to the economy.

Key Points

- **Issue:**
 - Part IXB, introduced into the Constitution through the **97th Amendment**, **dictated the terms for running co-operative societies**.
 - The provisions in the Amendment, **passed** by Parliament **without getting them ratified by State legislatures** as required by the Constitution.

Co-operatives

- According to the **International Labour Organisation (ILO)**, a cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.
- There are **many types of cooperatives** such as Consumer Cooperative Society, Producer Cooperative Society, Credit Cooperative Society, Housing Cooperative Society and Marketing Cooperative Society.
- The **United Nations General Assembly** had declared the year **2012 as the International Year of Cooperatives**.
- India is an agricultural country and laid the foundation of **World's biggest cooperative movement in the world**.
 - Recently, a separate '**Ministry of Co-operation**' has been created by the Central Government to give a new push to the cooperative movement.
- It went to the extent of **determining the number of directors** a society should have or their **length of tenure** and even the **necessary expertise** required to become a member of the society.

Note:

Other Major Provisions of the 97th Amendment

- The word “cooperatives” was added after “unions and associations” in **Article 19(1)(c)** under **Part III of the Constitution**. This enables all the citizens to form cooperatives by giving it the status of a fundamental right of citizens.
- A new **Article 43B** was added in the **Directive Principles of State Policy** (Part IV) regarding the “promotion of cooperative societies”.
- **Central Government’s Argument:**
 - It justified that the government was **injecting ‘professionalism’ and autonomy** into the functioning of the societies.
 - **Lack of accountability** by the members has **led to poor services and low productivity**.
 - Even **elections are not held on time**. Co-operatives **need to run on well-established democratic principles**.
- **SC’s Ruling:**
 - **Exclusive Legislation of States:**
 - The constitution has been described as **quasi-federal** in that, so far as legislative powers are concerned, though **there is a tilt in favour of the Centre vis-à-vis the States** given the **federal supremacy** principle.
 - **Quasi-federalism** means an intermediate form of state between a unitary state and a federation.
 - However, within their own sphere, the **States have exclusive power to legislate on topics reserved exclusively to them**.
 - **Part IX B**, which consists of **Articles 243ZH to 243ZT**, has “significantly and substantially impacted” **State legislatures’ “exclusive legislative power”** over its co-operative sector under **Entry 32 of the State List**.
 - The court pointed out how **Article 243ZI** makes it clear that a **State may only make law on the incorporation, regulation and winding up of a society** subject to the provisions of **Part IXB** of the 97th Amendment.
 - **Not Ratified by the States:**
 - It held that the **97th Constitutional Amendment required ratification by at least one-half of the state legislatures as per Article 368(2)** of the Constitution, since it dealt with an entry which

was an exclusive state subject (co-operative societies).

- Under **Article 368(2)**, Parliament can amend the Constitution by passing a Bill with a **special majority**.
- Since such ratification was not done in the case of the 97th amendment, it was liable to be struck down.
- **Upheld the Validity of Provisions related to Multi State Cooperative Societies:**
 - It did not strike down the portions of **Part IXB** of the Amendment concerning ‘**Multi State Co-operative Societies (MSCS)**’ due to the **lack of ratification**.
 - When it comes to MSCS with objects not confined to one State, the **legislative power would be that of the Union of India** which is contained in **Entry 44 List I (Union List)**.

Lists to Differentiate Legislative Powers

- There are **three Lists** which provide for distribution of legislative powers (**under 7th Schedule to the Constitution**):
 - **Union List (List I)** - It contains **98 subjects (originally 97)** and comprises the **subjects which are of national importance** and admit of uniform laws for the whole of the country.
 - Only the Union Parliament can legislate with respect to these matters e.g. Defence, Foreign Affairs, Banking, Currency, Union Taxes, etc.
 - **State List (List II)** - It contains **59 subjects (originally 66)** and comprises **subjects of local or State interest**.
 - It lies within the legislative competence of the State Legislatures, viz. Public Order and Police, Health, Agriculture, etc.
 - **Concurrent List (List III)** - It contains **52 subjects (Originally 47)** with respect to which; both Union Parliament and the State Legislature have concurrent power of legislation. The Concurrent List (not found in any federal Constitution) was to serve as a device to avoid excessive rigidity to a two-fold distribution.
 - It is a ‘**twilight zone**’, as for not so important matters, the States can take initiative, while for the important matters, the Parliament can do so.

Note:



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- It is declared that **Part IXB of the Constitution is operative only insofar as it concerns multi-State cooperative societies** both within the various States and in the Union Territories.

Challenge to Restitution of Conjugal Rights

Why in News

The **Supreme Court (SC)** is going to hear a fresh challenge to the provision allowing restitution (recovery) of **conjugal rights** under **Hindu personal laws (Hindu Marriage act 1955)**.

Key Points

➤ Conjugal Rights:

- Conjugal rights are **rights created by marriage**, i.e. **the right of the husband or the wife to the society of the other spouse**.
- The **law recognises these rights**— both in **personal laws** dealing with marriage, divorce etc, and in **criminal law** requiring payment of maintenance and alimony to a spouse.
- **Section 9 of the Hindu Marriage Act** recognises one aspect of conjugal rights — the right to consortium and protects it by allowing a spouse to move court to enforce the right.
- The **concept of restitution of conjugal rights is codified in Hindu personal law** now, but has **colonial origins**.
 - Originating from **Jewish law**, the **provision for restitution of conjugal rights reached India** and other common law countries **through British Rule**.
 - The **British law treated wives as their husband's personal possession**, hence they were not allowed to leave their husbands.
- Similar provisions exist in **Muslim personal law as well as the Divorce Act, 1869**, which governs **Christian family law**.
 - Incidentally, in **1970, the U.K repealed** the law on restitution of conjugal rights.

➤ Challenged Provision:

- **Section 9** of the Hindu Marriage Act, 1955, which deals with restitution of conjugal rights, reads:

- When either the **husband or the wife has, without reasonable excuse, withdrawn from the society of the other**, the aggrieved party may apply by petition to the district court.
- For **restitution of conjugal rights** and the court, on being satisfied of the truth of the statements made in such a petition and that there is **no legal ground why the application should not be granted**, may decree restitution of conjugal rights accordingly.

➤ Reason for Challenging the Law:

○ Violation of Rights:

- The law is being challenged now on the main grounds that it **violates the fundamental right to privacy**.
- In 2019, a **nine-judge Bench of the SC recognised the right to privacy** as a **fundamental right**.
 - The right to privacy is protected as an intrinsic part of the right to life and personal liberty under **Article 21** and as a part of the freedoms guaranteed by Part III of the Constitution.
- The 2019 judgement has set the stage for **potential challenges to several laws** such as criminalisation of **homosexuality**, **marital rape**, restitution of conjugal rights, the two-finger test in rape investigations.
- The plea argues that a court-mandated **restitution of conjugal rights amounted to a “coercive act”** on the part of the state, which **violates one's sexual and decisional autonomy, and right to privacy and dignity**.

○ Biased Against Women:

- Although the **law is gender-neutral** since it allows both wife and husband to seek restitution of conjugal rights, **the provision disproportionately affects women**.
- Women are often called back to marital homes under the provision, and given that **marital rape is not a crime**, leaves them **susceptible to such coerced cohabitation**.
- It is also argued whether the state can have such a compelling interest in protecting the institution of marriage that it **allows a legislation to enforce cohabitation of spouses**.

Note:

○ **Not in Consonance with SC Judgements:**

- In the recent judgement of *Joseph Shine v Union of India 2019*, the SC has put great emphasis on the **right to privacy and bodily autonomy of married women**, stating that marriage does not take away their sexual freedom nor choice.
- If **everybody is entitled to their bodily autonomy, choice, and right to privacy**, how can a court mandate two adults to cohabit if one of them does not wish to do so.
 - How can courts preach autonomy of the body and then turn around and decree otherwise.

○ **Misuse of the Provision:**

- Another pertinent matter to take into consideration is the **misuse of this provision as a shield against divorce proceedings** and alimony payments.
- Often an aggrieved spouse files for divorce from their place of residence and their **spouse retaliates by filing for a decree of restitution in their place of residence**.

➤ **Previous Judgements:**

- In **1984**, the SC had upheld **Section 9 of the Hindu Marriage Act** in the case of *Saroj Rani v Sudarshan Kumar Chadha*, holding that the **provision serves a social purpose as an aid to the prevention of break-up of marriage**.
- In **1983**, a single-judge bench of the **Andhra Pradesh High Court** had for the first time **struck down the provision** in the case of *T Sareetha v T Venkatasubbaiah* and declared it null and void.
 - It **cited the right to privacy among other reasons**. The court also held that in “a matter so intimately concerned the wife or the husband the parties are better **left alone without state interference**”.
 - The court had, most importantly, also recognised that compelling “**sexual cohabitation**” would be of “**grave consequences for women**”.
- However, in the same year, a single-judge Bench of the Delhi High Court took a diametrically opposite view of the law. In the case of *Harvinder Kaur v Harmander Singh Chaudhry*, the **Delhi High Court upheld the provision**.

Plea Challenges Sedition Law

Why in News

Recently, a petition was filed in the **Supreme court (SC)**, that seeks a relook into the **Sedition Law**.

Key Points

➤ **From Petitioner:**

- The nearly-60-year old judgment helped sedition to survive in Indian Penal Code.
- The **1962 judgment in the KedarNath case**, which upheld **Section 124A (sedition)**, a relic of the colonial legacy, was given at a time when doctrines such as ‘**chilling effect**’ (**Deterring effect resulting from restrictive law**) on **free speech** were unheard of. It was delivered at a time when scope and inter-relationship of fundamental rights were rather restrictive.
- In the Kedar Nath judgment, the court had reasoned that without **Section 124A**, the State would be in jeopardy if the government was subverted. It, however, said that Section 124A would apply only to expressions that either intended to or had the tendency to cause violence were punishable as ‘**sedition**’.

➤ **Court's Ruling:**

- It sends a strong message to the government that **sedition is being misused by the authorities** to trample upon **citizens' fundamental rights** of free speech and liberty.
 - SC made it clear that the court is sensitive to the public demand to judicially review the manner in which law enforcement authorities are using the sedition law to control free speech and send journalists, activists and dissenters to jail, and keep them there.
- Section 124A of the Indian Penal Code **may have passed its time**.
- The Court said “a statute criminalising expression based on unconstitutionally vague definitions of ‘**disaffection towards Government**’ etc. is an unreasonable restriction on the fundamental right to free expression guaranteed under **Article 19**”.

Note:

(1)(a) and causes constitutionally impermissible 'Chilling Effect' on speech".

➤ **Background of Sedition Law:**

- Sedition laws were enacted in **17th century England** when lawmakers believed that **only good opinions of the government should survive**, as bad opinions were detrimental to the government and monarchy.
- The law was originally drafted in **1837 by Thomas Macaulay**, the British historian-politician, but was inexplicably omitted when the **Indian Penal Code (IPC)** was enacted in **1860**.
- **Section 124A** was inserted in 1870 by an amendment introduced by Sir James Stephen when it felt the need for a specific section to deal with the offence.
 - It was one of the many draconian laws enacted to stifle any voices of dissent at that time.
 - It was used by the British to silence **Mahatma Gandhi** and **Bal Gangadhar Tilak**.

➤ **Sedition Law Today:** Sedition is a crime under Section 124A of the Indian Penal Code (IPC).

○ **Section 124A IPC:**

- It defines sedition as **an offence committed when** "any person by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards the government established by law in India".
- Disaffection includes **disloyalty and all feelings of enmity**. However, **comments without exciting or attempting to excite hatred**, contempt or disaffection, will not constitute an offence under this section.

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

- Sedition is a **non-bailable offence**. Punishment under the **Section 124A** ranges from imprisonment up to **three years to a life term**, to which fine may be added.
- A person charged **under this law is barred** from a government job.
 - They have to live without their passport and must produce themselves in the court at all times as and when required.

Analysis

➤ **Arguments in Favour of Section 124A:**

- Has its utility in combating anti-national, secessionist and terrorist elements.
- It protects the elected government from attempts to overthrow the government with violence and illegal means.
- If **contempt of court** invites penal action, contempt of government should also attract punishment.
- Many districts in different states face a **maoist insurgency** and rebel groups, they openly advocate the overthrow of the state government by revolution.
- Against this backdrop, the abolition of Section 124A would be ill-advised merely because it has been wrongly invoked in some highly publicized cases.

➤ **Arguments against Section 124A:**

- It is a constraint on the **legitimate exercise of constitutionally guaranteed freedom** of speech and expression.
- **Dissent and criticism of the government are essential ingredients** of robust public debate in a vibrant democracy. They should not be constructed as sedition.
- The British, who introduced sedition to oppress Indians, have themselves abolished the law in their country. There is no reason why India should not abolish this section.
- The terms used under Section 124A like '**disaffection**' are vague and subject to different interpretations to the whims and fancies of the investigating officers.
- IPC and **Unlawful Activities Prevention Act 2019** have provisions that penalize "**disrupting the public order**" or "**overthrowing the government with violence and illegal means**". These are sufficient for protecting national integrity.
- The sedition law is being misused as a tool to persecute political dissent.
- In 1979, India ratified the **International Covenant on Civil and Political Rights (ICCPR)**, which sets forth internationally recognized standards for the protection of freedom of expression. However, misuse of sedition and arbitrary slapping of charges are inconsistent with India's international commitments.

Note:



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No Parliamentary Immunity for Vandalism: SC

Why in News

Recently, the **Supreme Court** has **rejected Kerala government's plea to withdraw criminal cases** against its MLAs who were charged in the assembly.

- The ruling Kerala government had appealed, to the Supreme Court, to withdraw a criminal case against their leaders **who destroyed public property and disrupted a Budget speech** on the State Assembly floor in 2015.

Key Points

- **Arguments of the Petitioner:**
 - The Kerala Government **had claimed parliamentary privilege**, arguing that the incident occurred inside the Assembly hall.
 - They had **claimed immunity from criminal prosecution**.
 - They had argued that the **prior sanction of the Speaker was necessary** before the registration of an FIR by the police.
- **Highlights of the Judgement:**
 - **Parliamentary Privileges are Not Gateways of Immunity:** The legislators who indulge in vandalism and general mayhem cannot claim parliamentary privilege and immunity from criminal prosecution.
 - **Vandalism is Not Essential Legislative Action:** Lawmakers possess privileges that are essential for exercising public functions.
 - Vandalism and destruction inside the House are not essential for exercising legislative function.
 - **Vandalism and Right to Protest:** Vandalism on the Assembly floor **could not be equated with the right to protest** by Opposition legislators.
 - No member of an elected legislature can claim either a privilege or immunity to stand above the sanctions of the criminal law (**Prevention of Damage to Public Property Act, 1984**), which applies equally to all citizens.
 - Destruction of public property could not be equated with the exercise of **freedom of speech**.

- **Maintaining Public Trust:** Legislators should act within the parameters of the public trust imposed on them to do their duty.

- They had taken office swearing true allegiance to the Constitution.
- They had to uphold the sovereignty and integrity of India and had to perform the duty imposed on them by the people who elected them.

➤ About Parliamentary Privilege:

- Parliamentary privileges are certain rights and immunities enjoyed by members of Parliament, individually and collectively, so that they can **"effectively discharge their functions"**.
- When any of these rights and immunities are disregarded, the offence is called a breach of privilege and is punishable under law of Parliament.
- The Constitution (**Article 105 for Parliament and Article 194 for State Assemblies**) mentions two privileges, i.e. freedom of speech in Parliament and right of publication of its proceedings.
- **Rule No 222 in Chapter 20 of the Lok Sabha Rule Book** and correspondingly **Rule 187 in Chapter 16 of the Rajya Sabha rulebook** governs privilege.

➤ Individualistic Privileges:

- **Freedom of Speech:** The members of Parliament/ state assembly enjoy freedom of speech and expression.
 - **No member can be taken to task anywhere outside the four walls of the House** (e.g. court of law) or cannot be discriminated against for expressing his/her views in the House and its Committees.
 - However, a member has the privilege of freedom of speech in Parliament, he has no right to publish it outside Parliament.
- **Freedom from Arrest: No member shall be arrested in a civil case 40 days** before and after the adjournment of the House and also when the House is in session.
 - It also means that **no member can be arrested within the precincts of the Parliament** without the permission of the House to which he/she belongs.
- **Exemption from Attendance as Witnesses:** The members of Parliament/ assemblies also enjoy freedom from attendance as witnesses.

Note:

➤ **Collective Privileges:**

- **Right to Publish Debates and Proceedings:** Parliament/Assembly can prohibit the press from publishing its proceedings, when needed.
- **Right to exclude strangers:** Parliament/Assembly enjoys the right to exclude strangers (no-members or visitors) from the galleries at any time and to resolve debate with closed doors.
- **Right to Punish Members and Outsiders:** In India, the Parliament/Assembly has been given punitive powers to punish those who are judged guilty of contempt of the House.

Right to be Forgotten

Why in News

Recently, a reality show contestant has approached the Delhi High Court with a plea seeking the removal of his videos, photographs and articles etc. from the internet citing his “**Right to be Forgotten (RTBF)**”.

- In the plea, the petitioner also maintains that the “**Right to be Forgotten**” goes in sync with the “**Right to Privacy**”, which is an integral part of **Article 21** of the Constitution (**Right to Life**).

Key Points

➤ **About:**

- **Right to be Forgotten (RTBF):** It is the right to have publicly available personal information removed from the internet, search, databases, websites or any other public platforms, once the personal information in question is no longer necessary, or relevant.
- **Origin:** The RTBF gained importance after the 2014 decision of the **Court of Justice of the European Union (“CJEU”)** in the **Google Spain case**.
 - RTBF has been recognised as a **statutory right** in the **European Union** under the **General Data Protection Regulation (GDPR)**.
 - It has been upheld by a number of courts in the United Kingdom, and in Europe.
- **Status in India:** In India, there is **no law that specifically provides for the right to be forgotten**. However, the **Personal Data Protection Bill 2019** recognised this right.

- **Information Technology Act, 2000** provides for safeguard against certain breaches in relation to data from computer systems.

- It contains provisions to prevent the unauthorized use of computers, computer systems and data stored therein.

➤ **Personal Data Protection Bill and RTBF:**

- In December, 2019, the Personal Data Protection Bill was introduced in Lok Sabha. It aims to set out provisions meant for the protection of the personal data of individuals.
- **Clause 20** under Chapter V of this draft bill titled “**Rights of Data Principal**” mentions the “**Right to be Forgotten**.”
 - It states that the “data principal (the person to whom the data is related) shall have the right to restrict or prevent the continuing disclosure of his personal data by a data fiduciary”.
 - Therefore, broadly, under the Right to be forgotten, users can de-link, limit, delete or correct the disclosure of their personal information held by data fiduciaries.
 - A **data fiduciary** means any person, including the State, a company, any juristic entity or any individual who alone or in conjunction with others determines the purpose and means of processing of personal data.
 - **Data Protection Authority (DPA):** Even so, the **sensitivity of the personal data and information cannot be determined independently by the person concerned**, but will be overseen by the Data Protection Authority (DPA).
 - This means that while the draft bill gives some provisions under which a data principal can seek that his data be removed, his or her rights are **subject to authorisation by the Adjudicating Officer who works for the DPA**.
 - While assessing the data principal’s request, this officer will need to examine the sensitivity of the personal data, the scale of disclosure, degree of accessibility sought to be restricted, role of the data principal in public life and the nature of the disclosure among some other variables.
- **Right to Privacy and RTBF:**
 - The RTBF falls under the purview of an **individual’s right to privacy**, which is governed by the **Personal Data Protection Bill, 2019**.

Note:



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- In 2017, the **Right to Privacy** was declared a **fundamental right** by the Supreme Court in its landmark **Puttaswamy case verdict**.
 - The court said that, “the right to privacy is protected as an intrinsic part of the **right to life and personal liberty under Article 21** and as a part of the freedoms guaranteed by **Part III of the Constitution**”.

Challenges

- **Conflict with Public Record:** Right to be forgotten may get into conflict with matters involving public records.
 - For instance, judgments have always been treated as public records and fall within the definition of a public document according to Section 74 of the **Indian Evidence Act, 1872**.
 - The RTBI cannot be extended to official public records, especially judicial records as that would undermine public faith in the judicial system in the long run.
- **Individual vs Society:** Right to be forgotten creates a dilemma between the right to privacy of individuals and the right to information of society and freedom of press.

Secrecy of Vote

Why In News

Recently, the **Supreme Court of India** held that in any election, be it to Parliament or State legislature, the **maintenance of secrecy of voting is “a must”**.

- It reiterated its **2013 judgement in the People’s Union for Civil Liberties case**.

Key Points

- **Highlights of the Latest Judgement:**
 - **Part of Fundamental Right:** The secrecy is a part of the **fundamental right** of **freedom of expression**.
 - The confidentiality of choice strengthened democracy.
 - **Part of Basic Structure:** Democracy and free elections were a part of the **Basic Structure of the Constitution**.
 - The concept of ‘basic structure’ came into existence in the landmark judgment in **Kesavananda Bharati vs State of Kerala case (1973)**.

- **On Booth Capturing:** Booth capturing and/or bogus voting should be dealt with iron hands, because it ultimately **affects the rule of law and democracy**.
 - Nobody can be permitted to **dilute the right to free and fair election**.
- **On Unlawful Assembly:** Once the unlawful assembly is established in prosecution of the common object, each member of the unlawful assembly is guilty of the offence of rioting.
 - The use of the force, even though it be the slightest possible character by any one member of the assembly, once established as unlawful constitutes rioting.
 - It is not necessary that force or violence must be by all but the liability accrues to all the members of the unlawful assembly.
 - The definition of ‘unlawful assembly’, according to Indian law, is laid down in **Section 141 of the Indian Penal Code**.
- **Judgement in People’s Union for Civil Liberties case, 2013:**
 - The two main key components that came out of the Supreme Court judgment are:
 - Right to vote also includes a **right not to vote** i.e right to reject.
 - **Right to secrecy is an integral part of a free and fair election**.
 - **Right to Reject:** It implies that a voter while voting has every right not to opt for any of the candidates during an election.
 - Such a right implies a choice to remain neutral. It has its genesis in freedom of speech and expression.
 - Introducing a **‘None of the Above’ (NOTA)** button can increase public participation in an electoral process.
 - **Right to Secrecy:**
 - It is a **central right of an elector to cast his vote without fear** of reprisal, duress or coercion as **per Article 21 of the Indian Constitution**.
 - Protection of the elector’s identity and affording secrecy is therefore integral to free and fair elections.
 - An arbitrary **distinction between the voter who casts his vote and the voter who does not cast his vote is violative of Article 14, Article 19(1) (a) and Article 21** of the Indian Constitution.

Note:

- **Article 21(3)** of the **Universal Declaration of Human Rights** and **Article 25(b)** of the **International Covenant on Civil and Political Rights** deals with the “**Right to secrecy**”.

➤ **Other Related Judgement:**

- Earlier, the SC held that the **principle of secrecy of ballots** is an important postulate of **constitutional democracy** and referred to **Section 94** of the **Representation of People Act (RPA) 1951**.
- The section upholds the **privilege of the voters to maintain confidentiality** about their choice of the vote.

Parliament Sessions

Why in News

Recently, the **Monsoon session of Parliament** has begun, after the reshuffling of the **Council of ministers** and the **Cabinet committees**.

Key Points

➤ **Sessions of Parliament:**

- The summoning of Parliament is **specified in Article 85** of the Constitution.
- The **power to convene a session of Parliament rests with the Government**.
 - The **decision is taken by the Cabinet Committee on Parliamentary Affairs which is formalised by the President**, in whose name MPs (Members of Parliament) are summoned to meet for a session.
- India **does not have a fixed parliamentary calendar**. By convention (i.e. not provided by the Constitution), Parliament **meets for three sessions in a year**.
 - The **longest, Budget Session (1st session)**, starts towards the end of January, and concludes by the end of April or first week of May.
 - The **second session is the three-week Monsoon Session**, which usually begins in July and finishes in August.
 - **Winter Session (3rd session)**, is held from November to December.

➤ **Summoning of Parliament:**

- Summoning is the **process of calling all members of the Parliament** to meet. The **President summons**

each House of the Parliament from time to time. The **gap between two sessions of the Parliament cannot exceed 6 months**, which means the Parliament meets at least two times in one year.

➤ **Adjournment:**

- Adjournment **terminates the sitting of the House** which meets again at the time appointed for the next sitting. The **postponement may be for a specified time** such as hours, days or weeks.
- If the meeting is terminated without any definite time/ date fixed for the next meeting, it is **called Adjournment sine die**.
- The power of adjournment as well as adjournment sine die **lies with the presiding officer (Speaker or Chairman) of the House**.

➤ **Prorogation:**

- Prorogation is the **end of session and not the dissolution** of the house (in case of Lok Sabha, as Rajya Sabha does not dissolve).
- It is **done by the President of India**.

➤ **Quorum:**

- Quorum refers to the **minimum number of the members required** to be present for conducting a meeting of the house.
- The Constitution has fixed **one-tenth strength** as quorum for both Lok Sabha and Rajya Sabha.
- Thus, to conduct a sitting of **Lok Sabha**, there should be **at least 55 members present** while to conduct a sitting of **Rajya Sabha**, there should be **at least 25 members present**.

➤ **Joint Session of Parliament (Article 108):**

- The Constitution of India provides for the joint sitting of the **Parliament's two Houses, the Lok Sabha and the Rajya Sabha**, in order to break any deadlock between the two.
- The joint sitting is **called by the President**. Such a session is **presided over by the Speaker**, and in his/her absence, by the Deputy Speaker of the Lok Sabha.
- In the absence of both, it is presided over by the **Deputy Chairman of the Rajya Sabha**.
 - If any of the above are not present, **any other member of the Parliament can preside** by consensus of both the Houses.

Note:



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Adjournment Motion

Why in News

Recently, the **Shiromani Akali Dal (Political Party)** has decided to move an **Adjournment Motion** in the Lok Sabha against the government on the **three controversial farm laws**.

- **Motions** and resolutions are **procedural devices** to raise a discussion in the House on a matter of general public interest.

Key Points

- Adjournment motion is **introduced only in the Lok Sabha to draw the attention of the House to a definite matter of urgent public importance**.
 - It **involves an element of censure** against the government, therefore Rajya Sabha is not permitted to make use of this device.
- It is regarded as an **extraordinary device** as it interrupts the normal business of the House. It **needs the support of 50 members** to be admitted.
- The **discussion** on this motion **should last for not less than two hours and thirty minutes**.
- However, the right to move a motion for an adjournment of the business of the House is subject to the **following restrictions**. i.e. it should:
 - Raise a **matter** which is definite, factual, urgent and of public importance.
 - Not cover more than one matter.
 - Be **restricted to a specific matter** of recent occurrence.
 - Not raise a **question of privilege**.
 - Not **revive discussion** on a matter that has been discussed in the same session.
 - Not deal with any matter that is **under adjudication of court**.
 - Not raise any question that **can be raised on a distinct motion**.

Types of Motions in Indian Parliament

➤ Privilege Motion

- It is **moved by a member when he feels that a minister has committed a breach of privilege of the House** or one or more of its members by withholding facts of a case or by giving wrong

or distorted facts. Its purpose is **to censure the concerned minister**.

- It **can be moved in Rajya Sabha as well as Lok Sabha**.

➤ Censure Motion

- It **should state the reasons** for its adoption in the Lok Sabha. It **can be moved against an individual minister or a group of ministers** or the entire council of ministers.
- It is moved **to censure the council of ministers** for specific policies and actions. It **can be moved only in Lok Sabha**.

➤ Call-Attention Motion

- It is introduced in the Parliament by a member **to call the attention of a minister to a matter of urgent public importance**, and to seek an authoritative statement from him on that matter.
- It **can be moved in Rajya Sabha as well as Lok Sabha**.

➤ Adjournment Motion

- It is introduced in the Lok Sabha **to draw the attention of the House to a definite matter of urgent public importance**. It involves an element of censure against the government.
- It **can be moved only in Lok Sabha**.

➤ No-Day-Yet-Named Motion

- It is a motion that has been admitted by the Speaker but **no date has been fixed for its discussion**.
- It **can be moved in Rajya Sabha as well as Lok Sabha**.

➤ No Confidence Motion

- **Article 75 of the Constitution** says that the council of ministers shall be collectively responsible to the Lok Sabha. In other words, **the Lok Sabha can remove the ministry from office by passing a no-confidence motion**. The motion **needs the support of 50 members to be admitted**.
- It **can be moved only in Lok Sabha**.

➤ Motion of Thanks

- The first session after each general election and the first session of every fiscal year is addressed by the president. This **address of the president is discussed in both the Houses of Parliament on a motion called the 'Motion of Thanks'**.

Note:



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- This motion **must be passed in the House**. Otherwise, it **amounts to the defeat of the government**.

➤ Cut Motions

- A cut motion is a **special power vested in members of the Lok Sabha to oppose a demand being discussed for specific allocation by the government** in the Finance Bill as part of the Demand for Grants.
- If the motion is adopted, it **amounts to a no-confidence vote**, and if the government fails to jolt up numbers in the lower House, it is obliged to resign according to the norms of the House.
- A motion may be moved to reduce the amount of a demand in any of the following ways:
 - **Policy Cut Motion:** It is moved so that the amount of the demand be reduced to Re.1 (**represents disapproval of the policy underlying the demand**).
 - **Economy Cut Motions:** It is moved so that the amount of the demand will be reduced by a **specified amount**.
 - **Token Cut Motions:** It is moved so that the amount of the demand is reduced by Rs.100 (**expresses a specific grievance**).
- It can be moved only in Lok Sabha.

Judicial Appointments to High Courts

Why in News

Recently, the **Union Minister of Law and Justice** informed the **Rajya Sabha** regarding the appointment of judges in various high courts.

- The minister pointed out that filling up vacancies in the higher judiciary is a **continuous, integrated and collaborative process** between the **Executive** and the **Judiciary**.
- It requires **consultation and approval** from **Constitutional authorities** at the **State** as well as **Central level**.

Key Points

- **Appointment of HC Judges:**
 - **Article 217 of the Constitution:** It states that the **Judge of a High Court shall be appointed by the**

President in consultation with the **Chief Justice of India** (CJI), the **Governor of the State**.

- In the case of appointment of a Judge other than the Chief Justice, the **Chief Justice of the High Court is consulted**.
- **Consultation Process:** High Court judges are recommended by a **Collegium** comprising the **CJI and two senior-most judges**.
 - The proposal, however, is **initiated by the Chief Justice of the High Court** concerned in consultation with two senior-most colleagues.
 - The recommendation is sent to the Chief Minister, who advises the Governor to send the proposal to the Union Law Minister.
 - The **Chief Justice of the High Court** is appointed as per the policy of having Chief Justices from outside the respective States.
 - The Collegium takes the call on the elevation.
- **Ad-hoc Judges:** The appointment of retired judges was provided for in the Constitution under **Article 224A**.
 - Under the Article, the **Chief Justice of a High Court** for any State may at any time, with the **previous consent of the President**, request any person who has held the office of judge of that court or of any other High Court to sit and act as a judge of the High Court for that State.
 - Recently, the Supreme Court pushed for the **appointment of retired judges** to battle the pendency of cases in High Courts.
 - It orally outlined prospective guidelines for the appointment and functioning of an ad-hoc judge.
- **Collegium System:**
 - It is the system of appointment and transfer of judges that has evolved through judgments of the SC, and **not by an Act of Parliament** or by a **provision of the Constitution**.
 - **Evolution of the System:**
 - **First Judges Case (1981):** It declared that the “primacy” of the Chief Justice of India (CJI) recommendation on judicial appointments and transfers can be refused for “cogent reasons.”
 - The ruling gave the **Executive primacy over the Judiciary** in judicial appointments for the next 12 years.

Note:



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- **Second Judges Case (1993):** SC introduced the **Collegium system**, holding that “consultation” really meant “concurrence”.

- It added that it was **not the CJI’s individual opinion**, but an institutional opinion formed in consultation with the two senior-most judges in the SC.

- **Third Judges Case (1998):** SC on President’s reference expanded the Collegium to a five-member body, comprising the CJI and four of his senior-most colleagues (for example for the transfer of HC judges).

➤ **Issues Involved:**

- **Cumbersome Process:** There are inordinate delays in the appointment of High Court judges and depleting numbers in the higher judiciary threaten to affect the justice delivery mechanism.
- **Lack of transparency:** The absence of formal criteria has multiple worrying implications.
 - Presently, there is no structured process to investigate if a judge who is recommended by the collegium has any conflict of interests.
- **Improper Representation:** The collegium system structurally tends to favour particular sections of society and is far from being representative of the population for whom it seeks to deliver justice.
- **Vacancy in High Courts:** The total sanctioned strength of judges across the 25 high courts is 1,098 but the working strength is only 645, a shortfall of 453 judges.
- **High Pendency of Cases:** The total pendency of cases in the several courts of India at different levels, sums up to a total of about 3.7 crores thus increasing the demand of a better and improved judicial system.

➤ **Attempts of Reform:**

- The attempt was made to replace the Collegium by a ‘**National Judicial Appointments Commission (NJAC)**’ in 2014 through the **99th Constitutional Amendment Act, 2014**.
 - The NJAC proposed to make the appointment of High Court and Supreme Court judges and chief justices more **transparent**.
 - They will be selected by the commission, whose members will be drawn from the judiciary, legislature and civil society.

- The **Constitutional Bench** of the Supreme Court declared **NJAC unconstitutional in 2015**, citing that it violates the **Basic Structure** of the **Constitution of India** on the ground that it posed a threat to the independence of the judiciary.

Surveillance Laws in India and Privacy

Why in News

Recently, a global collaborative investigative effort has revealed that, at least 300 **individuals in India, were potentially identified for targeted surveillance** using sophisticated **spyware called Pegasus**. However, the government has claimed that all interception in India takes place lawfully.

- Communication surveillance in India takes place primarily under **two laws** - the **Telegraph Act, 1885** and the **Information Technology Act, 2000**.
- While the **Telegraph Act deals with interception of calls**, the **IT Act was enacted to deal with surveillance of all electronic communication**.

THE PEGASUS PROJECT

➤ Paris-based media nonprofit Forbidden Stories and Amnesty International accessed a leaked database of thousands of phone numbers across the world targeted by a spyware called Pegasus

➤ They shared the data with global media organisations as part of a collaborative investigation called Pegasus Project

➤ An Israeli

company called NSO Group makes Pegasus, a spyware capable of extracting data from a phone

➤ According to the report, at least 2 Union Cabinet ministers, 3 opposition leaders, a Constitutional authority, government officials, scientists and over 40 journalists in India were targeted



Key Points

➤ **Telegraph Act:**

- Under **Section 5(2) of this law**, the government can intercept calls only in certain situations:
 - Interests of the sovereignty and integrity of India,
 - Security of the state,
 - Friendly relations with foreign states or public order,

Note:

- Preventing incitement to the commission of an offence.
 - These are the **same restrictions imposed on free speech under Article 19(2) of the Constitution**.
 - However, these restrictions can be imposed only when there is a **condition precedent** - the **occurrence of any public emergency, or in the interest of public safety**.
 - Further, the grounds of selecting a person for surveillance and extent of information gathering has to be **recorded in writing**.
 - This lawful interception **cannot take place against journalists**.
 - Provided that press messages intended to be published in India of correspondents accredited to the Central Government or a State Government, unless their transmission has been prohibited under this subsection.
 - **Supreme Court Intervention:** In *Public Union for Civil Liberties v Union of India (1996)*, the SC pointed out lack of procedural safeguards in the provisions of the Telegraph Act and laid down following observations:
 - Tapping is a **serious invasion of an individual's privacy**.
 - It is no doubt correct that every Government exercises some degree of surveillance operation as a **part of its intelligence** outfit but at the same time **citizen's right to privacy has to be protected**.
 - **Sanction for Interception:** The abovementioned Supreme Court's observations formed the basis of **introducing Rule 419A** in the Telegraph Rules in 2007 and later in the rules prescribed under the IT Act in 2009.
 - Rule 419A states that a **Secretary to the Government of India (not below the rank of a Joint Secretary)** in the Ministry of Home Affairs can pass orders of interception in the case of Centre, and similar provisions exist at the state level.
- **IT Act, 2000:**
- **Section 69 of the Information Technology Act and the Information Technology (Procedure for Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009** were enacted to further the legal framework for electronic surveillance.
 - However, the scope of **Section 69 the IT Act** is much broader and vague than the Telegraph Act as the only condition precedent for engaging electronic surveillance is for the **"investigation of an offence"**.
 - These provisions are problematic and offer the **government total opacity in respect of its interception and monitoring activities**.
- **Associated Issues with the Surveillance:**
- **Legal Loopholes:** According to the Centre for Internet & Society, the **gaps in laws allow surveillance and affect privacy**. For example:
 - **Ambiguity on issues** like type of interception, granularity of information that can be intercepted and the **degree of assistance from service providers** helps in bypassing the law and aids surveillance by the state.
 - **Affects Fundamental Rights:** The very existence of a surveillance system impacts the right to privacy (held by the SC in *K.S. Puttaswamy v. Union of India case, 2017*) and the exercise of freedom of speech and personal liberty under **Articles 19 and 21 of the Constitution**.
 - **Authoritarian Regime:** The surveillance promotes spread of authoritarianism in the government functioning since it allows the executive to exercise a disproportionate amount of power on the citizen and impacts their personal lives.
 - **Threat to Freedom of Press:** Current revelations over the use of Pegasus highlights that surveillance was also conducted on many journalists. This affects freedom of press.

Creamy Layer: OBC

Why in News

- Recently, some MPs have raised the issue of defining a **Creamy Layer** in the **Monsoon Session** of Parliament.
- Further, the **Justice Rohini committee** is considering the sub-categorization of OBC quota and if any particular community or group of communities are benefiting most from the OBC quota and how to iron out anomalies.

Key Points

- **Background:**
- Based on the recommendation of the **Second Back-**

Note:

ward Classes Commission (Mandal Commission), the government in August, 1990 had notified 27% reservation for Socially and Educationally Backward Classes (SEBCs) in vacancies in civil posts and services that are to be filled on direct recruitment.

- After this was challenged, the Supreme Court in November, 1992 (**Indira Sawhney case**) upheld 27% reservation for OBCs, subject to exclusion of the creamy layer.

➤ **Definition:**

- It is a concept that sets a threshold within which OBC reservation benefits are applicable.
- While there is a 27% quota for OBCs in government jobs and higher educational institutions, those falling within the “**creamy layer**” (various categories based on income and parents’ rank) cannot get the benefits of this quota.
- Other **than the income limit, the current definition of the creamy layer remains the same.**

➤ **Categories defined under Creamy Layer:**

- **Income beyond 8 lakh:**
 - For those not in government, the current threshold is an income of Rs 8 lakh per year.
 - The income threshold is supposed to be raised every three years. It was last revised in 2017 (more than three years now).
- **Parents’ rank:** For children of government employees, the threshold is based on their parents’ rank and not income.
 - For instance, an individual is considered to fall within the creamy layer if either of his or her parents is in a constitutional post; if either parent has been directly recruited in Group-A; or if both parents are in Group-B services.
 - If the parents enter Group-A through promotion before the age of 40, their children will be in the creamy layer.
 - Children of a Colonel or higher-ranked officer in the Army, and children of officers of similar ranks in the Navy and Air Force, too, come under the creamy layer. There are other criteria as well.

➤ **Government’s Proposal:**

- A draft Cabinet note has stated that the creamy layer will be determined on all income, including salary calculated for income tax, but not agriculture income.

- The government is considering a consensus on Rs 12 lakh, whereas Parliament Committee has recommended to raise upto 15 lakh per year.
- It also **recommended excluding salary and agricultural revenue** while calculating the annual income ceiling for the creamy layer category of OBC.

Director of Inquiry for Lokpal

Why in News

Recently, in a **RTI** Reply, it has been revealed that the **Centre is yet to appoint a director of inquiry, more than two years after the Lokpal came into being.**

Key Points

➤ **About the Director of Inquiry:**

- As per the Lokpal and Lokayuktas Act, 2013, there shall be a Director of Inquiry, **not below the rank of Joint Secretary** to the Central Government.
- As per the provisions contained under **Section 20 (1) (b)** of the Lokpal and Lokayuktas Act, 2013, **complaints in respect of public servants are referred by the Lokpal to the Central Vigilance Commission (CVC)** for a preliminary inquiry.
- The non-appointment of director of inquiry again reflects the **lack of political will** for strengthened Lokpal in India.

➤ **About Lokpal:**

- A Lokpal is an **anti-corruption authority or ombudsman who represents the public interest.**
 - India is a **signatory to the United Nations Convention against Corruption.**
- The concept of an ombudsman **was borrowed from Sweden.**
- The Lokpal, the **apex body to inquire and investigate graft complaints against public functionaries**, came into being with the appointment of its chairperson and members in **March 2019.**
- The **First Administrative Reforms Commission (ARC) of India (1966– 1970)** recommended the setting up of two special authorities designated as ‘**Lokpal**’ and ‘**Lokayukta**’ for the redressal of citizens’ grievances.
 - The **Lokpal** is responsible for enquiring into corruption charges at the **national level** while

Note:



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the **Lokayukta** performs the same function at the **state level**.

- The Lokpal has **jurisdiction over all Members of Parliament and central government employees** in cases of corruption.
- Apart from this, Lokpal **can also inquire into anti-graft complaints regarding any member of an institution** which is wholly or partially financed by the central government or controlled by it.
- Presently, **Justice Pinaki Chandra Ghose** is the chairperson of the Lokpal.
- Lokpal is a **multi-member body** that consists of **one chairperson and a maximum of 8 members**.
- **Issues Regarding Lokpal:**
 - Lokpal is **not free from political influence** as the appointing committee itself consists of members from political parties.
 - The **selection committee for Lokpal** is composed of the Prime Minister who is the Chairperson; Speaker of Lok Sabha, Leader of Opposition in Lok Sabha, Chief Justice of India or a Judge nominated by him/her and One eminent jurist.
 - The appointment of Lokpal can be manipulated in a way as there is **no criterion to decide who is an 'eminent jurist'** or 'a person of integrity'.
 - The biggest lacunae is the **exclusion of the judiciary from the ambit of the Lokpal**.
 - The Lokpal is **not given any constitutional backing** and there is **no adequate provision for appeal against the Lokpal**.
 - The complaint against corruption **cannot be registered after a period of seven years** from the date on which the offence mentioned in such a complaint is alleged to have been committed.

Menace of Manual Scavenging

Why in News

Recently, the centre has claimed that no deaths due to manual scavenging have been reported in the past five years.

- However, according to the **National Convener of the Safai Karmachari Andolan**, 472 manual scavenging deaths across the country were recorded between 2016 and 2020, and 26 so far in 2021.

- Safai Karmachari Andolan is a **movement for the elimination of manual scavenging**.

- **Article 21 of the Constitution** guarantees '**Right to Life**' and that also with **dignity**. This right is available to **both citizens and non-citizens**.

Key Points

- **Manual Scavenging:**
 - Manual scavenging is defined as "the removal of human excrement from public streets and dry latrines, cleaning septic tanks, gutters and sewers".
- **Reasons for the Prevalence:**
 - **Indifferent Attitude:** A number of independent surveys have talked about the continued reluctance on the part of state governments to admit that the practice prevails under their watch.
 - **Issues due to Outsourcing:** Many times local bodies outsource sewer cleaning tasks to private contractors. However, many of them fly-by-night operators, do not maintain proper rolls of sanitation workers.
 - In case after case of workers being asphyxiated to death, these contractors have denied any association with the deceased.
 - **Social Issue:** The practice is **driven by caste, class and income divides**.
 - It is linked to India's caste system where so-called lower castes are expected to perform this job.
 - In **1993**, India **banned the employment of people as manual scavengers** (The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993), however, the stigma and discrimination associated with it still linger on.
 - This makes it difficult for liberated manual scavengers to secure alternative livelihoods.
- **Steps Taken:**
 - The Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020:
 - It proposes to completely mechanise sewer cleaning, introduce ways for 'on-site' protection and provide compensation to manual scavengers in case of sewer deaths.
 - It will be an amendment to **The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**.

Note:



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- It is still awaiting cabinet approval.
- **The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013:**
 - Superseding the 1993 Act, the 2013 Act goes beyond prohibitions on dry latrines, and outlaws all manual excrement cleaning of insanitary latrines, open drains, or pits.
- **Prevention of Atrocities Act:**
 - In 1989, the **Prevention of Atrocities Act** became an integrated guard for sanitation workers; more than **90% people employed as manual scavengers belonged to the Scheduled Caste**. This became an important landmark to free manual scavengers from designated traditional occupations.
- **Safaimitra Suraksha Challenge:**
 - It was launched by the **Ministry of Housing and Urban Affairs** on **World Toilet Day (19th November)** in 2020.
 - The Government launched this “challenge” for all states to make sewer-cleaning mechanised by April 2021 — if any human needs to enter a sewer line in case of unavoidable emergency, proper gear and oxygen tanks, etc., are to be provided.
- **‘Swachhta Abhiyan App’:**
 - It has been developed to **identify and geotag the data of insanitary latrines and manual scavengers** so that the insanitary latrines can be replaced with sanitary latrines and rehabilitate all the manual scavengers to provide dignity of life to them.
- **SC Judgement:** In 2014, a **Supreme Court** order made it **mandatory** for the government to **identify all those who died in sewage work** since 1993 and provide **Rs. 10 lakh each** as compensation to their families.

NEET's All India Quota

Why in News

Recently, the Union Health Ministry has announced **27% reservation for the Other Backward Classes (OBCs)** and **10% quota for the Economically Weaker Sections (EWS)** in the **All India Quota (AIQ) scheme** for undergraduate (UG) and postgraduate (PG) medical / dental courses from 2021-22 onwards.

Key Points

➤ About All India Quota (AIQ) Scheme:

- The **AIQ was introduced in 1986** under the directions of the Supreme Court (SC) to provide for **domicile-free merit-based opportunities** to students from any State to aspire to study in a medical college located in another State.
 - It comprises **15% of UG seats and 50% of PG seats in government medical colleges**.
 - Remaining chunk of the seats in state medical/ dental colleges is **reserved for students domiciled in their respective states**.
- In January, 2007, in **Abhay Nath v University of Delhi and Others**, the SC directed that reservation of **15% for Scheduled Castes and 7.5% for Scheduled Tribes** be introduced in the AIQ.
 - Until 2007, no reservation was implemented within the All India Quota for medical admission.
- When the **Central Educational Institutions (Reservation in Admission) Act became effective in 2007**, providing for a uniform 27% reservation to the OBCs, the scheme was implemented in all the Central Educational Institutions.
 - However, this was **not extended to the AIQ seats of State medical and dental colleges**.
 - The 10% EWS quota under the **Constitution (One Hundred And Third Amendment) Act, 2019**, too, has been implemented in central educational Institutions, but not in the National Eligibility-cum-Entrance Test (NEET) AIQ for state institutions.

The Quota story | A brief timeline of reservations under the all India quota (AIQ):

- AIQ was introduced in 1986 for domicile-free merit-based opportunities to medical aspirants of a State to study in a college in another State
- In 2007, the Supreme Court introduced reservation of 15% of seats in the AIQ for the SCs and 7.5% for the STs
- On July 19, the Madras High Court said that the Centre cannot delay indefinitely the implementation of reservation to OBCs under the scheme. It granted the Centre a week's time to indicate the mode and manner of implementation
- Under it, 15% and 50% of the UG and PG seats, in government medical colleges are allocated



Note:

- Now, after this decision, the Reservation for the OBC and EWS categories within the AIQ will be offered in medical colleges from the current academic year.
 - This decision will help thousands of students under the given categories.

➤ **About NEET:**

- The **National Eligibility-cum-Entrance Test (NEET)** is the entrance examination for entry to all undergraduate and postgraduate medical and dental courses in the country.
- Until 2016, the **All India Pre-Medical Test (AIPMT)** was the national-level entrance examination for medical colleges.
 - While state governments used to hold separate entrance tests for seats that were not contested at an all-India level.
- In 2016, the Supreme Court upheld the newly inserted section **10-D of the Indian Medical Council Act, 1956** which provides for a uniform entrance examination to all medical educational institutions at undergraduate level and postgraduate level in Hindi, English and various other languages.
 - Now, the **Indian Medical Council Act, 1956** stands repealed after it has been replaced by the **National Medical Commission Act, 2019** that came into existence on 8th August 2019.
- It is conducted by the **National Testing Agency (NTA)**.

Emigration Bill 2021

Why in News

Recently, the Ministry of External Affairs (MEA) invited public inputs to the **Emigration Bill 2021**. The Bill presents a long overdue opportunity to reform the **recruitment process for nationals seeking employment abroad**.

Key Points

➤ **Key Features of the Bill:**

- The Bill intends to replace the **Emigration Act of 1983**.
- The Bill envisages **comprehensive emigration management, institutes regulatory mechanisms governing overseas employment** of Indian nationals and establishes a **framework for protection and promotion** of welfare of emigrants.

○ The bill proposes a **three-tier institutional framework**:

- It launches a new emigration policy division in (MEA) which will be referred to as the **Central Emigration Management Authority**.
- It proposes a **Bureau of Emigration Policy and Planning, and a Bureau of Emigration Administration** shall handle day-to-day operational matters and oversee the welfare of emigrants.
- It proposes **nodal agencies under a Chief Emigration Officer** to ensure the welfare and protection of the emigrants.
- It permits government authorities to **punish workers by cancelling or suspending their passports** and imposing fines up to Rs 50,000 for violating any of the Bill's provisions.
 - When enforced, it can be used as a tool to **crackdown on workers who migrate through unregistered brokers** or via irregular arrangements such as on tourist visas.
- The proposed legislation will also maintain registration of human resources agencies, validity and renewal and cancellation of a certificate.
 - Besides, authorities will be empowered to have certain powers of the **civil court**.

➤ **Need for the Bill:**

- **Labour migration is governed by the Emigration Act, 1983** which sets up a mechanism for hiring through government-certified recruiting agents - individuals or public or private agencies.
 - It outlines obligations for agents to conduct due diligence of prospective employers, sets up a cap on service fees, and establishes a government review of worker travel and employment documents (known as emigration clearances).
 - The Emigration Act, 1983 enacted in the **specific context of large-scale emigration** to the Gulf, **falls short** in addressing the wide geo-economic, geo-political and geo-strategic impact that emigration has today.
- For years, independent investigations into migrant worker conditions have **underlined serious exploitative practices** which include:
 - Large recruitment charges,
 - Contract substitution,

Note:



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- Deception,
 - Retention of passports,
 - Non-payment or underpayment of wages,
 - Poor living conditions,
 - Discrimination and other forms of ill-treatment.
- For instance, in recent months, media reports have highlighted how the majority of migrant worker deaths in the **Arab Gulf States/West Asia** are attributed to heart attacks and respiratory failures, whose causes are unexplained and poorly understood.

➤ **Associated Issues:**

- **Lacks a Human Rights Framework:** The bill is criticised to be **lacking a human rights framework** aimed at securing the rights of migrants and their families. For example:
- The penal provisions under the law criminalizes the choices migrant workers make either because they are **unaware of the law, under the influence of their recruiters, or simply desperate to find a decent job.**
 - Further, migrants in an irregular situation who fear that they could be fined or have their passports revoked, are also **less likely to make complaints or pursue remedies for abuses faced.**
- **Not in Sync With International Standards:** The Bill permits manpower agencies to charge workers' service fees, and even allows agents to set their own limits.
- However, International labour standards and the International Labour organization (ILO) general principles recognise that it is employers, not workers who should bear recruitment payments.
 - Worker-paid recruitment fees eat into their savings, force them to take high-interest loans, leave workers in situations of debt bondage — a **form of forced labour.**
- **Scant Gender Dimensions:** This Bill does not also adequately reflect the gender dimensions of labour migration.
- Women have limited agency in recruitment compared to their counterparts and are more likely to be employed in marginalised and informal sectors and/or isolated occupations in which labour, physical, psychological, and sexual abuse are common.

Geospatial Technologies for the Water Sector in India

Why in News

Recently, the **Association of Geospatial Industries** released a report titled **"Potential of Geospatial Technologies for the Water Sector in India"**. The report mentions opportunities in the Water sector that can benefit from the use of Geospatial technologies.

- As the severity of the water crisis in India increases every year, central and state government agencies are using a variety of resources to tackle the water crisis. One among them is the adoption of Geospatial technologies.

Key Points

➤ **Overview of Water Sector in India:**

- **Demand-Supply Mismatch:** India has about **17% of the world population**, but **only about 4% of the world's freshwater reserves**, and is currently facing a severe water challenge.
 - Further, total capacity of India's reservoirs stands at 250 billion cubic meters (bcm), while its total water bearing capacity over the surface is around 320 bcm.
- **Low Rate of Collection:** India receives 3,000 billion cubic metres of water every year through rainfall or other sources such as glaciers; of this, only 8% is collected.
- **Over-extraction & Over-reliance on Groundwater:** India fills groundwater aquifers at the rate of 458 bcm per year, while it extracts around 650 bcm of water from the earth.
 - 89% of India's water resources are used for agriculture, out of which 65% is withdrawn from under the ground.
 - Thus, one of India's biggest challenges is to conserve groundwater.
- **Water Stress:** As per a **NITI Aayog** report, currently nearly 820 million people in 12 major river basins of India face extreme water stress.
- **Qualitative Issue:** Adding to the issue of lack of water availability is the issue of water quality.
 - Groundwater in one-third of India's 600 districts is **contaminated mainly through fluoride and arsenic.**

Note:

- Further, there has been a **136% increase in the number of grossly polluting industries** between 2011- 2018, according to the **State of India's Environment report, 2019**.

➤ **Need to Conserve Water:**

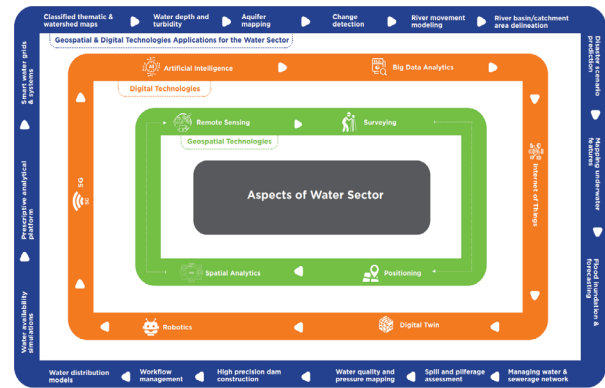
- Given the **population density** and **requirement of water for agriculture**, India is heavily dependent on groundwater and is one of the worst hit countries as far as the water crisis is concerned.
- Availability of clean water to all for personal, industrial, and agricultural use will not only ensure India reaches its vision of **becoming a USD 5 Trillion economy** but will also enable it to achieve the **United Nations Sustainable Development Goals**.

➤ **About Geospatial Technologies:**

- Geospatial technologies is a term used to describe the range of modern tools **contributing to the geographic mapping and analysis of the Earth and human societies**.
- The term 'geospatial' refers not to one single technology, but a collection of technologies that help to collect, analyse, store, manage, distribute, integrate, and present geographic information.
- Broadly speaking, it consists of the following technologies:
 - **Remote Sensing**
 - **GIS (Geographic Information System)**
 - **GNSS (Global Navigation Satellite System)**
 - **Survey**
 - **3D modelling**
- **Benefits:** Geospatial technology enables better measurement, management, and maintenance of assets, monitoring of resources and even providing predictive and prescriptive analysis for forecasting and planned interventions.

➤ **Geospatial Technology for Water Sector:**

- Geospatial and digital technologies like **Satellite Based Remote Sensing, GPS Based Equipment and Sensors, Artificial Intelligence, Big Data Analytics, Internet of Things, 5G, Robotics** and **Digital Twin**, can be effectively used to combat the water crisis.



➤ **Major Ongoing Water Projects in India:**

- Recognising the water crisis in India, the government of India formed a single ministry i.e **Ministry of Jal Shakti**. Previously, water was a subject which was dealt with by almost nine Ministries.
- **Jal Jeevan Mission**
- **Dam Rehabilitation and Improvement Project (DRIP)**
- **Namami Gange**
- **National River Linking Project (NRLP)**
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**
- **National Hydrology Programme**
- **Pradhan Mantri Krishi Sinchayi Yojana (PMKSY)**
- **National Aquifer Mapping and Management Programme (NAQUIM)**
- **River Basin Management**
- **Atal Bhujal Yojana (ABHY)**
- **National Water Mission**

Digital Twin

- Digital Twin is a **virtual replica of the physical world**, its dynamics, and processes, which allow us to simulate real life situations and analyse its impact.
- Digital twins are **composed of three parts**:
 - the physical entities in the physical world,
 - the virtual models in the virtual world, and
 - the connected data that tie the two worlds.
- Digital Twins not only integrate the digital representation of physical assets, like physical systems of pipes, pumps, valves, and tanks, but also include historical data sets such as weather records and realtime dynamic interactions, which allow them to be used for multiple analyses.

Note:

Women's Reservation Bill

Recently, a political party has **raised the demand** of bringing the long-pending **Women's Reservation Bill to Parliament**, ahead of the **monsoon session**.

- The Bill was introduced in the **Rajya Sabha in May 2008** and was referred to a **standing committee**. In 2010, it was passed in the House and **transmitted finally to the Lok Sabha**. However, the Bill **lapsed with the 15th Lok Sabha**.

Key Points

- **Origin:**
 - The **original idea** for this bill **originated from a constitutional amendment** which was passed back in **1993**.
 - The **constitutional amendment** stated that a random **one third of village council leader, or Sarpanch, positions in the gram panchayat** should be reserved for women.
 - The **Women's Reservation Bill** was launched as a **long term plan to extend this reservation to Lok Sabha and state legislative assemblies**.
- **About the Bill:**
 - The bill seeks to **reserve 33% seats in Lok Sabha and all state legislative assemblies for women**.
 - Reserved seats **may be allotted by rotation to different constituencies** in the state or union territory.
 - Reservation of seats for women **shall cease to exist 15 years after the commencement** of this Amendment Act.
- **Need:**
 - According to **Global Gender Gap Report 2021**, **India has declined on the political empowerment index by 13.5 percentage points**, and a decline in the **number of women ministers**, from **23.1% in 2019 to 9.1% in 2021**.
 - It is acknowledged even by the **government's Economic Surveys** that women's representatives in Lok Sabha and the legislative assemblies are abysmally low.

- The **various surveys** do indicate that **women representatives from Panchayati Raj have worked commendably in the development and overall well-being of society** in villages and many of them would definitely want to work on the larger scale, however, they **face various challenges** in the political structure prevalent in India.

- **Challenges** include lack of proper political education, low financial power of women in society, sexual violence, manifestations of insecure patriarchy, uneven distribution of household work between men and women, etc.
- The **phenomenon of Panchayat Patis – husbands** (or other male relatives) using women as proxies in PRIs and wielding the real power – is prevalent.

➤ Significance:

- Women's political empowerment is premised on three **fundamental and non-negotiable principles**:
 - The **equality** between women and men.
 - Women's right to a **full development** of their potential.
 - Women's right to **self representation and self-determination**.
- There is a **gender gap in political decision-making**, and women leaders need to come out more in numbers to **impact position decisions** and **inspire teenage girls to contribute to nation-building**.

➤ Issues:

- It has been argued that it **would perpetuate the unequal status of women** since they would not be **perceived to be competing on merit**.
- It is also contended that this policy **diverts attention from the larger issues of electoral reform** such as criminalisation of politics and inner party democracy.
- It **restricts the choice of voters** to women candidates.
- **Rotation of reserved constituencies in every election** may reduce the **incentive for an MP** to work for his constituency as he may be **ineligible to seek re-election from that constituency**.
 - Some experts have suggested the **adoption/ promotion of alternative methods**, such as reservation in political parties and dual member constituencies.

Note:

New Commission for Air Quality Management

Why in News

The Ministry of Environment, Forests and Climate Change (MoEFCC) is set to table the Commission for Air Quality Management in the National Capital Region and Adjoining Areas Bill, 2021 in Parliament during the Monsoon Session.

Key Points

➤ Background and New Changes:

- Initially, the Commission for Air Quality Management ordinance was promulgated by the President in October, 2020 but the bill to replace the ordinance was not passed in the budget session of Parliament, as a result of which the commission ceased to operate in March, 2020.
- Subsequently, the MoEFCC brought a second ordinance in April 2021, with modifications due to the farmers' protest.
 - Farmers had raised concerns of stiff penalties and possible jail terms for stubble burning (as stated in the first ordinance).
 - The government has decriminalised the act of stubble burning and withdrawn the clause for possible jail time.
 - However, environmental compensation fees are levied on those who are found to be engaged in stubble burning, including farmers.

➤ About the Bill:

- It provides for the constitution of a Commission for better coordination, research, identification, and resolution of problems related to air quality in the National Capital Region (NCR) and adjoining areas.
 - Adjoining areas have been defined as areas in the states of Haryana, Punjab, Rajasthan, and Uttar Pradesh adjoining the NCR where any source of pollution may cause adverse impact on air quality in the NCR.
- It also dissolves the Environment Pollution Prevention and Control Authority established in the NCR in 1998.

➤ Composition:

- The Commission will be headed by a full-time chairperson who has been a Secretary to the

Government of India, or a Chief Secretary to a State government.

- The chairperson will hold the post for three years or until s/he attains the age of 70 years.
- It will have members from several Ministries as well as representatives from the stakeholder States.
- It will have experts from the Central Pollution Control Board (CPCB), Indian Space Research Organisation (ISRO) and Civil Society.
- Functions:
 - Coordinating actions taken by concerned state governments (Delhi, Haryana, Punjab, Rajasthan, and Uttar Pradesh).
 - Planning and executing plans to prevent and control air pollution in the NCR.
 - Providing a framework for identification of air pollutants.
 - Conducting research and development through networking with technical institutions.
 - Training and creating a special workforce to deal with issues related to air pollution.
 - Preparing various action plans such as increasing plantation and addressing stubble burning.
- Powers:
 - The new body will have the power to issue directions and entertain complaints as it deems necessary for the purpose of protecting and improving the quality of the air in the NCR and adjoining areas.
 - It will also lay down parameters for control of air pollution (such as permissible levels of emissions and discharge of pollutants).
 - It will also be in charge of identifying violators, monitoring factories and industries and any other polluting unit in the region, and will have the powers to shut down such units.
 - It will also have the powers to overrule directives issued by the state governments in the region, that may be in violation of pollution norms.

Essential Defence Services Bill, 2021

Why in News

Recently, the government introduced the Essential Defence Services Bill, 2021 in Lok Sabha.

Note:

- It seeks to **replace the ordinance issued in June 2021** and **prohibits any agitation and strike** by anyone engaged in the **essential defence services**.

Key Points

- **Essential Defence Services:**
 - It includes any service in any **establishment or undertaking dealing with production of goods or equipment required for defence** related purposes or any **establishment of the armed forces** or connected with them or defence.
 - It also includes services that, **if ceased, would affect the safety of the establishment engaged in such services** or its employees.
 - In addition, the **government may declare any service as an essential defence service** if its cessation would affect the:
 - Production of defence equipment or goods.
 - Operation or maintenance of industrial establishments or units engaged in such production.
 - Repair or maintenance of products connected with defence.
- **Defined Strikes:**
 - It is defined as **cessation of work by a body of persons acting together**, which includes:
 - **Mass casual leave.**
 - **Coordinated refusal** of any number of persons to continue to work or accept employment.
 - **Refusal to work overtime**, where such work is necessary for maintenance of essential defence services.
 - Any other conduct which results in, or is likely to result in, **disruption of work in essential defence services**.
- **Prohibition on strikes, lock-outs, and lay-offs:**
 - Government **may prohibit strikes, lock-outs, and lay-offs in units engaged in essential defence services**.
 - It may issue such an order if necessary in the interest of **sovereignty and integrity** of India, **security** of any state, **public order, public, decency and morality**.
- **Punishment:**
 - **Illegal Lock-Outs and Lay-Offs:**

Right to Strikes

- Right to strike is recognized globally. **Article 19(1)** the Constitution of India guarantees the protection of certain freedoms as fundamental rights such as:
 - Freedom of **speech and expression**.
 - **Assemble peaceably** and without arms.
 - Form **associations or unions**.
 - **Move freely** throughout the territory of India.
 - **Reside and settle** in any part of the territory of India.
 - **Practise any profession**, or to carry on any occupation, trade or business.
- However, **strike is not expressly recognized in the Constitution of India**. The **Supreme Court** settled the case of **Kameshwar Prasad v. The State of Bihar 1958** by stating that **strike is not a fundamental right**. Government employees have no legal or moral rights to go on strikes.
- India recognized strike as a **statutory right under the Industrial Disputes Act, 1947**.

Industrial Disputes Act 1947

- It defines public utility service and strike, it also puts certain prohibitions on the right to strike. It provides that **no person employed in public utility service shall go on strike in breach of contract**:
 - **Without** giving the employer **notice of strike** within six weeks before striking.
 - Within **fourteen days of giving such notice**.
 - **Before the expiry of the date** of strike specified in any such notice as aforesaid.
 - During the **pendency of any conciliation proceedings** before a conciliation officer and seven days after the conclusion of such proceedings.
- It is to be noted that **these provisions do not prohibit the workmen** from going on strike but **require them to fulfill the condition before going on strike**. Further these provisions apply to a **public utility service only**.
 - Employers violating the prohibition order through illegal lock-outs or lay-offs will be punished with up to **one year imprisonment or Rs 10,000 fine, or both**.
- **Strikes:**
 - **Persons commencing or participating in illegal strikes** - Up to **one year imprisonment or Rs 10,000 fine, or both**.

Note:

- **Persons instigating, inciting, or taking actions to continue illegal strikes, or knowingly supplying money** for such purposes – Up to two years imprisonment or Rs 15,000 fine, or both.
 - Such an employee will be liable to **disciplinary action** including dismissal as per the terms and conditions of his service.
 - In such cases, the **concerned authority is allowed to dismiss or remove the employee without any inquiry**, if it is not reasonably practicable to hold such inquiry.
- All offences punishable will be **cognisable** and **non-bailable**.
 - **Cognisable** offences are those that require an immediate arrest.
 - **Public Utility Service:**
 - It will amend the **Industrial Disputes Act, 1947** to include essential defence services under **public utility services**.
 - The undertakings which supply the **basic necessary services** such as electricity, water, gas, power, transport etc. comes under the purview of the public utility services.

■■■



Note:

Economic Scenario

Highlights

- Reforms Based and Results Linked Scheme: DISCOMs
- Credit Growth for MSMEs
- Factoring Regulation (Amendment) Bill, 2021
- AERA Amendment Bill, 2021
- Non-Bank PSPs to Join Centralised Payment System
- DICGC Bill, 2021
- UN's Survey on Digital and Sustainable Trade Facilitation 2021
- Insolvency and Bankruptcy Code (Amendment Bill), 2021
- World Economic Outlook: IMF
- Marine Aids to Navigation Bill 2021
- SLDE and GHG Calculator
- Promoting Digital Banking
- New Facilities Under Strategic Petroleum Reserves
- Tackling the Menace of Black Money
- Suspension of FCRA Certificate
- Periodic Labour Force Survey 2019-20
- Investment Climate in India
- RBI to Introduce Digital Currency
- Special Economic Zones
- Subsidy Scheme to Boost Merchant Ships
- Amendment in IBBI Regulations 2016
- Stand Up India Scheme
- Indian Labour Conference
- External Benchmarks Lending Rate
- Foreign Card Payment Network Companies Barred: RBI
- India's Textile Sector
- 30 Years of Economic Liberalisation

Reforms Based and Results Linked Scheme: DISCOMs

Why in News

This Union cabinet has recently approved a **Reforms-based and Results-linked, Revamped Distribution Sector Scheme**.

- The scheme requires that DISCOMs (Power Distribution Companies) submit **detailed project reports (DPRs)** on how they plan to reduce their operational losses to avail of funding.
- Initially, the preliminary timeline given to discoms was 31st October 2021. It is now **extended to 31st December 2021**.

Key Points

➤ Scheme Objectives:

- Reduction of **AT&C** (aggregate technical & commercial) **losses** to pan-India levels of **12-15%** by 2024-25.
- Reduction of **ACS-ARR gap** (i.e. between the total cost of electricity and revenues generated from supplying power) to zero by 2024-25.

- Developing **institutional capabilities** for modern discoms.
- Improvement in the **quality, reliability, and affordability of power supply** to consumers through a financially sustainable and operationally efficient Distribution Sector.
- Implementation of the Scheme would be based on the **action plan worked out for each state** rather than a "one-size-fits-all" approach.

➤ Features:

- **Conditional Financial Assistance:** The Scheme seeks to improve the **operational efficiencies and financial sustainability of all DISCOMs** (excluding Private Sector DISCOMs) by providing conditional financial assistance to DISCOMs for strengthening of supply infrastructure.
- **Subsuming of Various Schemes:** It is proposed that the currently ongoing approved projects under the following Schemes would be subsumed:
 - Integrated Power Development Scheme (IPDS)
 - **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)**
 - **Ujwal Discom Assurance Yojana (UDAY)**

Note:

- **Prime Minister's Development Package (PMDP) 2015** for the Union Territories of Jammu & Kashmir (J&K) and Ladakh.
- **Solarization of Agricultural Feeders:** The Scheme has a major focus on improving electricity supply for the farmers and for providing daytime electricity to them through solarization of agricultural feeders.
 - This Scheme converges with the **PM-KUSUM Scheme**, which aims to solarize all feeders, and provide avenues for additional income to farmers.
- **Smart Metering:** A key feature of the Scheme is to enable consumer empowerment by way of prepaid **Smart metering** to be implemented in **Public-Private-Partnership (PPP) mode**.
 - **Smart meters** would allow consumers to **monitor their electricity consumption on a routine basis instead of monthly basis**, which can help them in usage of electricity as per their own needs and in terms of the resources available.
 - It is proposed to install approximately **10 crore prepaid Smart Meters by December, 2023 in the first phase**.
- **Leveraging Technology:** **Artificial Intelligence** would be leveraged to prepare system generated energy accounting reports.
 - This will enable DISCOMs to take informed decisions on **loss reduction, demand forecasting, Time of Day (ToD) tariff, Renewable Energy (RE) Integration** and for other predictive analysis.

Credit Growth for MSMEs

Why in News

According to a report from **TransUnion Cibil** and **Small Industries Development Bank of India (SIDBI)**, there has been a growth in the credit outstanding amount of **Micro, Small and Medium Enterprise (MSME)** sector to Rs 20.21 lakh crore, with a **year-on-year growth rate of 6.6%**.

- Even according to the **Reserve Bank of India (RBI)**, credit growth to micro and small industries accelerated to **6.4% in June 2021**, compared to a contraction of **2.9% in 2020**.

Key Points

- **Loans to MSMEs:**

Small Industries Development Bank of India

- SIDBI set up in April 1990 under an Act of Indian Parliament, acts as the **Principal Financial Institution for Promotion, Financing and Development** of the MSME sector as well as for coordination of functions of institutions engaged in similar activities.

TransUnion CIBIL Limited

- It is a **credit information company operating in India**. It maintains credit files on 600 million individuals and 32 million businesses.

- In **Financial Year (FY) 2021**, the country disbursed loans worth Rs 9.5 lakh crore to MSME sector, higher than preceding year of Rs 6.8 lakh crore in FY 2020.
- **Outstanding Credit:**
 - MSME credit outstanding has grown by 6.6% in March'21, with the **micro segment growing the fastest at 7.4%**
 - Micro segment was followed by the **small segment at 6.8%** and **medium segment at 5.8%**.
- **Sector Wise Analysis:**
 - **Agriculture and Allied Activities:**
 - Credit to agriculture and allied activities continued to perform well, registering an **accelerated growth of 11.4% in June 2021**, compared to 2.4% in June 2020.
 - **Industry:**
 - Within industry, credit to food processing, gems & jewellery, glass & glassware, leather & leather products, mining & quarrying, paper & paper products, rubber, plastic & their products, and textiles registered **high growth in June 2021**.
 - However, credit growth to all engineering, beverages & tobacco, basic metal & metal products, cement & cement products, chemicals & chemical products, construction, infrastructure, petroleum coal products & nuclear fuels and vehicles, vehicle parts & transport equipment **decelerated or contracted**.
 - **Services:**
 - Credit growth to the **services sector decelerated to 2.9% in June 2021**, from 10.7% in June 2020, mainly **due to contraction in credit growth to commercial real estate, Non-Banking Financial Companies (NBFCs)** and tourism, hotels & restaurants.

Note:

What's MSME

Revised Classification applicable w.e.f 1st July 2020			
Composite Criteria: Investment in Plant & Machinery/equipment and Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover ; not more than Rs. 5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover ; not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover ; not more than Rs. 250 crore

- Credit to **trade segment continued to perform well**, registering accelerated growth of 11.1% in June 2021 as compared to 8.1% a year ago.

➤ Reason for Growth:

- The rise in credit offtake by MSMEs is due to a host of government initiatives like the **Emergency Credit Line Guarantee Scheme (ECLGS)** to tackle the economic downturn created by the **Covid pandemic**.
- ECLGS scheme was launched as part of the **Atmanirbhar Bharat Abhiyan package** announced in May 2020 to mitigate the distress caused by coronavirus-induced lockdown, by providing credit to different sectors, especially MSMEs
- It's **objective** was to support small businesses struggling to meet their operational liabilities due to the imposition of a nationwide lockdown.
- Recently, the government has **widened its scope to new sectors**, including hospitality, travel and tourism.

➤ Other Initiatives for MSMEs:

- **Prime Minister's Employment Generation programme (PMEGP)**
- **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)**
- **A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE)**
- **Interest Subvention Scheme for Incremental Credit to MSMEs**
- **Credit Guarantee Scheme for Micro and Small Enterprises**
- **CHAMPIONS portal**
- **MSME Samadhan**

Factoring Regulation (Amendment) Bill, 2021

Why in News

Recently, **Rajya Sabha** has passed the **Factoring Regulation (Amendment) Bill, 2021** to bring changes in the legislation aimed at helping the **Micro, Small and Medium Enterprises (MSME)** sector.

- It has incorporated many suggestions from the **UK Sinha Committee**.

Factoring business

- Factoring business is a business where an entity acquires the receivables of another entity for an amount.
 - Note that **credit facilities provided by a bank against the security of receivables** are not considered as factoring business.
- **Factor** can be a **bank, a registered non-banking financial company or any company registered under the Companies Act**.
- **Receivables** is the total amount that is owed or yet to be paid by the customers (referred as the debtors) to the assignor for the use of any goods, services or facility.

Key Points

- **Key Provisions of the Bill:**
 - **Change in the Definitions:**
 - It amends the definitions of **"receivables", "assignment", and "factoring business"** to bring them at par with international definitions.
 - **Relaxation to NBFCs' Factoring Threshold:**

Note:



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- The bill **seeks to amend the Factoring Regulation Act, 2011** to **widen the scope of entities** which can engage in factoring business.
- The current law which gave the Reserve Bank of India authority to allow non-bank finance companies to remain in factoring business only if it was their principal business.
 - That is, **more than half of assets were to be deployed and income earned from factoring business.**
- The **Bill removes this threshold** and opens up the opportunity in this business to more non-bank lenders at a time small businesses are facing financial stress.
- **TReDS to Register Charges:**
 - The Bill states that where **trade receivables are financed through Trade Receivables Discounting System (TReDS)**, the details regarding transactions should be filed with the **Central Registry by the concerned TReDS, on behalf of the factor.**
 - TReDS is an **electronic platform for facilitating financing of trade receivables of MSMEs.**
- **RBI to Regulate:**
 - It empowers **Reserve Bank of India (RBI)** to make **regulations for granting registration certificates to a factor, filing of transaction details** with the Central Registry and all other matters.
- **No time-bound Registration:**
 - It **removes the 30-day time period for the factors to register the details of every transaction** entered by them. The registering authority for such transactions is the Central Registry setup under the **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002.**
- **Significance:**
 - **Allowing non-NBFC factors and other entities** to undertake factoring is expected to **increase the supply of funds** available to small businesses.
 - This may **result in bringing down the cost of funds and enable greater access** to the credit-starved small businesses, ensuring timely payments against their receivables.
 - MSMEs will get the **easier liquidity** which will help in their operation.

- MSMEs are facing difficulty due to **delay in receivables and this bill will help in ensuring smoother working capital cycle and healthier cash flow.**

- It will **liberalise the restrictive provisions in the Act** and at the same time ensure that a strong regulatory/oversight mechanism is put in place through the RBI.

➤ **UK Sinha Committee:**

- The Reserve Bank had set up an eight-member expert committee under the leadership of the former chairman of **Securities and Exchange Board of India (SEBI)**, UK Sinha to review the framework for the MSME sector, in 2019.
- It has made recommendations with regard to amendments in MSME Development Act, strengthening of financial delivery mechanism, improving marketing support, encouraging technology adoption and strengthening of cluster development support for MSMEs etc.

AERA Amendment Bill, 2021

Why in News

Recently, the Lok Sabha passed the **Airports Economic Regulatory Authority of India (AERA) Amendment Bill, 2021.**

- It was **first introduced in March 2021** and subsequently referred to a **parliamentary standing committee on transport, tourism and culture**, which approved it without any changes.
- It seeks to amend the **Airports Economic Regulatory Authority of India Act, 2008.**



- Lok Sabha passed AERA amendment Bill to modify definition of 'major airport'
- A major airport is one which handles or is designed to handle 3.5 mn passengers annually
- There are around 25 major airports in the country
- Amendment will allow the Centre to privatise a small loss-making airport, along with each of the six airports, by clubbing them
- Currently, AERA determines tariff of a single airport; amendment will allow for tariff fixation of more than one airport
- **THE CENTRE ALREADY DECIDED TO PRIVATISE SIX AIRPORTS AUTHORITY OF INDIA AIRPORTS AT AMRITSAR, VARANASI, BHUBANESWAR, INDORE, RAIPUR, AND TIRUCHIRAPALLI**

Note:

Key Points

➤ Major Provisions:

○ Definition:

- It proposes to **amend the definition of major airport** to include a group of airports.
 - The 2008 Act designates an airport as a **major airport if it has an annual passenger traffic of at least 35 lakh.**
 - The central government **may also designate any airport as a major airport by a notification.**

○ Tariff:

- It will allow AERA to **regulate tariff and other charges for aeronautical services** for not just major airports with annual passenger traffic of more than 35 lakh, but also a group of airports.

○ Profitable Clubbing:

- The government will be **able to club profitable and non-profitable airports** as a combination/package to bidders to make it a viable combination for investment under **PPP (Public-Private Partnership)** mode.

➤ Significance:

- It will **help in expanding the air connectivity** to relatively remote areas and as a result, expediting the **UDAN regional connectivity scheme.**
- It will **encourage development of smaller airports.**

➤ Concern:

- Lack of clarity in the bill on the **criterion for deciding which airports will be clubbed together** to qualify under 'a group of airports' definition, whether it will be the passenger traffic of more than 3.5 million or some other factors too.

Airports Economic Regulatory Authority of India

➤ Background:

- Initially, the **Airports Authority of India (AAI)** was **running and managing the airports.** After some time, a change was made in the civil aviation policy as some private players were also given airports to run. The reason behind this was to provide consumers with great services.
- Typically, **airports run the risk of becoming a monopoly because cities usually have one civilian airport** which controls all aeronautical services in that area.

- To ensure that private airport operators do not misuse their monopoly, the need for an independent tariff regulator in the airport sector was felt.

➤ About:

- The Airports Economic Regulatory Authority of India Act, 2008 (AERA Act) was passed which set up the AERA as a **statutory body**.
- It was set up, keeping in mind that the **country needs to have an independent regulator** who has transparent rules and can take care of the interests of the service providers as well as that of the consumers.

➤ Functions:

- The AERA **regulates tariffs and other charges** (development fee and passenger service fee) **for aeronautical services** (air traffic management, landing and parking of aircraft, ground handling services) at major airports.

Non-Bank PSPs to Join Centralised Payment System

Why in News

Recently, the **Reserve Bank of India (RBI)** allowed non-bank Payment System Providers (PSPs) to participate in Centralised Payment Systems (CPS - RTGS and NEFT), as direct members.

Key Points

➤ Allowed in a Phased Manner:

- In the first phase, PSPs such as **Prepaid Payment Instruments (PPIs), card networks and White Label ATM (WLA) operators** will be allowed access.
 - ATMs set up, owned and operated by non-banks are called **WLAs**.
- Presently, **only banks and select non-banks** such as **NABARD** (National Bank for Agriculture and Rural Development) and **Exim Bank** (Export-Import Bank of India) are allowed access to CPS owned by RBI – NEFT and RTGS.

➤ Separate IFSC to Non-Banks:

- It means allotment of a separate **Indian Financial System Code (IFSC)** to non-banks, opening a current account with the RBI in its **core banking system (e-Kuber)** and maintaining a settlement account with the RBI.

Note:

- **IFSC** represents the 11 digit character code that helps identify the individual bank branches that participate in the various online money transfer options like NEFT and RTGS.
- **Core Banking System** is a solution that enables banks to offer a multitude of customer-centric services on a 24x7 basis.
- It will also mean **membership of Indian Financial Network (INFINET)** and **use of Structured Financial Messaging System (SFMS)** to communicate with CPS.
- **INFINET** is a membership-only Closed User Group (CUG) Network that comprises the RBI, Member Banks and Financial Institutions.
- **SFMS** is India's backbone for inter-bank financial messaging & CPS.
- **Significance:**
 - **Minimizing risk of payment ecosystem:**
 - Direct access for non-banks to CPS lowers the overall risk in the payments ecosystem.
 - **Reduction in cost of payments:**
 - It also brings advantages to non-banks like reduction in cost of payments, minimising dependence on banks, reducing the time taken for completing payments.
 - **Mitigating failure or delay in fund execution:**
 - Risk of failure or delay in execution of fund transfers can also be avoided when the transactions are **directly initiated and processed by the non-bank entities**.
 - **Increasing efficiency and better risk management:**
 - Non-bank entities shall transfer funds from their Current Account to RTGS Settlement Account and vice versa during the operating hours.
 - It will increase efficiency, innovations, improve standards of data security as well as better risk management.

Centralised & Decentralised Payment Systems

- CPS in India are **Real Time Gross Settlement (RTGS)** and **National Electronic Funds Transfer (NEFT)** systems, both owned and operated by the Reserve Bank.
- **RTGS:** It enables **real-time transfer of funds to a beneficiary's account** and is **primarily meant for large-value transactions**.

- Real time means the processing of instructions at the time they are received and gross settlement implies that settlement of funds transfer instructions occurs individually.

- **NEFT:** It is an **electronic fund transfer system in which the transactions received up to a particular time are processed in batches**.

- It is generally used for fund transfers of up to Rs. 2 lakh.

- The **decentralised payment systems** will include **clearing houses managed by RBI (Cheque Truncation System (CTS) centres)** as well as **other banks (Express Cheque Clearing System (ECCS) centres)** and any other system as decided by RBI from time to time.

E-Kuber

- e-Kuber is the **Core Banking Solution of the Reserve Bank of India** which was introduced in 2012.
- The centralisation thus makes a **"one-stop" shop for financial services a reality**. Using CBS, customers can access their accounts from any branch, anywhere, irrespective of where they have physically opened their accounts.
- Almost **all branches of commercial banks**, including the Regional Rural Banks (RRBs), are brought into the core-banking fold.
- The e-kuber system can be accessed either **through INFINET or Internet**.

DICGC Bill, 2021

Why in News

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

- The failure of banks such as **Punjab and Maharashtra Co-operative (PMC) Bank**, **Yes Bank** and **Lakshmi Vilas Bank** reignited the debate on the low level of insurance against the deposits held by customers in Indian banks.

Note:

- **Deposit Insurance:** It is a protection cover against losses accruing to bank deposits if a bank fails financially and has no money to pay its depositors and has to go in for liquidation.

Note:

- **Credit Guarantee:** It is the guarantee that often provides for a specific remedy to the creditor if his debtor does not return his debt.

Key Points

- **Coverage:**
 - The bill will cover **98.3% of depositors and 50.9% of deposit value** in the banking system, **way above the global level of 80% and 20-30%**, respectively.
 - It will **cover all types of banks**, which also include **regional rural banks** and **co-operative banks**.
 - It will cover **banks already under moratorium** and those that **could come under moratorium**.
 - **Moratorium** is a legally authorized period of delay in the performance of a legal obligation or the payment of a debt.
- **Insurance Cover:**
 - It will **provide funds up to Rs 5 lakh to an account holder within 90 days** in the event of a bank coming under the moratorium imposed by the **Reserve Bank of India (RBI)**.
 - Earlier, account holders had to wait for years till the liquidation or restructuring of a distressed lender to get their deposits that are insured against default.
 - The Rs 5-lakh deposit insurance cover was **raised from Rs 1 lakh in 2020**.
 - **The Damodaran Committee** on 'Customer Services in Banks' (2011) had **recommended a five-time increase in the cap to Rs. 5 lakh** due to rising income levels and increasing size of individual bank deposits.
 - Within the **first 45 days of the bank being put under moratorium**, the **DICGC would collect all information** relating to deposit accounts. In the **next 45 days, it will review the information and repay depositors** within a maximum of 90 days.
- **Insurance Premium:**
 - It **permits raising the deposit insurance premium by 20% immediately, and maximum by 50%**.
 - The premium is **paid by banks to the DICGC**. The Insured banks pay advance insurance premiums to the corporation **semi-annually within two months from the beginning of each financial half year**, based on their deposits as at the end of previous half year.

- It has been **raised from 10 paise for every Rs 100 deposit, to 12 paise and a limit of 15 paise** has been imposed.
- This is **only an enabling provision** and the **determination of an increase in the premium payable would involve consultations with the RBI** and require government approval.

Deposit Insurance and Credit Guarantee Corporation

➤ About:

- It **came into existence in 1978** after the merger of **Deposit Insurance Corporation (DIC)** and **Credit Guarantee Corporation of India Ltd. (CGCI)** after passing of the **Deposit Insurance and Credit Guarantee Corporation Act, 1961** by the Parliament.
- It **serves as a deposit insurance and credit guarantee for banks** in India.
- It is a **fully owned subsidiary of and is governed by the RBI**.

➤ Coverage:

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

➤ Types of Deposits Covered:

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

➤ Funds:

- The Corporation maintains the **following funds** :
 - Deposit Insurance Fund
 - Credit Guarantee Fund
 - General Fund

Note:

- The **first two** are funded respectively by the insurance premia and **guarantee fees received and are utilised for settlement** of the respective claims.
- The **General Fund** is utilised for meeting the establishment and administrative expenses of the Corporation.

UN's Survey on Digital and Sustainable Trade Facilitation 2021

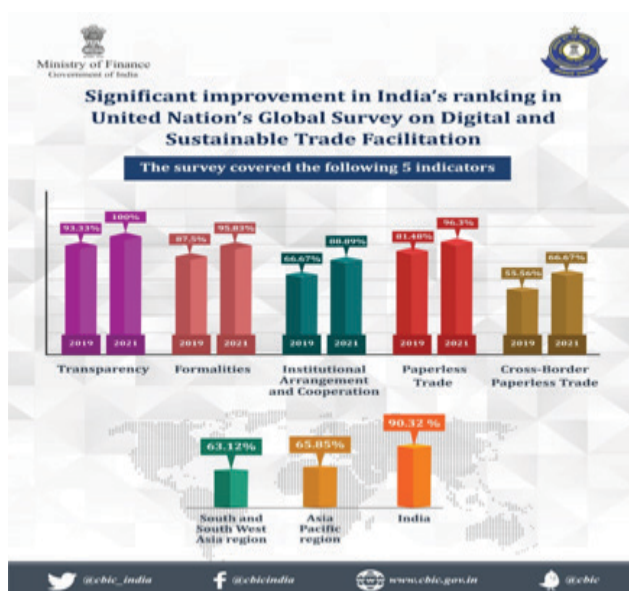
Why in News

Recently, India has scored 90.32% in United Nations Economic and Social Commission for Asia Pacific's (UNESCAP) Global Survey on Digital and Sustainable Trade Facilitation.

- This is a remarkable jump from 78.49% in 2019.

Key Points

- **About Survey:**
 - The survey is **conducted every two years** by **UNESCAP** and includes **an assessment of 58 trade facilitation measures covered by the World Trade Organization's Trade Facilitation Agreement**.
 - **58 measures include** publications of existing import-export rules on the internet, risk management, advance ruling on tariff classification, pre-arrival



processing, independent appeal mechanism, expedited shipments, automated customs system, among others.

- A **higher score** for a country **helps businesses in their investment decisions**.
- The **UN Regional Commissions jointly conduct the UN Global Survey on Digital and Sustainable Trade Facilitation**.
- The Survey **currently covers 143 economies around the globe**. For Asia Pacific, it is conducted by UNESCAP.
- **Assessment of India:**
 - It pointed out **India's improvement in the scores on all five key indicators**.
 - **Transparency:** 100% in 2021 (from 93.33% in 2019)
 - **Formalities:** 95.83% in 2021 (from 87.5% in 2019)
 - **Institutional Arrangement and Cooperation:** 88.89% in 2021 (from 66.67% in 2019)
 - **Paperless Trade:** 96.3% in 2021 (from 81.48% in 2019).
 - **Cross-Border Paperless Trade:** 66.67% in 2021 (from 55.56% in 2019).
 - **Comparison with Other Countries:**
 - India is the **best performing nation** as compared to the **South and South West Asia region** (63.12 %) and **Asia Pacific region** (65.85%).
 - The overall score of India is **also greater than many OECD (Organisation for Economic Cooperation and Development) countries** including France, UK, Canada, Norway, Finland etc. and the overall score is **greater than the average score of the EU (European Union)**.
 - **Cause of Improvement:**
 - The **CBIC** (Central Board of Indirect Taxes and Customs) has been at forefront of path breaking reforms under the umbrella of 'Turant' Customs to usher in a Faceless, Paperless and Contactless Customs by way of a series of reforms.
 - During the **Covid-19 pandemic**, Customs formations worked to expedite imports such as oxygen-related equipment, life-saving medicines, vaccines etc.

Note:

United Nations' Economic and Social Commission for Asia and the Pacific

- **About:** It is a regional development arm of the **United Nations** for the Asia-Pacific region.
- **Members:** It has **53 Member States** and **9 Associate Members** from Asia-Pacific Region. **India** is also a member.
- **Established:** 1947
- **Headquarters:** Bangkok, Thailand
- **Objective:** To overcome some of the region's greatest challenges by providing results-oriented projects, technical assistance and capacity building to member States.
- **Recent report:** '**Economic and Social Survey of Asia and the Pacific 2021: Towards post-Covid-19 resilient economies**'.

Insolvency and Bankruptcy Code (Amendment Bill), 2021

Why in News

Recently, the government introduced the **Insolvency and Bankruptcy Code (Amendment Bill), 2021** in the Lok Sabha.

- The Bill is set to replace the **Insolvency and Bankruptcy Code Amendment Ordinance 2021** promulgated in April 2021.
 - It introduced an **alternate insolvency resolution process** for **Micro, Small and Medium Enterprises (MSMEs)** with defaults **up to Rs 1 crore** called the **Pre-packaged Insolvency Resolution Process (PIRP)**.
- In March 2021 a sub-committee of the **Insolvency Law Committee (ILC)** recommended a **pre-pack** framework within the basic structure of the **Insolvency and Bankruptcy Code (IBC), 2016**.

Key Points

- **Major Provisions:**
 - Distressed Corporate Debtors (CDs) are permitted to initiate a **PIRP** with the **approval of two-thirds of their creditors** to resolve their outstanding debt under the new mechanism.
 - A CD is a corporate person **who owes debt to any other person**.

Insolvency and Bankruptcy Code

- It is a reform **enacted in 2016**. It **amalgamates various laws** relating to the insolvency resolution of business firms.
- It lays down **clear-cut and faster insolvency proceedings to help creditors**, such as banks, recover dues and prevent bad loans, a key drag on the economy.

Key Words

- **Insolvency:** It is a situation where **individuals or companies are unable to repay** their outstanding debt.
- **Bankruptcy:** It is a **situation whereby a court of competent jurisdiction has declared a person or other entity insolvent**, having passed appropriate orders to resolve it and protect the rights of the creditors. It is a legal declaration of one's inability to pay off debts.

- The PIRP also allows for a **Swiss challenge to the resolution plan** submitted by a CD in case operational creditors are not paid 100 % of their outstanding dues.

- A **Swiss Challenge** is a method of bidding, often used in public projects, in which an interested party initiates a proposal for a contract or the bid for a project.

About PIRP:

- A pre-pack is the **resolution of the debt of a distressed company through an agreement between secured creditors and investors** instead of a public bidding process.
 - This system of insolvency proceedings has become an **increasingly popular mechanism** for insolvency resolution in the UK and Europe over the past decade.
- Pre-packs are **largely aimed at providing MSMEs with an opportunity to restructure their liabilities and start with a clean slate** while still providing adequate protections so that the system is not misused by firms to avoid making payments to creditors.
- Unlike in the case of **Corporate Insolvency Resolution Process (CIRP)**, **debtors remain in control of their distressed firm during the PIRP**.
- Under the **pre-pack system**, financial creditors will **agree to terms with a potential investor** and seek

Note:

approval of the resolution plan from the **National Company Law Tribunal (NCLT)**..

➤ **Need of Pre-Packs:**

- CIRP is a **time taking resolution**. At the end of December 2020, over 86% of the 1717 ongoing insolvency resolution proceedings had crossed the **270-day threshold**.
 - Under the IBC, **stakeholders are required to complete the CIRP within 330 days** of the initiation of insolvency proceedings.
 - One of the key reasons behind delays in the CIRPs are **prolonged litigations by erstwhile promoters and potential bidders**.

➤ **Key Features of Pre-Packs:**

- **Insolvency Practitioner:**
 - Pre-Pack **usually requires services of an insolvency practitioner** to assist the stakeholders in the conduct of the process.
 - The extent of **authority** of the practitioner **varies across jurisdictions**.
- **Consensual Process:**
 - It envisages a **consensual process** - prior understanding among or approval by stakeholders about the course of action to address stress of a CD, before invoking the formal part of the process.
- **No requirement of Court Approval:**
 - It does **not always require approval of a court**. Wherever it requires approval, the courts **often get guided by commercial wisdom of the parties**.
 - Outcome of the pre-pack process, where approved by the court, is **binding on all stakeholders**.

➤ **Benefits of pre-packs:**

- **Quick resolution:**
 - It is limited to a **maximum of 120 days** with only 90 days available to the stakeholders to bring the resolution plan to the NCLT.
 - Besides offering a way for MSMEs to restructure their debts, the pre-pack scheme could also **reduce the burden on benches of the NCLT** by offering a faster resolution mechanism than ordinary CIRPs.
- **Minimises Disruptions to the Business:**
 - Existing **management retains control** in the case of pre-packs rather than resolution professionals

in CIRP, hence **avoids the cost of disruption of business** and continues to retain employees, suppliers, customers, and investors.

○ **Addresses the entire liability side:**

- PIRP will **help CD to enter into consensual restructuring** with lenders and **address the entire liability** side of the company.

➤ **Challenges of PIRP:**

○ **Raising additional capital:**

- Initially **CDs may not raise additional capital or debt from Investors or Banks**, because of the risk involved in recovering the money being provided by these Investors and lenders.

○ **Small timeline:**

- Resolution Plan under PIRP is 90 days with an additional 30 days to AA (Adjudicating Authority) for support of the scheme. It is **challenging for CoC (Committee of Creditors) members to decide on the Base resolution Plan within this short period** without any broad parameters on which the Resolution Plan be approved.

World Economic Outlook: IMF

Why in News

The latest edition of the **International Monetary Fund's (IMF) World Economic Outlook** has cut its **2021 growth forecast for India to 9.5% from 12.5% estimated earlier in April 2021**.

- While re-calibrating its forecast IMF considered two major factors which are **access to vaccines** and **risk of new Corona-variants**.

Key Points

➤ **Indian Economy:**

- Indian economy is expected to grow by **9.5% in 2021 and 8.5% in 2022** (larger than the **6.9% it had projected in April**).
- In **2020**, India's economy witnessed an estimated **contraction of 8%**.
- The IMF has cut its growth forecast because of the **Covid-19 Second Wave** that hit the recovery momentum, damaging consumer confidence and rural demand.

➤ **Global Economy:**

Note:



drishti

- Retained its global growth forecast at **6% for the year 2021**, and it is expected to grow at **4.9 % for the year 2022**.
 - In 2020, the global economy **contracted by 3.3%**
- **Global Trade Volume:**
 - Revised up its predictions of global trade volume growth by a sharp 130 bps **for 2021 to 9.7 %** and **50 bps for 2022 to 7%**.
 - **India is set to benefit** from an expected rise in global trade prospects once its supply side gains traction.
- **Suggestions:**
 - **Tighter External Financial Conditions:**
 - Emerging markets **should prepare for possibly tighter external financial conditions by lengthening debt maturities** where possible and limiting the buildup of unhedged foreign currency debt.
 - **Avoid Premature Tightening Policies:**
 - Central banks should avoid premature tightening policies when faced with **transitory inflation pressures** but should be prepared to move quickly if inflation expectations show **signs of de-anchoring**.
 - **Prioritize Health Spending:**
 - Fiscal policy **should continue to prioritize health spending**, including on vaccine production and distribution infrastructure, personnel, and public health campaigns, to boost take-up.
 - **Fiscal policy** is the means by which a government adjusts its spending levels and tax rates to monitor and influence a nation's economy.

International Monetary Fund

- The IMF was set up along with the **World Bank** after the **Second World War** to assist in the reconstruction of war-ravaged countries.
 - The two organisations were agreed to be set up at a conference in Bretton Woods in the US. Hence, they are **known as the Bretton Woods twins**.
- **Created in 1945, the IMF is governed by and accountable to the 190 countries** that make up its near-global membership. India joined on **27th December, 1945**.

- The IMF's primary purpose is **to ensure the stability of the international monetary system** — the system of exchange rates and international payments that enables countries (and their citizens) to transact with each other.
 - The Fund's **mandate was updated in 2012** to include all macroeconomic and financial sector issues that bear on global stability.
- **Reports by IMF:**
 - **Global Financial Stability Report.**
 - **World Economic Outlook.**

World Economic Outlook

- It is a survey by the **IMF that is usually published twice a year** in the months of April and October.
- It analyzes and predicts **global economic developments during the near and medium term**.
- In response to the growing demand for more frequent forecast updates, the **WEO Update is published in January and July** between the two main WEO publications released usually **in April and October**.

Marine Aids to Navigation Bill 2021

Why in News

Recently, the Parliament has passed the **Marine Aids to Navigation Bill 2021**. The bill will **repeal the Lighthouse Act, 1927**, an over nine-decade-old law governing the traditional navigation aid, i.e. lighthouses.

Key Points

- **Background:**
 - Uptil now, the **administration and management of Lighthouse and Lightships** in India is governed by **Lighthouse Act 1927** for safe navigation.
 - Lighthouses serve **two main purposes** viz. as a **navigational aid** and to **warn boats of dangerous areas**.
 - It is like a **traffic sign on the sea**.
 - However, as the **technology evolved**, systems were put in place where with the help of Radar and other sensors, vessels were advised from shore about the position.

Note:

- Thus, **Vessel Traffic Services (VTS)** came into existence and found wide acceptability.
- These modern, technologically improved aids to marine navigation systems have changed their profile from a 'passive' service to that of 'passive as well as interactive' service.
- The need for enactment of a new Act is necessitated to **provide an appropriate statutory framework which reflects the modern role of marine aids to navigation** and to be in **compliance with India's obligations under International Conventions**.
- **Salient Features of the Bill:**
 - **Main Objectives:**
 - Incorporating the **global best practices and technological developments**,
 - Complying with **India's International obligations** in the field of Marine Aids to Navigation,
 - Making the **legislative framework user-friendly**,
 - Promoting **ease of doing business**.
 - **Scope of the Law:** The Bill applies to the whole of India including various maritime zones including **territorial waters, continental shelf, and exclusive economic zone**.
 - **Defined Mechanism:** It defines aid to navigation as a device, system or service, external to vessels, designed and operated to enhance safe and efficient navigation of individual vessels and vessel traffic.
 - **Vessel traffic service** means a service implemented under the Act to improve the safety and efficiency of vessel traffic and to protect the environment.
 - **Institutional Mechanism:** The Bill provides that the Central government shall appoint a **Director General**, who will inter alia advise the central government on matters related to aids to navigation.
 - It also provides for appointments of **Deputy Director Generals and Directors for districts**.
 - **Heritage Lighthouse:** The Bill empowers the Central Government to designate any aid to navigation under its control as a "**heritage lighthouse**".
 - In addition to their function as aids to navigation, such lighthouses will be developed for **educational, cultural, and tourism purposes**.
 - **Offences and Penalties:** It comprises a **new schedule of offences**, along with commensurate penalties for obstructing and damaging the aids to navigation,

and non-compliance with directives issued by the Central Government and other bodies.

➤ **Intended Benefits:**

- **Improved Legal Framework** for Matters related to Aids to Navigation & Vessel Traffic Services and covers the future developments in the field of Marine Navigation.
- **Management of 'Vessel Traffic Services' for enhancing the safety and efficiency** of shipping and to protect the environment.
- **Skill development** through Training and Certification for the operators of 'Aids to Navigation' and 'Vessel Traffic Services' at par with International standards.
- **Auditing and Accreditation of Institutes** to cater to the need of Training and Certification at par with global standards.
- **Marking of "Wreck" in general waters** to identify sunken / stranded vessels for safe and efficient navigation.
- **Development of Lighthouses for the purpose of education, culture and tourism**, which would tap the tourism potential of coastal regions and contribute to their economy.

SLDE and GHG Calculator

Why in News

Recently, the government has launched the **Secured Logistics Document Exchange (SLDE)** along with a **Calculator for GreenHouse Gas (GHG) Emissions** to boost **Ease-Of-Doing Business** in the country.

- In **World Bank's Ease-Of-Doing Business Report, 2020** India was ranked **63** out of 190 countries.

Key Points

- **Secured Logistics Document Exchange:**
 - The SLDE platform is a solution to **replace the present manual process of generation, exchange and compliance of logistics documents** with a digitized, secure and seamless document exchange system.
 - It will **enable generation, storage and interchange of logistics-related documents digitally** using **Aadhaar** and **blockchain**-based security protocols for data security and authentication.

Note:

- It will also provide a **complete audit trail of document transfer**, faster execution of transactions, **lower cost of shipping and overall carbon footprint**, easy verification of authenticity of documents, lowered risk of fraud, etc.
- **GreenHouse Gas Emission Calculator:**
 - The GHG Calculator is an efficient, **user-friendly tool and provides for calculating and comparing GHG emissions** across different modes.
 - It allows for **commodity-wise comparison of GHG emissions** and total cost of transportation, including their environmental cost, between movement by road and rail.
 - The tool is intended to **facilitate appropriate modal choice for all concerned**.
- **Benefits:**
 - **Improved Efficiency:**
 - Initiatives will improve **logistics efficiency, reduce logistics cost, and promote multi-modality and sustainability** in a big way, also help **fill the gap areas** where no action has yet been taken either by private players or any of the line ministries.
 - **Achieving Targets:**
 - It will help achieve the targets of **improved India's ranking in Logistics Performance Index (LPI)**, reduction in logistics cost and establishment of indigenous India-specific metrics for continual improvement in logistics.
 - India ranked **44th on the LPI in 2018**.
- **Related Initiatives:**
 - **Dedicated Freight Corridor (DFC):**
 - It is a **high speed and high capacity railway corridor** that is exclusively meant for the transportation of freight, or in other words, goods and commodities.
 - **National Logistics Law 2020:**
 - It aims to **streamline the logistics ecosystem in the country**, with a view to promote growth of the sector and also to add impetus to enhance export competitiveness and ranking in LPI.
 - **Logix India 2019:**
 - It was organized by the Ministry of Commerce & Industry and the **Federation of Indian Export Organisations (FIEO)** as an **initiative to improve logistics cost effectiveness** and operational efficiencies for India's global trade.

- **Multimodal Logistics Park:**
 - The park will **reduce trade cost by 10%** and have cargo capacity of 13 million metric tons (MMT) per year.
- **Fast Tracking Freight in India:**
 - Recently it was launched to make goods transport cost-effective and **to reduce India's logistics cost**.
- **Port Community System 'PCS1x':**
 - The platform has the **potential to revolutionize maritime trade in India** and bring it at par with global best practices and pave the way to improve the Ease of Doing Business world ranking and **LPI ranks**.

Promoting Digital Banking

Why in News

Recently, the **Union Minister of State for Finance** has stated in the **Rajya Sabha** that the Government has taken a **number of steps to facilitate digital banking, doorstep banking services and digital lending platforms**.

Key Points

- **Digital Banking:**
 - It is the **digitization (or moving online) of all the traditional banking activities and programs services** that were historically only available to customers when physically inside of a bank branch.
 - This **includes** activities like Money Deposits, Withdrawals, and Transfers, Checking/Saving Account Management, Applying for Financial Products, Loan Management, Bill Pay, Account Services.
- **Challenges:**
 - **Internet access** is not the only barrier to adoption of digital payments.
 - **Educating users as well as ensuring the security** of their data is essential.
- **Initiatives Highlighted:**
 - **EASE Reforms Agenda:** It was **launched in January 2018 jointly by the government and PSBs**.
 - It was **commissioned through Indian Banks' Association** and authored by **Boston Consulting Group**.
 - EASE Agenda is **aimed at institutionalizing CLEAN and SMART banking**.

Note:

- **EASE Reforms Index:** The Index measures performance of each PSB on 120+ objective metrics. The goal is to continue driving change by encouraging healthy competition among PSBs.
- **EASE 1.0:** The EASE 1.0 report showed significant improvement in PSB performance in resolution of **Non Performing Assets** (NPAs) transparently.
- **EASE 2.0:** EASE 2.0 builds on the foundation of EASE 1.0 and introduced new reform Action Points across six themes to make reforms journey irreversible, strengthen processes and systems, and drive outcomes.
 - The six themes of EASE 2.0 are: Responsible Banking; Customer Responsiveness; Credit Off-take, PSBs as UdyamiMitra (SIDBI portal for credit management of MSMEs); Financial Inclusion & Digitalisation; and Governance and Human Resource (HR).
- **Ease 3.0:** It seeks to enhance ease of banking in all customer experiences, using technology viz. **Dial-a-loan, Partnerships with FinTechs and E-commerce companies, Credit@click, Tech-enabled agriculture lending, EASE Banking Outlets etc.**
- **Ease 4.0:** State-run banks will focus on **co-lending with non-banking firms, digital agriculture financing, synergies and technological resilience for 24x7 banking** as part of their reforms agenda for this fiscal, Ease 4.0.
- **PSBloansin59 minutes.com:**
 - Initiation of digital lending has been made contactless through **PSBloansin59 minutes.com**, using triangulation of **credit bureau, income-tax and goods and services tax (GST)** data, to provide online in principle approval for **Micro, Small and Medium Enterprises (MSME)** loans.
- **Trade Receivables Discounting System (TReDS) Platform:**
 - **Online bill discounting for MSMEs** has been enabled on a competitive basis **through Public Sector Banks (PSBs) onboarding onto the TReDS platform** and the proportion of online discounted bills has grown rapidly.
 - **Bill Discounting** is a trade-related activity in which a company's unpaid invoices which are due to be paid at a future date are sold to a financier (a bank or another financial institution).

- **Jeevan Pramaan' Initiative:**
 - This **initiative for pensioners** has enabled senior citizen pensioners the facility to update their annual life certificate online.
- **Doorstep Banking Services:**
 - **PSB Alliance**, an initiative of all **PSBs and Indian Banks' Association**, has launched **doorstep banking services for all customers**.
 - Through 'Door Step Banking', customers can avail major Banking transaction services at their Doorstep.
- **Current Status:**
 - Now, nearly **72% of financial transactions of PSBs** are done through digital channels, with doubling of customers active on digital channels from 3.4 crore in FY 2019-20 to 7.6 crore in FY 2020-21.
 - The share of **financial transactions undertaken through home and mobile channels** has increased from **29% in FY 2018-19 to 76% in FY 2020-21**.

New Facilities Under Strategic Petroleum Reserves

Why in News

Recently, under the **Strategic Petroleum Reserves (SPR)** programme, the government has given approval for establishing **two additional facilities**.

- In 2020, **India filled its strategic petroleum reserves** in view of the **slump in crude prices**.

Key Points

- **New Facilities:**
 - The new facilities will be **commercial-cum-strategic facilities** with a total storage capacity of **6.5 MMT**(Million Metric Ton) underground storages at:
 - **Chandikhol, Odisha** (4 MMT)
 - **Padur, Karnataka** (2.5 MMT)
 - They will be built in **Public Private Partnership** mode under **phase II** of the SPR Programme.
- **Existing Facilities:**
 - Under **Phase I of the Programme**, Government of India has established petroleum storage facilities with total capacity of **5.33 MMT at 3 locations**:
 - **Visakhapatnam, Andhra Pradesh** (1.33 MMT).

Note:

- **Mangaluru, Karnataka** (1.5 MMT).
- **Padur, Karnataka** (2.5 MMT).
- The petroleum reserves established under Phase I are **strategic in nature** and the crude oil stored in these reserves will be **used during an oil shortage event**, as and when declared so by the Government of India.

Strategic Petroleum Reserves

➤ About:

- Strategic petroleum reserves are **huge stockpiles of crude oil** to deal with any crude oil-related crisis like the risk of supply disruption from natural disasters, war or other calamities.
- According to the agreement on an **International Energy Programme (I.E.P.)**, each **International Energy Agency (IEA)** country has an **obligation to hold emergency oil stocks equivalent to at least 90 days of net oil imports**.
 - In case of a severe oil supply disruption, **IEA members may decide to release these stocks to the market** as part of a collective action.
 - **India became an associate member** of the IEA in 2017.
- The **concept** of dedicated strategic reserves **was first mooted in 1973 in the US**, after the **OPEC (Organization of the Petroleum Exporting Countries)** oil crisis.
- Underground storage is, by far, the **most economical method** of storing petroleum products because the underground facility **rules out the requirement of large swathes of land, ensures less evaporation** and, since the caverns are built much below the sea level, it is **easy to discharge crude** into them from ships.
- The construction of the Strategic Crude Oil Storage facilities in India is being managed by **Indian Strategic Petroleum Reserves Limited (ISPRL)**.
 - ISPRL is a wholly owned subsidiary of Oil Industry Development Board (OIDB) under the Ministry of Petroleum & Natural Gas.
- After the new facilities get functional a total of **22 days (10+12)** of oil consumption will be made available.
- With the strategic facilities **Indian refiners also maintain crude oil storage (industrial stock) of 65 days**.

- Thus, Approximately a total of **87 days (22 by strategic reserves + 65 by Indian refiners)** of oil consumption will be made available in India after completion of **Phase II of the SPR programme**. This will be very **close to the 90 days mandate by the IEA**.

➤ Need of SPRs in India:

- **Build Sufficient Capacity:**
 - The **current capacity of this is not sufficient** to tackle any unpredicted event that occurs in the international crude market.
 - 86% of the country is dependent on oil with **nearly 5 million barrels of oil consumption in a day**.
- **Energy Security:**
 - The **fluctuation in the price of crude oil in the international market** leads to a dire need for India to make petroleum reserves to ensure the country's energy security and avoid monetary loss.

Tackling the Menace of Black Money

Why in News

Recently, the **Union Minister of State for Finance** has stated in **Lok Sabha** that the **government's black money law** has helped detect several instances where Indians have been found stashing undisclosed income overseas.

Key Points

➤ Black Money:

- There is **no official definition of black money in economic theory**, with several different terms such as parallel economy, black money, black incomes, unaccounted economy, illegal economy and irregular economy all being used more or less synonymously.
- The simplest definition of black money could possibly be **money that is hidden from tax authorities**.
- It can come from two broad categories:
 - **Illegal Activity:**
 - Money that is earned through illegal activity is obviously not reported to the tax authorities, and so is black.

Note:



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- **Legal but Unreported Activity:**

- The second category comprises income from legal activity that is not reported to the tax authorities.

➤ **Impacts:**

- **Loss of Revenue:**

- Black money eats up a part of the tax and, thus, the **government's deficit increases**.
- The government has to **balance this deficit by increasing taxes, decreasing subsidies and increasing borrowings**.
- Borrowing leads to a further **increase in the government's debt due to interest burden**. If the government is unable to balance the deficit, it has to decrease spending, which affects development.

- **Money Circulation:**

- People generally tend to keep black money in the form of **gold, immovable property and other secret manners**.
- Such money does not become part of the main economy and, therefore, remains generally out of circulation.
- The black money keeps circulating among the wealthy and creates more opportunities for them.

- **Higher Inflation:**

- The infusion of **unaccounted black money** in the economy **leads to higher inflation**, which obviously hits the poor the most.
- It also increases the disparity between the rich and the poor.

➤ **Government's Initiatives:**

- **Legislative Action:**

- **The Fugitive Economic Offenders Act, 2018**
- **The Central Goods and Services Tax Act, 2017**
- **The Benami Transactions (Prohibition) Amendment Act, 2016**
- **The Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015**
- **Prevention of Money Laundering Act, 2002.**

- **International Cooperation:**

- **Double Taxation Avoidance Agreements (DTAAs):**
 - India is proactively engaging with foreign governments with a view to facilitate and enhance the exchange of information under

Double Taxation Avoidance Agreements (DTAAs)/Tax Information Exchange Agreements (TIEAs)/Multilateral Conventions.

- **Automatic Exchange of Information:**

- **India has been a leading force** in the efforts to forge a **multilateral regime** for proactive sharing of **financial information** known as **Automatic Exchange of Information** which will greatly assist the global efforts to combat tax evasion.
- The Automatic Exchange of Information based on Common Reporting Standard has commenced from 2017 enabling **India to receive financial account information of Indian residents in other countries**.
- **Foreign Account Tax Compliance Act of USA:**
 - **India has entered into an information sharing agreement with the USA under the act.**

Suspension of FCRA Certificate

Why in News

The Commonwealth Human Rights Initiative (CHRI) has challenged the suspension of its **Foreign Contribution Regulation Act (FCRA) certificate** for 180 days.

- The **Ministry of Home Affairs (MHA)** suspended **CHRI's certificate** in violation of various provisions of the FCRA Act.

Key Points

- **Foreign Contribution (Regulation) Act (FCRA), 2010:**
- Foreign funding of persons in India is regulated under **FCRA act** and is implemented by the **Ministry of Home Affairs**.
 - **Individuals** are permitted to accept foreign contributions **without permission of MHA**.
 - However, the **monetary limit for acceptance** of such foreign contributions **shall be less than Rs. 25,000**.
 - The Act ensures that the recipients of foreign contributions adhere to the stated purpose for which such contribution has been obtained.
 - Under the Act, organisations are required to register themselves every five years.

Note:

➤ **Foreign Contribution (Regulation) Amendment Act, 2020:**

- **Prohibition to accept foreign contribution:** The Act bars public servants from receiving foreign contributions. Public servant includes any person who is in service or paid by the government, or remunerated by the government for the performance of any public duty.
- **Transfer of foreign contribution:** The Act prohibits the transfer of foreign contribution to any other person not registered to accept foreign contributions.
- **Aadhaar for registration:** The Act makes Aadhaar number mandatory for all office bearers, directors or key functionaries of a person receiving foreign contribution, as an identification document.
- **FCRA account:** The Act states that foreign contributions must be received only in an account designated by the bank as FCRA account in such branches of the State Bank of India, New Delhi.
- **Reduction in use of foreign contribution for administrative purposes:** The Act proposes that not more than 20% of the total foreign funds received could be defrayed for administrative expenses. In FCRA 2010, the limit was 50%.
- **Surrender of certificate:** The Act allows the central government to permit a person to surrender their registration certificate.
- **Other Regulations:**
 - **Widening the Scope of Foreign Contribution:** Under the issued regulations, donations given in Indian rupees (INR) by any foreigner/foreign source including foreigners of Indian origin like **Overseas Citizen of India (OCI)** or Person of India Origin (PIO) cardholders should also be treated as foreign contribution.
 - **Meeting the Standards of FATF:** The guidelines mandate that good practices should be followed by NGOs in accordance with standards of the global financial watchdog- **Financial Action Task Force (FATF)**.
 - It asked NGOs to inform the Ministry about "suspicious activities" of any donor or recipient and "take due diligence of its employees at the time of recruitment."

➤ **Argument of CHRI:**

- The suspension order is contrary to the framework of the scheme set out under the FCRA Act and even the **suspension was passed without initiating any inquiry**.

- The suspension order was based on wholly incorrect facts and violates basic **principles of natural justice**.

➤ **Issues Related to FCRA:**

- **Scope not defined:** It prohibits the receipt of foreign contributions "for any activities detrimental to the national interest" or the "economic interest of the state".
 - However, there is no clear guidance on what constitutes "public interest".
- **Limits Fundamental Rights:** The FCRA restrictions have serious consequences on both the rights to free speech and freedom of association under **Articles 19(1)(a)** and **19(1)(c)** of the Constitution.

Commonwealth

Human Rights Initiative (CHRI)

- CHRI is an **independent, non-partisan, international non-governmental organisation**, working for the practical realisation of human rights across the Commonwealth.
- **Headquarters**
 - New Delhi

The Commonwealth

- **Origin:** It is one of the world's oldest political associations of states. Its roots go back to the British Empire when some countries were ruled directly or indirectly by Britain.
 - Some of these countries became self-governing while retaining Britain's monarch as Head of State. They formed the British **Commonwealth of Nations**.
 - In 1949, the Commonwealth came into being. Since then, independent countries from Africa, the Americas, Asia, Europe and the Pacific have joined the Commonwealth.
- **Membership:** The Commonwealth is a voluntary association of 54 independent and equal sovereign states.
 - Membership is based on free and equal voluntary cooperation. Rwanda and Mozambique - have no historical ties to the British Empire.

Note:

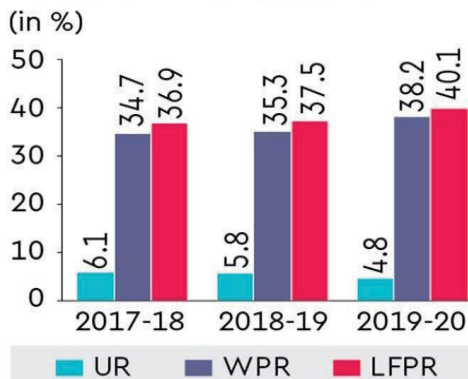
Periodic Labour Force Survey 2019-20

Why in News

Recently, the **National Statistical Office (NSO)** released the **third annual report** on **Periodic Labour Force Survey (PLFS)**, conducted between **July 2019 and June 2020**.

- Labour indicators recorded an **all-round improvement in 2019-20** compared with the previous two years i.e. 2017-18 and 2018-19.

Labour indicators



National Statistical Office

- It is the **central statistical agency** of the Government mandated under the **Statistical Services Act 1980** under the **Ministry of Statistics and Programme Implementation**.
- It is **responsible for the development of arrangements for providing statistical information services** to meet the needs of the Government and other users for information on which to base policy, planning, monitoring and management decisions.
 - The services include **collecting, compiling and disseminating official statistical information**.
- Other Reports & Indices by NSO:
 - **Index of Industrial Production (IIP)**
 - **Consumer Price Index (CPI)**
 - **Sustainable Development Goals National Indicator Framework** Progress Report

Key Points

- **Unemployment Rate:**

- The unemployment rate **fell to 4.8% in 2019-20**. In 2018-19, it stood at 5.8% and 6.1% in 2017-18.

➤ Worker Population Rate:

- It improved to **38.2% in 2019-20** compared with 35.3% in 2018-19 and 34.7% in 2017-18.

➤ Labour Force Participation Ratio:

- It **increased to 40.1% in 2019-20** from 37.5% and 36.9%, respectively, in the last two years. The higher the LFPR, the better.

➤ Gender Based Unemployment Rate:

- The data showed the jobless rate for both **male and female fell to 5.1% and 4.2%**, respectively, in 2019-20 from 6% and 5.2% in 2018-19.
 - WPR and LFPR also comparatively improved during the year.

➤ Periodic Labour Force Survey:

○ About:

- It is India's **first computer-based survey** launched by the **NSO in 2017**.
- It has been constituted based on the recommendation of a committee headed by **Amitabh Kundu**.
- It essentially **maps the state of employment in the country**. In doing so, it **collects data on several variables** such as the level of **unemployment**, the **types of employment** and their respective shares, the **wages earned** from different types of jobs, the **number of hours worked etc.**
- Before PLFS, the **National Sample Survey Office (NSSO)**- previous name of NSO used to bring the data related to employment and unemployment based on its quinquennial (every 5 year) household socio-economic survey programme.

○ Objective:

- To **estimate the key employment and unemployment indicators** (viz. WPR, LFPR, UR) in the short time interval of three months for the urban areas only in the **Current Weekly Status (CWS)**.
- To **estimate employment and unemployment indicators** in both **usual status and CWS** in both **rural and urban areas** annually.

- **Recent Government Initiatives to Tackle Unemployment:**

Note:



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- The Union government has come up with an economic stimulus package under **Atmanirbhar Bharat Abhiyan** to support the Indian economy and create jobs.
 - Under the **Pradhan Mantri Street Vendor's Atma Nirbhar Nidhi (PM SVANidhi)**, the Union Government is providing affordable loans to street vendors.
 - In 2020 the government allocated an additional fund of Rs 40,000 crore for **MGNREGA**, as part of the stimulus package.
 - The government is offering **credit guarantees for Micro, Small and Medium Enterprises (MSMEs)** which will help them in getting loans easily and boost their functioning.
 - **Pradhan Mantri Mudra Yojana** to provide financial support to entrepreneurs to start small enterprises.
- Various other initiatives have also been taken by the government to support the economy which includes relaxation in Companies Act and **Insolvency proceedings, reforms in agri- marketing** etc.
- Government has also taken initiatives such as the **New Code on Wages, 2019** to reduce gender-based discrimination in wages, recruitment and conditions of employment.
- State governments have also come up with the initiative to support their economy and increase jobs.
 - Andhra Pradesh government's **'ReStart' programme** to support the MSME sector in the State.
 - **Jharkhand has launched three employment schemes** to create wage employment for workers in rural areas.

Key Terms

- **Unemployment Rate (UR):**
- It is defined as the **percentage of persons unemployed** among the persons in the labour force. **Labour Force Participation Rate (LFPR):**
 - It is defined as the **percentage of persons in the labour force** (i.e. working or seeking or available for work) in the population.
- **Worker Population Ratio (WPR):**
 - It is defined as the **percentage of employed persons in the population.**

➤ Activity Status:

- The activity status of a person is **determined on the basis of the activities pursued by the person during the specified reference period.**
 - **Usual Status:** The activity status determined on the basis of the **reference period of the last 365 days** preceding the date of survey, it is known as the usual activity status of the person.
 - **Current Weekly Status (CWS):** The activity status determined on the basis of a **reference period of the last 7 days** preceding the date of survey is known as the current weekly status (CWS) of the person.

Investment Climate in India

Why in News

Recently, the **US State Department released a report** titled '2021 Investment Climate Statements: India'. The report **lauded the structural economic reforms** carried by the Government of India, in the wake of economic slowdown and **Covid-19 pandemic**.

- However, the report asserts that India **remains a challenging place to do business.**
- Earlier, the **UK India Business Council (UKIBC)** emphasized that some of the reforms under the **Atmanirbhar Bharat programme could have negative consequences** for the UK and all multinational companies.

Key Points

➤ Recent Economic Reforms:

- **Privatization:** In February 2021, the Government of India announced plans to raise \$2.4 billion through an **ambitious privatization program** that would dramatically reduce the government's role in the economy.
- **FDI Liberalization:** In August 2019, the government announced a **new package of liberalization measures** and brought a number of sectors including coal mining and contract manufacturing under the **automatic route.**
 - In March 2021, Parliament further liberalized India's insurance sector, increasing the **foreign direct investment (FDI) limits to 74% from 49%.**

Note:

- **Atmanirbhar Bharat Abhiyan:** In order to combat economic slowdown pertaining to Covid-19, the Government of India launched **Atmanirbhar Bharat Abhiyan**.
 - This programme envisages extensive social welfare and economic stimulus programs and increased spending on infrastructure and public health.
 - Further, it aims towards cutting down import dependence by focusing on substitution while improving safety compliance and quality goods to gain global market share.
- **PLI Scheme:** The government also adopted **production linked incentives** to promote manufacturing in pharmaceuticals, automobiles, textiles, electronics, and other sectors.
- **Insolvency and Bankruptcy Code:** The introduction and implementation of the **Insolvency and Bankruptcy Code (IBC)** in 2016 led to an overhaul of the previous framework on insolvency and paved the way for much-needed reforms.
 - Among the areas where India has improved the most in the **World Bank's Ease of Doing Business Ranking** the past three years has been under the resolving insolvency metric.
- **Matching Global Standards of Arbitration:** The government of India passed **Arbitration and Conciliation (Amendment) Act, 2021**.
 - The Act contains provisions to deal with domestic and international arbitration and defines the law for conducting conciliation proceedings.
- **Sovereign Wealth Funds:** In 2016, the Indian government established the **National Infrastructure Investment Fund (NIIF)**, touted as India's first sovereign wealth fund to promote investments in the infrastructure sector.
 - The government agreed to contribute \$3 billion to the fund, while an additional \$3 billion will be raised from the private sector.
- **Labour Code:** In the budget 2021 the government announced that the **four labour codes** shall be implemented in India with effect from 1st April 2021.
 - These labour codes envisage simplifying the country's archaic labour laws and give impetus to economic activity without compromising with the workers' benefits.
- **Other Measures for Improving Ease of Doing Business:**
 - **Invest India:** It is the official investment promotion and facilitation agency which works with investors through their investment lifecycle to provide support with market entry strategies, industry analysis, partner search, and policy advocacy as required.
 - **PRAGATI Initiative:** To fast-track the approval process, especially in the case of major projects, the government of India started the **Pro-Active Governance and Timely Implementation (PRAGATI initiative)**.
 - It is a digital, multi-modal platform to speed the government's approval process.
- **Economic Policies Bothering Foreign Investors:**
 - **Controversial Decisions:** Recently, the government took two controversial decisions i.e. **removal of special constitutional status from the state of Jammu and Kashmir (J&K)** and the passage of the **Citizenship Amendment Act (CAA), 2019**.
 - However, India maintains that the CAA and scrapping of Article 370 was its internal matter and that "no foreign party has any locus standi on issues pertaining to India's sovereignty."
 - **New Protectionist Measures:** Several sectors of the economy continue to retain equity limits for foreign capital as well as management and control restrictions, which deter investment.
 - For example, in 2016, India allowed up to **100% FDI in domestic airlines**, but the issue of substantial ownership and effective control (SOEC) rules that mandate majority control by Indian nationals have not yet been clarified.
 - **Bilateral Investment Agreements and Taxation Treaties:** India adopted a new **model Bilateral Investment Treaty (BIT)** in December 2015, following several adverse rulings in international arbitration proceedings.
 - The new model BIT does not allow foreign investors to use investor-state dispute settlement methods, and instead requires foreign investors first to exhaust all local judicial and administrative remedies before entering international arbitration.
 - **Procurement Rules that Limit Competitive Choices:** **Preferential Market Access (PMA) for government**

Note:

procurement has created substantial challenges for foreign firms operating in India.

- State-owned “Public Sector Undertakings” and the government accord a 20% price preference to vendors utilizing more than 50% local content.
- **Intellectual Property Rights:** India remained on the **Priority Watch List in the 2020 Special 301 Report** due to concerns over weak intellectual property (IP) protection and enforcement.
- **Corruption:** India, with a score of 40, ranked 86 among 180 countries in **Transparency International's 2020 Corruption Perception Index**.
- **Other Issues:** There are other issues that restrict the expansion in bilateral trade. For example, **sanitary and phytosanitary measures** and Indian-specific standards not aligned with international standards.

RBI to Introduce Digital Currency

Why in News

The **Reserve Bank of India (RBI)** is working on a **phased implementation strategy** for its own **digital currency** and is in the process of launching it in **wholesale and retail segments in the near future**.

- A **high-level inter-ministerial committee** set up by the Finance Ministry had recommended **Central Bank Digital Currency (CBDC)** with **changes in the legal framework including the RBI Act**, which currently empowers the RBI to regulate issuance of bank notes.

Key Points

- **Digital Currency:**
 - It is a **payment method** which exists **only in electronic form and is not tangible**.
 - It can be **transferred between entities or users with the help of technology** like computers, smartphones and the internet.
 - Although it is similar to physical currencies, digital money allows borderless transfer of ownership as well as instantaneous transactions.
 - Digital currency is also known as **digital money and cybercash**.
 - E.g. **Cryptocurrency**
- **Need:**

Addressing the Malpractices:

- The need for a sovereign digital currency arises from the **anarchic design of existing cryptocurrencies**, wherein their creation, as well as maintenance, are in the hands of the public.
 - With no government supervision and ease of cross-border payments, renders them vulnerable to malpractices like tax evasion, terror funding, **money laundering**, etc.
 - By regulating digital currency, the central bank can put a check on their malpractices.

Addressing Volatility:

- As the **cryptocurrencies** are not pegged to any asset or currency, its value is solely determined by speculation (demand and supply).
- Due to this, there has been huge volatility in the value of cryptocurrencies like bitcoin.
 - As CBDCs will be pegged to any assets (like gold or fiat currency) and hence will not witness the volatility being seen in cryptocurrencies.

Digital Currency Proxy War:

- India runs the **risk of being caught up in the whirlwind of a proxy digital currency war** as the US and China battle it out to gain supremacy across other markets by introducing new-age financial products.
 - Today, a **sovereign Digital Rupee** isn't just a matter of financial innovation but a need to push back against the inevitable proxy war which threatens our national and financial security.

Reducing Dependency on Dollar:

- Digital Rupee **provides an opportunity for India to establish the dominance of Digital Rupee as a superior currency** for trade with its strategic partners, thereby reducing dependency on the dollar.

Advent of Private Currency:

- If these **private currencies gain recognition**, national currencies with limited convertibility are likely to come under some kind of threat.

Significance:

- It would **reduce the cost of currency management** while enabling **real-time payments without any inter-bank settlement**.

Note:



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- India's fairly high currency-to-GDP ratio holds out another benefit of Central Bank Digital Currency (CBDC) - to the extent large cash usage can be replaced by (CBDC), the **cost of printing, transporting and storing paper currency can be substantially reduced.**
- It will also **minimize the damage to the public** from the usage of private virtual currencies.

➤ Issues:

- Some key issues under RBI's examination include, the **scope of CBDCs, the underlying technology, the validation mechanism and distribution architecture.**
- **Also, legal changes would be necessary** as the current provisions have been made keeping in mind currency in a physical form under the **Reserve Bank of India Act.**
- Consequential amendments would also be required in the **Coinage Act, Foreign Exchange Management Act (FEMA) and Information Technology Act.**
- **Sudden flight of money** from a bank under stress is another point of concern.

➤ Recent Developments:

- **El Salvador**, a small coastal country in Central America, has become the **first in the world to adopt Bitcoin, as legal tender.**
- **Britain** is also exploring the possibility of creating a Central Bank Digital Currency (Bitcoin).
- In 2020, **China started testing its official digital currency** which is unofficially called "Digital Currency Electronic Payment, DC/EP".
- In **April 2018**, RBI banned banks and other regulated entities from supporting crypto transactions after digital currencies were used for frauds. In **March 2020**, the **Supreme Court struck down the ban** as unconstitutional.

Special Economic Zones

Why in News

Special Economic Zones (SEZ) have touched new heights in terms of performance in Exports, Investment and Employment in the last three years.

Key Points

➤ About:

- An SEZ is a **territory within a country that is typically duty-free** (Fiscal Concession) and has different business and commercial laws chiefly to **encourage investment and create employment.**
- SEZs are created also to better administer these areas, thereby **increasing the ease of doing business.**

➤ SEZs in India:

- Asia's **first EPZ** (Export Processing Zones) was established in **1965 at Kandla, Gujarat.**
- While **these EPZs had a similar structure to SEZs**, the government began to establish **SEZs in 2000** under the **Foreign Trade Policy** to redress the infrastructural and bureaucratic challenges that were seen to have limited the success of EPZs.
- The Special Economic Zones **Act was passed in 2005.** The Act came into force along with the **SEZ Rules in 2006.**
- However, SEZs were **operational in India from 2000 to 2006** (under the Foreign Trade Policy).
- India's SEZs **were structured closely with China's successful model.**
- Presently, **379 SEZs are notified**, out of which 265 are operational. About 64% of the SEZs are located in five states – Tamil Nadu, Telangana, Karnataka, Andhra Pradesh and Maharashtra.
- The **Board of Approval is the apex body** and is headed by the Secretary, Department of Commerce (**Ministry of Commerce and Industry**).
- The **Baba Kalyani led committee** was constituted by the Ministry of Commerce and Industry to study the existing SEZ policy of India and had submitted its recommendations in November 2018.
 - It was set up with a broad objective to evaluate the SEZ policy towards making it **WTO (World Trade Organisation)** -compatible and to bring in global best practices to maximise capacity utilisation and to maximise potential output of the SEZs.

➤ Objectives of the SEZ Act:

- To **create additional economic activity.**
- To **boost the export** of goods and services.
- To **generate employment.**
- To **boost domestic and foreign investments.**
- To develop **infrastructure facilities.**

➤ Major Incentives and Facilities Available to SEZ:

Note:



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- **Duty free import/domestic procurement** of goods for development, operation and maintenance of SEZ units.
- **Exemption from various taxes** like Income Tax, minimum alternate tax, etc.
- **External commercial borrowing** by SEZ units upto US \$ 500 million in a year without any maturity restriction through recognized banking channels.
- **Single window clearance** for Central and State level approvals.
- **Performance so far:**
 - **Exports:** Exports of Rs. 22,840 Crore (2005-06) has **increased to Rs. 7,59,524 Crore** (2020-21).
 - **Investment:** Investment of Rs. 4,035.51 Crore (2005-06) has **increased to Rs. 6,17,499 Crore** (2020-21).
 - **Employment:** Employment from 1,34,704 persons (2005-06) has **increased to 23,58,136 persons** (2020-21).
- **Challenges:**
 - **Unutilized Land in SEZs:**
 - Due to lack of demand for SEZ space and disruptions caused by the pandemic.
 - **Existence of Multiple Models:**
 - There are multiple models of economic zones such as **SEZ, coastal economic zone, Delhi-Mumbai Industrial Corridor, National Investment and Manufacturing Zone, food park and textile park** which pose challenges in integrating the various models.
 - **Competition from ASEAN Countries:**
 - In the past few years, many of the **ASEAN countries** have tweaked their policies to attract global players to invest into their SEZs and have also worked on a developmental set of their skilling initiatives.
 - Consequently, **Indian SEZs have lost some of their competitive advantages globally** and hence need to have fresher policies.

Subsidy Scheme to Boost Merchant Ships

Why in News

Recently, the Union Cabinet has approved a **scheme for providing subsidy support to Indian Shipping**

companies in global tenders floated by Ministries and **Central Public Sector Enterprises (CPSEs)** for import of government cargo.

- The scheme **provides a subsidy of Rs. 1,624 crore over five years.**

Key Points

➤ Highlights of the Scheme:

- The scheme envisages an **increase in flagging** and would link access to Indian cargo to investment in Indian ships.
 - Flagging in is the **process of adding a vessel to the national registry** and “flagging out” is the process of removing a vessel from a national registry.
- The subsidy support varies **from 5% to 15%** of the lowest quote offered by the foreign shipping company, depending on whether the ship was flagged after or before 1st February, 2021.
- However, **ships older than 20 years will not be eligible under the scheme**, according to the Ministry of Ports, Shipping and Waterways.

➤ Rationale of the Scheme:

- **Small Size of Indian Shipping Industry:** Despite having a 7,500 km long coastline, a significant **national EXIM (Export-Import) trade**, a **policy of 100% FDI in shipping since 1997**, the Indian shipping industry and India's national fleet is proportionately small when compared with its global counterparts.
 - Currently the Indian fleet comprises a meagre **1.2% of the world fleet in terms of capacity.**
 - The share of Indian ships in the carriage of India's EXIM trade has drastically declined from 40.7% in 1987-88 to about 7.8% in 2018-19.
- **Offsetting Higher Operational Costs:** Currently, Indian shipping industry bears relatively higher operating costs, owing to factors like higher costs of debt funds, taxation on wages of Indian seafarers, IGST on import of ships, blocked GST tax credits, etc.
 - In this context, these higher operational costs would be offset to a large extent through the subsidy support and it would be more attractive to flag merchant ships in India.

Note:

- **Increasing Foreign Exchange Outgo:** Owing to high operational costs, importing a shipping service by an Indian charterer is cheaper than contracting the services of a local shipping company.
 - This has led to an increase in foreign exchange outgo on account of freight bill payments to foreign shipping companies.
- **Significance of the Scheme:**
 - **Generating Employment:** Increase in Indian fleet will provide direct employment to Indian seafarers since Indian ships are required to employ only Indian seafarers.
 - Further, cadets wishing to become seafarers are required to obtain on-board training on ships. Indian ships will therefore provide training slots for young Indian cadet boys and girls.
 - **Strategic Advantages:** A policy to promote the growth of the Indian shipping industry is also necessary because having a bigger national fleet would provide economic, commercial, and strategic advantages to India.
 - **Economic Advantages:** A strong and diverse indigenous shipping fleet will not only lead to foreign exchange savings but would also reduce excessive dependence on foreign ships for transporting India's critical cargoes.
 - Thus, it would help in achieving the objective of Atmanirbhar Bharat and contribute to the Indian GDP.

Amendment in IBBI Regulations 2016

Why in News

Recently, the **Insolvency and Bankruptcy Board of India (IBBI)** has amended the **Insolvency and Bankruptcy Board of India (Insolvency Resolution Process for Corporate Persons) Regulations, 2016**.

- The amendments are aimed at **enhancing the discipline, transparency, and accountability** in corporate insolvency proceedings.
- In March 2021 a sub-committee of the **Insolvency Law Committee (ILC)** recommended a **pre-pack framework** within the basic structure of the **Insolvency and Bankruptcy Code (IBC), 2016**.

Key Points

- **Revealing Former Names & Address:**
 - The amendment **requires an Insolvency Professional (IP) conducting Corporate Insolvency Resolution Process (CIRP) to disclose all former names and registered office address(es)** so changed in the two years preceding the commencement of insolvency along with the current name and registered office address of the Corporate Debtor (CD), in all its communications and records.
 - **CIRP includes necessary steps to revive the company** such as raising fresh funds for operation, looking for a new buyer to sell the company as a going concern, etc.
 - **CD is any corporate organization** which owes a debt to any person.
 - A CD **may have changed its name or registered office address** prior to commencement of insolvency. Therefore the **stakeholders may find it difficult to relate to the new name or registered office address** and consequently fail to participate in the **CIRP**.
- **Appointment of Professionals:**
 - The amendment provides that the **Interim Resolution Professional (IRP)** or Resolution Professional (RP) **may appoint a professional, other than registered valuers**, if he is of the opinion that the services of such professional are required and such services are not available with the CD.
 - Such appointments shall be made on an **arm's length basis** following an objective and **transparent process**.
- **Avoidance of Transactions:**
 - The RP is **duty bound to find out if a CD has been subject to avoidance transactions**, namely, preferential transactions, undervalued transactions, extortionate credit transactions, fraudulent trading and wrongful trading, **and file applications with the Adjudicating Authority seeking appropriate relief**.
- **Significance:**
 - It would **allow stakeholders to claw back lost value** and would **disincentive stakeholders** from entering into such transactions.

Insolvency and Bankruptcy Code

- **Enactment:**
 - The IBC was enacted in 2016.

Note:



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Note:

- **Insolvency:** It is a situation where **individuals or companies are unable to repay their outstanding debt**.
- **Bankruptcy:** It is a situation whereby a **court of competent jurisdiction has declared a person or other entity insolvent**, having passed appropriate orders to resolve it and protect the rights of the creditors. It is a **legal declaration** of one's inability to pay off debts.
- **Objective:**
 - To **streamline and speed up the resolution process** of failed businesses.
 - To **consolidate provisions of the existing legislative framework** to form a common forum for debtors and creditors of all classes to resolve insolvency.
 - To **stipulate that the resolution process** of a stressed company will **have to be completed in a maximum of 270 days**.
- **Institutions to Facilitate Resolution of Insolvency:**
 - **Insolvency Professionals:**
 - These professionals **administer the resolution process, manage the assets of the debtor, and provide information for creditors** to assist them in decision making.
 - **Insolvency Professional Agencies:**
 - The agencies **conduct examinations to certify the insolvency professionals and enforce a code of conduct** for their performance.
 - **Information Utilities:**
 - Creditors will report financial information of the debt owed to them by the debtor. Such information will include records of debt, liabilities and defaults.
 - **Adjudicating Authorities:**
 - The proceedings of the resolution process are adjudicated by the **National Company Law Tribunal (NCLT)**, for companies; and the **Debt Recovery Tribunal (DRT)**, for individuals.
 - The **duties of the authorities** will include approval to initiate the resolution process, appoint the insolvency professional, and approve the final decision of creditors.
 - **Insolvency and Bankruptcy Board:**

- It is a **key pillar of the ecosystem** responsible for implementation of the Code.
- It **regulates insolvency professionals**, insolvency professional **agencies** and **information utilities** set up under the Code.
- The Board consists of representatives of the **Reserve Bank of India**, and the Ministries of Finance, Corporate Affairs and Law.

➤ **Insolvency Resolution Process:**

- It can be **initiated by any of the stakeholders** of the firm (debtors/creditors/employees). If the adjudicating authority accepts, an **IP is appointed**.
- The power of the management and the board of the firm is transferred to the **Committee of Creditors (CoC)**. They act through the IP.
- The **IP has to decide whether to revive the company** (insolvency resolution) or **liquidate it** (liquidation).
- If they decide to revive, **they have to find someone willing to buy the firm**.
- The creditors also have to accept a **significant reduction in debt**. The reduction is known as a haircut.
- They **invite open bids** from the interested parties to buy the firm.
- They **choose the party with the best resolution plan**, that is acceptable to the majority of the creditors (**75 % in CoC**), to take over the management of the firm.

Stand Up India Scheme

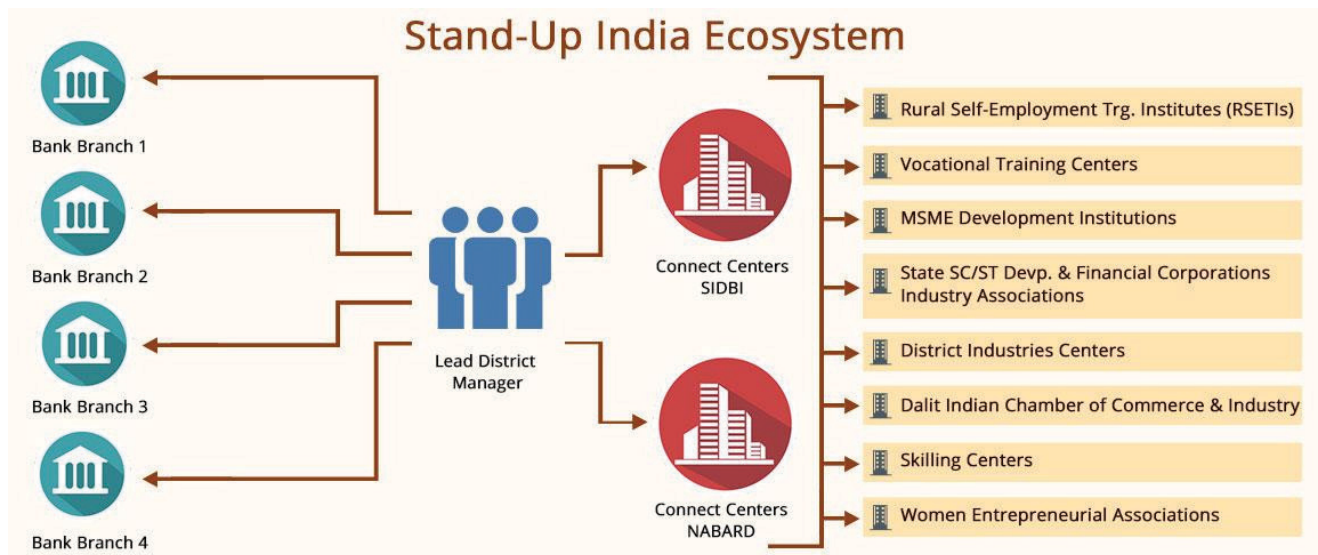
Why in News

Recently, the **Ministry of Finance** has **extended the Standup India Scheme up to the year 2025**.

Key Points

- **Launch:**
 - It was launched in April 2016 **to promote entrepreneurship at the grass-root level** focusing on economic empowerment and job creation.
- **Aim:**
 - To leverage the institutional credit structure to **reach out to the underserved sector of people** such as SCs, STs and Women Entrepreneurs.

Note:



➤ **Facilitates Bank Loans:**

- The objective of this scheme is to facilitate bank loans between Rs.10 lakh and Rs.1 crore to at least one SC or ST borrower and at least one woman borrower per bank branch of Scheduled Commercial Banks for setting up a Greenfield enterprise.
 - This enterprise may be in manufacturing, services or the trading sector.

➤ **Eligibility:**

- SC/ST and/or women entrepreneurs; above 18 years of age.
- Loans under the scheme are available for only Greenfield projects.
 - A greenfield project is one which is not constrained by prior work. It is constructed on unused land where there is no need to remodel or demolish an existing structure.
- Borrower should not be in default to any bank or financial institution.
- In case of non-individual enterprises, at least 51% of the shareholding and controlling stake should be held by either an SC/ST or Woman entrepreneur.

➤ **New Changes:**

- The margin money requirement for loans under the Scheme has been reduced from 'upto 25%' to 'upto 15%' and activities allied to agriculture have been included in the Scheme.

➤ **Connect Centers:**

- The offices of SIDBI (Small Industries Development

Bank of India) and NABARD (National Bank for Agriculture and Rural Development) are designated Stand-Up Connect Centres (SUCC).

➤ **Performance so far:**

- Banks have sanctioned Rs 26,204 crore to about 1,16,266 beneficiaries under the Scheme in the last five years.
- The scheme has benefited more than 93,094 women entrepreneurs.

Indian Labour Conference

Why in News

Recently, the Bharatiya Mazdoor Sangh (labour union) wrote to the Prime Minister asking him to convene the Indian Labour Conference (ILC).

- It argued that since Indian Parliament has ratified Convention No 144 of the International Labour Organisation, it is now India's legal obligation to hold the ILC in order to strengthen the tripartite mechanism.

Key Points

➤ **About:**

- ILC also known as the 'labour parliament' of the country formed on the lines of International Labour Conference is the apex level tripartite (Government, Employers and Workers) consultative committee in the Ministry of Labour & Employment.

Note:



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- **International Labour Conference** also known as International Parliament of Labour is a conference organized by ILO every year.
- Each member State is represented by a **delegation consisting of two government delegates, an employer delegate, a worker delegate**, and their respective advisers.
- The **first meeting** of the ILC (then called **Tripartite National Labour Conference**) was held in **1942** and so far a total of 46 Sessions have been held.
 - The most recent session of which was held in **2015**.
- The agenda of the ILC is finalised by the **Standing Labour Committee** which is again a tripartite body after detailed discussions.
- **Function:**
 - To **advise the Government** on the issues concerning the **working class** of the country.
- **Members:**
 - Central Trade Union Organisations, Central Organisations of employers, all State Governments and Union Territories and Central Ministries/ Departments concerned with the agenda items, are the members of the ILC.
- **Some Government Initiatives for the Working Class:**
 - **New Labour Codes, 2020**
 - **Pradhan Mantri Shram Yogi Maan-dhan**
 - **National Pension Scheme for Traders, Shopkeepers and Self-Employed Persons**
 - **Pradhan Mantri Rojgar Protsahan Yojana**

International Labour Organisation

- 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.
- **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

Convention No 144 of the ILO

- Convention 144 of the year **1976** which is also known as the **Convention on Tripartite Consultation** (International Labour Standards), **promotes application of an essential principle** on which the International Labour Organization (ILO) was founded which is:
 - Tripartite social dialogue in the development and implementation of international labour standards.
- Tripartism in respect to international labour standards promotes a national culture of social dialogue on wider social and economic issues.

External Benchmarks Lending Rate

Why in News

According to a recent **RBI** report on '**Monetary transmission in India**', the share of outstanding loans linked to **External Benchmarks Lending Rate (EBLR)** (like repo rate), increased from as low as 2.4% during September 2019 to 28.5% during March 2021.

- This increase in EBLR linked lending will **contribute to significant improvement in monetary policy transmission**.
- However, still **71.5% of outstanding loans are Internal Benchmark Lending Rate** (IBLR- like base rate and MCLR) linked loans, which continues to impede the monetary policy transmission.

Note:

- **Transmission of Monetary Policy:** The transmission of monetary policy describes how changes made by the Reserve Bank of India (RBI) to the policy rate flow through to economic activity (like lending) and inflation.
- **Repo Rate:** It is also known as the benchmark interest rate and is the rate at which the RBI lends money to the banks for a short term. Here, the central bank purchases security.

Key Points

- **Internal Benchmark Lending Rate (IBLR):**
 - The Internal Benchmark Lending Rates are a **set of reference lending rates which are calculated after considering factors like the bank's current**

Note:

financial overview, deposits and non performing assets (NPAs) etc. BPLR, Base rate, MCLR are the examples of Internal Benchmark Lending Rates.

○ **Benchmark Prime Lending Rate (BPLR):**

- BPLR was **used as a benchmark rate by banks for lending till June 2010.**
- Under it, bank loans were **priced on the actual cost of funds.**
- However, **the BPLR was subverted**, resulting in an opaque system. The bulk of wholesale credit (loans to corporate customers) was **contracted at sub-BPL rates** and it comprised nearly 70% of all bank credit.
- Under this system, **banks were subsidising corporate loans** by charging high interest rates from retail and small and medium enterprise customers.

○ **Base Rate:**

- Loans taken **between June 2010 and April 2016** from banks were on base rate.
- During the period, base rate was the **minimum interest rate** at which commercial banks could lend to customers.
- Base rate is calculated on **three parameters** — the **cost of funds, unallocated cost of resources and return on net worth.**
- Hence, the rate depended on individual banks and they changed it whenever their cost of funds and other parameters changed.

○ **Marginal Cost of Lending Rate (MCLR):**

- It came into effect in **April 2016.** It is a **benchmark lending rate for floating-rate loans.** This is the minimum interest rate at which commercial banks can lend.
- This rate is based on **four components—the marginal cost of funds, negative carry on account of cash reserve ratio, operating costs and tenor premium.**
- MCLR is **linked to the actual deposit rates.** Hence, when deposit rates rise, it indicates the banks are likely to hike MCLR and lending rates are set to go up.

➤ **Issues Related to IBLR Linked Loans:**

- The problem with the IBLR regime was that when RBI cut the repo and reverse repo rates, banks did not pass the full benefits to borrowers.

- In the IBLR Linked Loans, the interest rate has **many variables** including bank's spread, their current financial overview, deposits and non performing assets (NPAs) etc.

- Due to this, such internal benchmarks **did little to facilitate any swift change in interest rates** as per changes in RBI repo rate policy.
- The **opacity in interest rate** setting processes under internal benchmark regime hinders transmission to lending rates.

➤ **EBLR and Its Benefits:**

○ **About:**

- To ensure **complete transparency and standardization**, RBI mandated the banks to adopt a uniform external benchmark within a loan category, effective **1st October, 2019.**

- Unlike MCLR which was internal system for each bank, RBI has offered banks the options to choose from **4 external benchmarking mechanisms:**

- The RBI repo rate
- The 91-day T-bill yield
- The 182-day T-bill yield
- Any other benchmark market interest rate as developed by the **Financial Benchmarks India Pvt. Ltd.**

(i) **T-Bill or Treasury bills** are money market instruments issued by the Government of India as a promissory note with guaranteed repayment at a later date.

(ii) **Financial Benchmarks India Pvt. Ltd** was recognised by the Reserve bank of India as an independent Benchmark administrator on 2nd July 2015.

Marginal Cost of Lending Rate	Repo-Linked Loan
Linked to banks' cost of funds	Linked to RBI's lending rate
Takes 4-6 months to move after RBI rate cut	Responds immediately to RBI rate cut
RBI rate cuts not fully passed on to borrowers	Rate cuts are automatically passed on
Resets annually for most banks	Reset every three months
Changes by 5-10 bps	Usually changes 25bps or more
Revised every month	Reviewed bi-monthly
Low volatility	Higher volatility
100bps=1% Repo - RBI's lending rate to banks	

Note:

○ Benefits:

- Banks are **free to decide the spread** over the external benchmark.
 - However, the interest rate must be reset as per the external benchmark at least once every three months.
- Being an external system, this means any **policy rate cut decision will reach borrowers faster**.
- The adoption of external benchmarking will make the **interest rates transparent**.
 - The borrower will also know the spread or profit margin for each bank over the fixed interest rate making loan comparisons easier and more transparent.

Foreign Card Payment Network Companies Barred: RBI

Why in News

Recently, the **Reserve Bank of India (RBI)** has **barred three foreign card payment network firms** - Mastercard, American Express and Diners Club — from taking new customers on board **over the issue of storing data in India**.

- As many as **five private sector banks**, including Axis Bank, Yes Bank, and IndusInd Bank, are to be **impacted by the RBI's decision**.
- The **Personal Data Protection Bill** also has **provisions pertaining to 'data localisation'**.

'MASTER' OF CREDIT

Share of payment providers in banks' credit card schemes (%)



	VISA	RuPay	Mastercard
RBL Bank	0	0	100
YES Bank	0	0	100
Bajaj Finserv	0	0	100
HDFC Bank	38	2	45
IndusInd Bank	47	0	40
ICICI Bank	64	0	36
Axis Bank	65	0	35
SBI Cards	86	4	10

*Note: HDFC Bank's 15% cards are with Diners Club & IndusInd Bank's 13% cards are with American Express
Source: Nomura Research

Key Points

- **RBI's Circular on Data Storage-April 2018:**
 - All system providers were **directed to ensure that within six months the entire data** (full end-to-end transaction details, information collected or carried

or processed as part of the message or payment instruction) **relating to payment systems operated by them is stored in a system only in India**.

- They were also **required to report compliance to the RBI** and submit a board-approved system audit report conducted by a **Computer Emergency Response Team - India (CERT-IN)** empanelled auditor within the timelines specified.
- **Reason of Non- Compliance given by Payment Firms:**
 - **High Cost:**
 - Payment firms like Visa and Mastercard, which currently store and process Indian transactions outside the country, have said **their systems are centralised and expressed the fear that transferring the data storage to India will cost them millions of dollars**.
 - **Localization Demands from Other Countries:**
 - Once it happens in India, there could be similar demands from other countries, upsetting their plans.
 - **Lack of Clarity:**
 - While the **Finance Ministry had suggested some easing of norms in transferring the data**, the RBI has refused to change, stating that the payment systems need closer monitoring in the wake of the rising use of digital transactions.
- **Significance of RBI's Move:**
 - The RBI's decision to restrict entities from onboarding new customers is a crucial development in their endeavour to **ensure that all payment system operators store or localise their end-to-end transaction data only in India**.
 - The motivation behind such a move is **to carry out effective law enforcement requirements** as data access for law enforcement purposes has been a challenge.
- **Regulation of Payment Firms:**
 - Firms such as Mastercard, Visa and **National Payment Corporation of India (NPCI)** are Payment System Operators authorised to operate a card network in India under the **Payment and Settlement Systems (PSS) Act, 2007**.
 - Under the Act, the **RBI is the authority for the regulation and supervision of payment systems in India**. The RBI's payment system enables payments to be effected between a payer and a beneficiary

Note:

and involves the process of clearing, payment or settlement, or all of them.

- It includes both, paper-based such as cheque, demand draft and digital such as **National Electronic Fund Transfer (NEFT)**, **BHIM app**, settlement systems.
- The RBI has decided to allow non-bank entities — Prepaid Payment Instrument (PPI) issuers, card networks, **White Label ATM** operators, **Trade Receivables Discounting System (TReDS)** platforms — to become members of the centralised payment system and effect fund transfer through **Real Time Gross Settlement (RTGS)** and NEFT.

India's Textile Sector

Why in News

Recently, the Union Minister of Textiles held an in-depth **review of initiatives undertaken by the Ministry of Textiles** for giving a boost to the textiles sector.

Key Points

➤ About:

- Textiles & garments industry is **labour intensive sector** that employs 45 mn people in India is **second only to the agriculture sector in terms of employment**.
- India's textiles sector is **one of the oldest industries in the Indian economy**, and is a storehouse and carrier of traditional skills, heritage and culture.
- It can be divided into **two segments**-
 - The **unorganised sector** is small scale and uses traditional tools and methods. It consists of **handloom, handicrafts and sericulture** (production of silk).
 - The **organised sector** uses modern machinery and techniques and consists of the **spinning, apparel and garments segment**.

➤ Significance of the Textiles Sector:

- It contributes **2.3%** to Indian **Gross Domestic Product**, **7%** of Industrial Output, **12%** to the **export earnings of India** and employs more than **21% of total employment**.
- India is the **6th largest producer of Technical Textiles** with **6% Global Share**, **largest producer of cotton & jute** in the world.

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

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

➤ Challenges of the Textiles Sector:

- **Highly fragmented:** The Indian textile industry is highly fragmented and is being **dominated by the unorganized sector** and small and medium industries.
- **Outdated Technology:** The Indian textile industry has its **limitations of access to the latest technology** (especially in small-scale industries) and failures to meet global standards in the highly competitive market.
- **Tax Structure Issues:** The tax structure **GST (Goods and Service Tax)** makes the garments expensive and uncompetitive in domestic as well as international markets. Another threat is rising labour wages and workers' salaries.
- **Stagnant Exports:** The export from the sector has been stagnating and remained at the **USD 40-billion level for the last six years**.
- **Lack of Scale:** The apparel units in India have an **average size of 100 machines which is very less in comparison with Bangladesh**, which has on an average of at least 500 machines per factory.
- **Lack of Foreign Investment:** Due to challenges given above the foreign investors are not very enthusiastic about investing in the textile sector which is also one of the areas of concern.
 - Though the sector has witnessed a spurt in investment during the last five years, the industry attracted **Foreign Direct Investment (FDI)** of only **USD 3.41 billion from April 2000 to December 2019**.

➤ Major Initiatives:

- **Amended Technology Upgradation Fund Scheme (ATUFS):** In 2015, the government approved "Amended Technology Upgradation Fund Scheme (ATUFS)" for **technology upgradation of the textiles industry**.
- **Scheme for Integrated Textile Parks (SITP):** To assist small and medium entrepreneurs in the

Note:

textile industry to clusterize investments in textile parks by providing financial support for world class infrastructure in the parks.

- **SAMARTH (Scheme For Capacity Building In Textile Sector):** To address the shortage of skilled workers, the government launched the **Scheme for Capacity Building in Textile Sector (SCBTS)** and named it **SAMARTH Scheme**.
- **North East Region Textile Promotion Scheme (NERTPS):** This is a scheme for promoting textiles industry in the NER by providing infrastructure, capacity building and marketing support to all segments of the textile industry.
- **Power-Tex India:** It comprises new research and development in power loom textiles, new markets, branding, subsidies and welfare schemes for the workers.
- **Silk Samagra Scheme:** It focuses on improving the quality and productivity of domestic silk thereby reducing the country's dependence on imported silk.
- **Jute ICARE:** This pilot project launched in 2015 is aimed at addressing the difficulties faced by the jute cultivators by providing them certified seeds at subsidized rates, and by popularizing several newly developed retting technologies under water limiting conditions.
- **National Technical Textile Mission:** It aims to position the country as a global leader in technical textiles and increase the use of technical textiles in the domestic market. It aims to take the domestic market size to USD 40 billion to USD 50 billion by 2024.

30 Years of Economic Liberalisation

Why in News

Recently, on the 30th anniversary of the **economic liberalisation reforms**, former Prime Minister of India, Manmohan Singh, raised concerns over the macro-economic stability of the country.

- According to him, the current **economic crisis triggered by the Covid-19 pandemic** is more challenging than during the 1991 economic crisis and the nation would need to recalibrate its priorities to ensure a dignified life for all Indians.

10 REFORMS THAT CHANGED INDIA

GST did change the tax regime. But there are other key steps that form the bedrock of India's market-led economy & helped achieve higher growth...

NEW INDUSTRIAL POLICY > Industrial licensing was abolished and 18 PSU industries were gradually liberalised > Monopolies And Restrictive Trade Practices Act, 1969, was abolished FDI & TRADE POLICY > Import licensing was abolished for capital goods & intermediates, which became freely importable in 1993, simultaneously with the switch to a flexible exchange rate regime > India joined the World Trade Organization and Trade-Related Aspects of Intellectual Property Rights agreement > Quantitative restrictions on imports of manufactured consumer goods and agricultural products removed in 2001. The policy now allows 100% foreign ownership in many industries and majority ownership in all except banking, insurance, telecommunications and airlines > Current account convertibility introduced in 1994	NEW INSTITUTIONS > Securities and Exchange Board of India established > Insurance Regulatory & Development Authority and Pension Fund Regulatory & Development Authority set up > Union Budget created 'development finance institutions' and 'bad banks' to fund infrastructure and resolve stressed assets > GST Council established GOVERNMENT BORROWING > Domestic bond markets created and Clearing Corporation of India is set up INTEREST RATE LIBERALISATION > Interest rate controls were dismantled and savings interest rates were deregulated BASEL ACCORDS > Basel Accords, a series of 3 international banking regulation agreements, adopted NFSA & MGNREGS > NFSA legally entitled up to 75% of the rural and 50% of the urban	population to receive subsidised food grain under the Targeted Public Distribution System > MGNREGS guaranteed 100 days of wage-employment per year in rural areas AADHAAR > Aadhaar system provided a single-source offline/online identity verification, boosting the inclusion of programmes like PMJDY, Ayushman Bharat and Ujjwala INSOLVENCY & BANKRUPTCY CODE > A comprehensive law, IBC consolidated both consequential aspects of an economic collapse of a debtor – rehabilitation as well as liquidation MONETARY POLICY COMMITTEE > MPC was set up with basic objective to maintain price stability and accelerate the economy's growth rate. It has brought monetary policy decision-making in line with global best practices
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Key Points

➤ 1991 Crisis & Reforms:

- **1991 Crisis:** In 1990-91, India faced a severe **Balance of Payments (BOP) crisis**, where its foreign exchange reserves were just adequate to finance 15 days of imports. There were many factors that led to the BOP crisis:
 - **Fiscal Deficit:** The fiscal deficit during 1990-91 was around 8.4% of GDP.
 - **Gulf War I:** In 1990-91, the situation was aggravated by the rise in the price of oil due to Iraq's invasion of Kuwait.
 - **Rise in Prices:** The inflation rate increased from 6.7% to 16.7% due to a rapid increase in money supply and the country's economic position became worse.
- **Nature and Scope of 1991 Reforms:** In order to get out of the macro-economic crisis in 1991, India launched a New Economic Policy, which was based on LPG or **Liberalisation, Privatisation and Globalisation model**.
 - Then Finance Minister, Manmohan Singh, was the prime architect of the historic 1991 liberalisation.
 - The broad range of reforms under the LPG model included:
 - **Liberalising Industrial Policy:** Abolition of industrial license permit raj, Reduction in import tariffs, etc.

Note:

- **Beginning of Privatisation:** Deregulation of markets, Banking reforms, etc.
- **Globalisation:** Exchange rate correction, liberalising foreign direct investment and trade policies, Removal of mandatory convertibility cause, etc.
- These reforms are credited and applauded for the high economic growth seen from 1991 to 2011 and substantial reduction of poverty from 2005 to 2015.

➤ **2021 Crisis:**

- The **World Economic Outlook Report 2021**, states that the Indian economy is expected to grow by 12.5% in 2021 and 6.9% in 2022.
- However, the pandemic has massive unemployment in the informal sector and poverty is increasing after decades of decline.
- The **social sectors of health and education have lagged behind** and not kept pace with our economic progress.
- **Too many lives and livelihoods** have been lost that should not have been, during the pandemic.
- Inspector Raj is set to make a comeback through the **policy for e-commerce** entities.
- India is back to the old habits of borrowing excessively or **extracting money (in form of dividends) from the RBI** to finance the fiscal deficit.
- The **migrant labour crisis** has laid bare the gaps in the growth model.
- India foreign trade policy is again suspecting trade liberalisation, as India has already decided to opt-out of the 16-nation **Regional Comprehensive Economic Partnership (RCEP)** trade deal.



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Note:



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International Relations

Highlights

- *SCO Defence Ministers' Meeting*
- *Joint Actions in Afghanistan: China-Pakistan*
- *Nord Stream 2 Pipeline*
- *China-led South Asian Initiative*
- *Protests in Cuba*
- *Violence in South Africa*
- *G7's Build Back Better World Initiative*

SCO Defence Ministers' Meeting

Why in News

Recently, the **Shanghai Cooperation Organisation (SCO)** Defence Ministers' Meeting took place in Dushanbe, Tajikistan.

- The Defence Minister of India addressed the grouping and said **India is committed to working within the SCO framework** for helping create & maintain a secure & peaceful region.

Key Points

- Major Highlights of Defence Minister's Address:
 - **Terrorism is the most serious threat** to international peace and security and support to any acts of terror is a crime against humanity.
 - India reaffirms its resolve to fight terrorism in all its forms and manifestations.

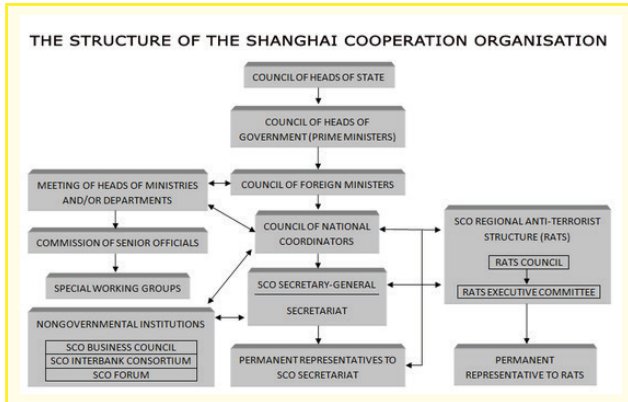


- The geo-strategic location of India makes it both a “**Eurasian land power**” as well as a stakeholder in the **Indo-Pacific**.
- Highlighted non-traditional security challenges like **pandemics, climate change, food security, water security and associated societal disruptions** can impact national and international landscape.
- In dealing with Covid-19 pandemic, India has been at the forefront to provide support and assistance to countries through its **Vaccine diplomacy**.
- India's initiative on **coalition for disaster resilient infrastructure (CDRI)** was also an example of how countries were coming together to create and share capabilities to deal with humanitarian assistance and disaster relief issues.

SCO

- The SCO was founded at a summit in **Shanghai in 2001** by the presidents of Russia, China, the Kyrgyz Republic, Kazakhstan, Tajikistan and Uzbekistan.
- Presently, the SCO comprises **eight member states** namely **India, Kazakhstan, China, the Kyrgyz Republic, Pakistan, the Russian Federation, Tajikistan, and Uzbekistan**.
- SCO nations together encompass nearly **half the human population** and it covers approximately **three-fifths of the Eurasian continent** in terms of geographical expanse.
- The SCO, seen as a **counterweight to NATO**, is an eight-member economic and security bloc and has emerged as one of the largest transregional international organisations.
- India was made an **observer at the SCO in 2005**.
- India and Pakistan became its **permanent members in 2017**.

Note:



➤ India's Opportunities and SCO:

- **Regional Security:** SCO will enable India, as an integral part of the Eurasian security grouping, to neutralise threats like religious extremism and terrorism in the region.
 - It is due to this, India has shown keen interest in deepening its security-related cooperation with the SCO and its **Regional Anti-Terrorism Structure (RATS)**, which specifically deals with issues relating to security and defence.
- **Connect With Central Asia:** SCO is also a potential platform to advance India's **Connect Central Asia policy**.
 - India's ongoing engagement with SCO can be seen through the **prism of reconnecting and re-energising ties with a region** with which India has shared civilizational linkages, and is considered the country's extended neighbourhood.
- **Dealing With Pakistan & China:** SCO provides India with a forum where it can constructively engage both China and Pakistan in a regional context and project India's security interests.
- **Bringing Stability in Afghanistan:** SCO, also an alternative regional platform to delve into the rapidly changing **situation in Afghanistan**.
 - So far India completed 500 projects in Afghanistan and is continuing with some more, with a total development aid of \$3 billion.
- **Strategic Importance:** Acknowledging the strategic importance emanating from the region and SCO, the Indian Prime Minister had articulated the foundational dimension of Eurasia being '**SECURE**'. The letters in the word SECURE are:
 - S for **Security of our citizens**,
 - E for **Economic development** for all,

- C for **Connecting the region**,
- U for **Unite our people**,
- R for **Respect for Sovereignty and Integrity**, and
- E for **Environment protection**.

Joint Actions in Afghanistan: China-Pakistan

Why in News

Recently, **China and Pakistan have decided to launch Joint Actions in Afghanistan** to stop the war-torn country from becoming a hotbed for terrorism.

- The recent **withdrawal of US troops from Afghanistan** has been matched by the swift **advance of the Taliban across the nation**.



Key Points

- **Joint Action:** It has been outlined in **five areas**:
 - To **avoid the expansion of war** and prevent Afghanistan from falling into a full-scale civil war.
 - To **promote the intra-Afghan negotiations between the government and the Taliban** and establish "a broad and inclusive political structure".
 - To resolutely **combat terrorist forces** and push all major forces in Afghanistan to draw a clear line against terrorism.
 - To **promote cooperation among Afghanistan's neighbours** and to explore the construction of a platform for cooperation among them.

Note:



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- To **closely work on international fora** on the Afghan issue.
- **Need:**
 - **Terrorism in Pakistan:**
 - Pakistan is concerned over the **Tehreek-e-Taliban Pakistan (TTP)**, which has been waging an insurgency against the country for several years.
 - **Rise in Uyghur Militants:**
 - China is worried over the regrouping of the **Uyghur** militants from Xinjiang, China who operate under the aegis of **East Turkestan Islamic Movement (ETIM)**, which Beijing alleges has links with Al-Qaeda.
 - The recently released 12th report of the Analytical Support and Sanctions Monitoring Team of the **United Nation** has **confirmed the presence of the ETIM militants in Afghanistan**.
 - **Economic Interests:**
 - If the situation in Afghanistan further deteriorates, Pakistan as well as the **China-Pakistan Economic Corridor (CPEC)** will be in danger. Also many other Chinese projects in Afghanistan and Pakistan will be in danger.
 - There was a recent **bomb attack on a shuttle bus carrying Chinese engineers** at Dasu area of Upper Kohistan district of Khyber Pakhtunkhwa province, Pakistan where a **Chinese company is building a 4320-mw dam on the Indus river**.
 - **India has opposed the CPEC**, which **passes through Pakistan-occupied Kashmir (PoK)**, although China has pushed ahead with projects and stepped up its investments in PoK.
- **Background of Situation in Afghanistan:**
 - On **11th September 2001, terrorist attacks (9/11) in America** killed nearly 3,000 people.
 - **Osama Bin Laden**, the head of Islamist terror group al-Qaeda, was quickly identified as the man responsible.
 - The Taliban, radical Islamists who ran Afghanistan at that time, protected Bin Laden, and refused to hand him over. So, a month after 9/11, the **US launched airstrikes against Afghanistan** (Operation Enduring Freedom).
 - After the attacks, the **North Atlantic Treaty Organization (NATO)** coalition troops declared war on Afghanistan.

- The **US** dislodged the Taliban regime and **established a transitional government in Afghanistan**.
- In July 2021, the **US troops departed** from the biggest airbase in Afghanistan after the 20-year-long war, effectively ending their military operations in the country.
- The US withdrawal has **turned the balance of power in the battleground in favour of the Taliban**.
- **India's Interests:**
 - **Investments:**
 - Protecting its **investments**, which run into billions of rupees, in Afghanistan.
 - **TALIBAN:**
 - **Preventing a future Taliban regime** from being a pawn of Pakistan.
 - **Pakistan's Terror Base:**
 - Making sure that the **Pakistan-backed anti-India terrorist groups do not get support from the Taliban**.

Nord Stream 2 Pipeline

Why in News

Recently, the **US has approved the Germany-Russia Nord Stream 2 Pipeline (NS2P) project** - which significantly increases Europe's energy dependence on Russia.

- The **US had previously imposed sanctions** to prevent the completion of this gas pipeline between Russia and Germany.

Nord Stream pipelines from Russia



Note:

Key Points

- **About:**
 - This is a 1,200-km pipeline that runs **from Ust-Luga in Russia to Greifswald in Germany through the Baltic Sea**. It will carry 55 billion cubic metres of gas per year.
 - It was decided to build this pipeline in 2015.
 - **Nord stream 1 system** is already completed and together with NS2P, it will supply 110 billion cubic metre of gas a year to Germany.
- **Implications:**
 - **EU's Dependence on Russia:**
 - It will increase Europe's dependence on Russia for Natural Gas, currently **EU (European Union)** countries already rely on Russia for 40% of their gas needs.
 - **Bypassing Ukraine:**
 - There is an existing pipeline between Russia and Europe through Ukraine, once the NS2P project is completed **it would bypass Ukraine and deprive it of a significant transit fee of around \$ 3 billion per year.**
 - **Geopolitical win for Russia:**
 - It can be a **generational geopolitical win** for Russia and a catastrophe for the United States and its allies.
- **US' New Stand:**
 - **Softer Option to threaten Russia:**
 - The US has gone with the softer option of threatening Russia with consequences should it use the pipeline to harm Ukraine or other countries in eastern Europe.
 - On one hand, it wants **access to Russia's hydrocarbons**, but on the other **distrusts Russian President Vladimir Putin**, who it holds responsible for a series of affronts, such as the **Crimean conflict** of 2014 and the alleged interference in the US elections of 2016 and 2020.
 - **Germany's own Act against Russia:**
 - The US-Germany deal lays out that Germany by itself will put sanctions and limit Russian exports, if 'Russia attempts to use the energy as a weapon and commit further aggressive acts against Ukraine'.
 - **Green Fund for Ukraine:**

- Germany has to "utilise all available leverage" to extend by 10 years the current Russia-Ukraine gas transit agreement.
- **Germany also has to contribute at least \$175 million to a new \$1 billion "Green Fund for Ukraine"** that aims at improving the country's energy independence.

China-led South Asian Initiative

Why in News

Recently, **Bangladesh has invited India to join the China-led South Asian initiative** for **Covid-19** vaccines and poverty alleviation.

- It includes the creation of the China-South Asian Countries Emergency Supplies Reserve, and a Poverty Alleviation and Cooperative Development Centre set up in China.

Key Points

- **About China-South Asian Initiative:**
 - **Members:** China, Afghanistan, Bangladesh, Nepal, Pakistan and Sri Lanka.
 - India, Bhutan and the Maldives are the other **SAARC countries** that are not part of this initiative.
 - **Intended Vision:** China has different kinds of strategic, maritime, political and ideological interests with different South Asian nations so it is increasing its engagements with each country on equal footing to counterbalance India.
 - **India's Stand:** Given continuing tensions over Chinese PLA aggression at the Line of Actual Control in Ladakh, India's stand is that other bilateral relations **cannot move ahead without a resolution of the boundary stand-off.**
- **Associated Issues:** This initiative seems to be China's strategy to contain and undermine India's role in South Asia. This can be reflected in the following arguments:
 - **Minus-India Initiative:** Combinations of all SAARC member countries (other than India, Bhutan and Maldives) led some experts to suggest this was meant to be a **"Minus India" initiative.**
 - **Diluting India's Role in South Asia:** This initiative is one of China's attempts to make inroads into South Asia.

Note:



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- The Chinese push to this regional grouping comes also at a time when India has been reluctant to **revive SAARC**, turning its focus more on yet **another regional bloc-BIMSTEC**.
- **Countering Quad:** The China-led bloc could be its plan to create what some call a northern Himalayan Quad aimed at countering the **US-led Quad** of which India is an active member.
- **India's Initiatives for South Asia:**
 - In early 2021, India - driven by its '**Neighbourhood First**' policy and in its understanding of its role as the '**net security provider**' of the region began providing Covid-19 vaccines on a priority basis to its immediate neighbours (**Vaccine Diplomacy**).
 - India is also **helping with the training of health workers** in some of these countries and the setting up of the infrastructure to administer the shots.
 - Recently, India, Japan and Australia have formally launched the **Supply Chain Resilience Initiative (SCRI)**.
 - It aims to reduce dependence on China amid a likelihood of reurning of supply chains in the Indo-Pacific region amid the Covid-19 pandemic.
 - However, **India for years has struggled to match the pace of Chinese investment in countries** such as Sri Lanka, Nepal and the Maldives, where China is building ports, roads and power stations as part of its **Belt and Road Initiative**.
 - Recently, the **Regional Comprehensive Economic Partnership (RCEP)**, a mega trade bloc comprising 15 countries led by China has come into existence. It has kept the doors for India open.

Protests in Cuba

Why in News

Recently, thousands of Cubans took to the streets across the country to protest longstanding restrictions on rights, scarcity of food and medicines, and the government's poor response to the **Covid-19 pandemic**.

- These protests are the **biggest anti-government demonstrations on the Communist-run island** in decades.



Key Points

- **Ongoing Protests:**
 - The anti-government protests erupted amid **Cuba's worst economic crisis** since the fall of the Soviet Union, its former ally, or end of the **cold war (1945-1991)**.
 - Cuba has been an authoritarian communist state for more than six decades.
 - Cuba has been **hit hard by US sanctions and Covid-19**.
 - Cubans have been angered by the collapse of the economy, food and medicine shortages, price hikes and the government's handling of the pandemic.
 - Protesters shouted "freedom" and **demanded for President Miguel Diaz-Canel to step down**.
 - On the other hand, Cuba's President **blamed the US for the turmoil**.
 - He called tight sanctions imposed by the US on Cuba, has resulted in a **policy of economic suffocation** and is the prime reason for protests in Cuba.
 - Further, the US President said the US stands with the people of Cuba in their call for freedom.
- **History of Cuba:**
 - From the 15th century, Cuba was a **colony of Spain** until the **Spanish-American War of 1898**, when Cuba was occupied by the US.

Note:



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- However, Cuba gained nominal independence as a de facto United States protectorate in 1902.
- In 1940, Cuba attempted to strengthen its democratic system. But, political radicalization and social strife culminated in a coup and **subsequent dictatorship under Fulgencio Batista in 1952.**
- Open corruption and oppression under Batista's rule led to his ousting in January 1959 by the **26th of July Movement.** This established communist rule under the **leadership of Fidel Castro.**
- Since 1965, the state has been governed by the **Communist Party of Cuba.**
- Moreover, the country was a point of contention during the Cold War between the Soviet Union and the United States. A **nuclear war** nearly broke out during the **Cuban Missile Crisis of 1962.**
- **USA-Cuba Relationship:** The United States and Cuba have had a strained relationship for more than sixty years. The tumultuous US-Cuba relationship has its **roots in the Cold War.** This can be reflected in the following events.
 - **Cuban Revolution:** In 1959, Fidel Castro and a group of revolutionaries seized power in Havana (city capital of Cuba). They **overthrew the US-backed** government of Fulgencio Batista.
 - After the Cuban Revolution, Fidel Castro's government began nationalizing American-owned properties, imposed economic penalties on trade with the US and increased its trade with the Soviet Union.
 - **Cuban Missile Crisis:** Aftermath of events following Cuban revolution, the United States severed diplomatic ties with Cuba and began pursuing covert operations to overthrow the Fidel Castro regime in 1961.
 - This followed an attempt by the US agencies to topple Cuban Government, known as the **Bay of Pigs invasion.**
 - In response, Cuba allowed the Soviet Union to **secretly install nuclear missiles on the island.** This brought the US and Soviet Union on the brink of Nuclear war.
 - In the end, Soviet Union agreed to withdraw the missiles in exchange for a pledge from the US not to invade Cuba and to remove the US nuclear missiles from Turkey.
- **US Sanctions:** After Cuban Missile Crisis, the US instituted a **ban on nearly all its exports to Cuba**, which US President John F. Kennedy expanded into a **full economic embargo** that included stringent travel restrictions.
 - These economic sanctions continue till today.
 - US President Barack Obama took several steps to normalize bilateral relations, including restoring diplomatic ties and expanding travel and trade.
 - However, the Trump administration reversed aspects of the past agreements by reimposing restrictions on tourism and other commerce.
- **India's Stand:**
 - Presently, India is yet to declare its stance on the current ongoing protest, but India **in the past has supported lifting the economic blockade of Cuba.**
 - In the UN General Assembly, India stressed that the continued existence of this siege by the US against Cuba undermines multilateralism and the credibility of the United Nations.

Communist Country

- A Communist country is a nation that is governed by a single party, and the foundation of the ruling leaders' decisions is based on the philosophies of Marx and Lenin.
- **Communism** is a political, social, philosophical, and economic doctrine aiming to replace private property profit-based economy with common ownership of major means of production.

Violence in South Africa

Why in News

Recently, **Riots and looting in South Africa** have left more than 70 people dead, hurt thousands of businesses and damaged major infrastructure.

- It is the **worst civil unrest since the end of white minority rule in 1994.**

Key Points

- **Reason for Recent Violence:**
 - Protests began over calls for **release of former president Jacob Zuma, who served the country from 2009-18** and is facing corruption charges.

Note:



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- Former Cabinet ministers, high-ranking government officials and executives of state-owned enterprises have **implicated Jacob Zuma in corruption**.
- Many feel that **his successor as president, Cyril Ramaphosa, has failed to provide decisive leadership** - either to calm anger over Zuma's imprisonment or to reassure South Africans that they will be safe.
- While the violence may have been spurred on by the **imprisonment of Jacob Zuma**, it's being **fanned by underlying problems in the country amid a raging pandemic and failing economy**.
 - In 2020, the country had witnessed its sharpest decline in annual **Gross Domestic Product** since 1946.
 - **Unemployment** stood at a record high of 32.6% in the first three months of 2021.

➤ **Government's Response:**

- The government has **condemned the violence** and has stated that there is no justification for the violence. A lot of **criminals or opportunistic individuals are trying to enrich themselves during this period**.
- It has **deployed its army to support the South African police**, however, the rioting and looting haven't stopped.

India-South Africa Relations

➤ **Background:**

- India's links with the struggle for freedom and justice in South Africa date back to the period during which **Mahatma Gandhi** started his Satyagraha movement in South Africa over a century ago.

- India was at the forefront of the international community in its **support to the anti-apartheid movement**; it was the **first country to sever trade relations with the apartheid Government (in 1946)** and subsequently **imposed a complete – diplomatic, commercial, cultural and sports – embargo** on South Africa.
- After a gap of four decades, India re-established trade and business ties in 1993, after South Africa ended its institutionalised **racial segregation (apartheid)**.
 - In November 1993, **diplomatic and consular relations were restored**.

➤ **Political Relations:**

- After South Africa achieved democracy in 1994, it was the **Red Fort Declaration on Strategic Partnership** between India and South Africa, signed in March 1997 which set the parameters for a rekindled relationship.
- The Strategic Partnership between the two countries was again reaffirmed in the **Tshwane Declaration (October 2006)**.
 - Both these declarations have been instrumental mechanisms that have contributed in the past to both South Africa and India for achieving their respective national objectives.
- India and South Africa have a **long history of working together by coordinating their views and efforts** in institutions of global governance/multilateral fora, in order to achieve greater autonomy and ensure that the agenda of 'South' is prioritised.
 - **For Example: BRICS** (Brazil, Russia, India, China and South Africa), **IBSA** (India, Brazil, and South Africa), **G20**, **Indian Ocean Rim Association (IORA)** and **World Trade Organisation (WTO)**.

➤ **Economic:**

- India is **South Africa's fifth-largest export destination**, and **fourth-largest import origin** and is the **second-largest trading partner in Asia**.
 - Both countries are working to boost trade volumes in the coming years. Bilateral trade between India and South Africa **currently stands at USD 10 billion**.
- In **2016** both the countries agreed to collaborate in the defence sector, especially in terms of the opportunities available for South African private

Note:

sector under **'Make in India'** initiative, energy sector, agro-processing, human resource development, and infrastructure development.

➤ **Science & Technology:**

- The Department of Science and Technology of both countries have collaborated, especially in the **Square Kilometer Array (SKA)** project.

➤ **Culture:**

- With the help of the **Indian Council for Cultural Relations (ICCR)**, an intensive programme of cultural exchanges is organised throughout South Africa including scholarships for South African nationals.
- The 9th **World Hindi Conference** was held in September 2012 at Johannesburg.

➤ **Indian Community:**

- The **major part of the Indian origin community came to South Africa from 1860 onwards** as farm labour to serve as field hands and mill operatives in the sugar and other agricultural plantations.
- South Africa is **home to the highest number of Indian Diaspora in the African continent**, with a total strength of 1,218,000 thereby constituting **3% of South Africa's total population**.
 - Since 2003 onwards, India has celebrated **Pravasi Bhartiya Divas (PBD)** each year on 9th January (the day Mahatma Gandhi returned from South Africa to India).

G7's Build Back Better World Initiative

Why in News

The **G7 (Group of Seven)** Countries proposed a **'Build Back Better World (B3W)** initiative' at the recent **47th G7 summit** to counter China's Belt and Road Initiative (BRI).

Key Points

➤ **About:**

- It **aims to address the infrastructure investment deficit in developing and lower income countries** - the **space which has been increasingly captured by China** through 2,600 BRI projects with trillions of dollars of investment.
 - **BRI projects are perceived as corrosive tactics or debt traps** laid by China for its strategic

dominance in trade, foreign policy and geopolitics in the world.

Group of Seven

- It is an **intergovernmental organisation** that was formed in **1975**.
- The **bloc meets annually** to discuss **issues of common interest** like global economic governance, international security and energy policy.
- The G7 countries are **the UK, Canada, France, Germany, Italy, Japan and the US**.
 - All the **G7 countries and India** are a part of **G20**.
- The G7 does **not have a formal constitution or a fixed headquarters**. The decisions taken by leaders during annual summits are non-binding.

- The **overall focus is on developing transportation, logistics and communications, which would reduce trade and transaction cost for China's trade**, give more market access to Chinese markets and ensure stable supply of energy and other resources.
- This infrastructure plan is **being led by the United States**.
 - B3W initiative will **provide a transparent infrastructure partnership to help narrow about \$40 trillion** needed by developing nations by 2035.
- It calls for spending **hundreds of billions of dollars** in collaboration with the **private sector** while **adhering to climate standards and labour practices**.
- However, the **announcement is yet to be made about how exactly the plan would work or how much capital it would ultimately allocate**.
- **China's BRI:**
 - **About:**
 - It was **launched in 2013**. It involves **development and investment initiatives** that would **stretch from Asia to Europe and beyond**.
 - More than 100 countries **have signed agreements with China** to cooperate in BRI projects like **railways, ports, highways and other infrastructure**.
 - **China's Investment through BRI:**
 - Since its inception, **outward investment has been aggressive** as China's **FDI (Foreign Direct**

Note:



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Investment) outflow to inflow ratio increased to 1 from around 0.34 during 2001-10.

- In volume terms, the **FDI outflow increased to an average of \$140 billion in 2016-19 from an annual average \$25 billion** during 2001-10.
- China is **investing in Africa** to lay a comprehensive transportation network. China has **also signed various contacts with the East Asian region**, mostly focusing on transportation, railways, roadways and waterways, for better integration between China and **ASEAN countries**.
- **Important Projects:**
 - China-Pakistan Economic Corridor (CPEC), the Bangladesh-China, the Myanmar Economic Corridor (BCIM) and the Colombo Port City Project in Sri Lanka, amongst others, are important BRI projects.
 - China has a plan to complete 4,000 km of railways and 10,000 km of highways within the Central Asian region as part of BRI.
- **India's Concerns:**
 - India has expressed concerns about the **China-Pakistan Economic Corridor (CPEC)**, as it traverses through **Pakistan-occupied Kashmir (PoK)**.

- The massive infrastructure project **connects China's Xinjiang province with Gwadar port** in Pakistan's Balochistan province.

- India **refused to join the Chinese initiative in the past** and raised its voice against the BRI.
- India **also sees an adverse trade impact on its products' competitiveness**, market access, resource extraction etc. due to Chinese competition.

➤ **Significance of B3W:**

- The **re-emergence of China as a leading global power** is considered to be one of the most significant geo-political events of recent times, alongside the **1991 fall of the Soviet Union** that ended the **Cold War**.
- China in 1979 had an **economy that was smaller than Italy's**, but after opening to foreign investment and introducing market reforms, it has **become the world's second-largest economy** and is a global leader in a range of new technologies.
- However, the **West had failed to offer a positive alternative** to the "lack of transparency, poor environmental and labour standards, and coercive approach" of the Chinese government that had left many countries worse off.

Note:

Science and Technology

Highlights

- GRB 200826A: Gamma-Ray Burst
- Monkeypox
- Near-Surface Shear Layer of the Sun
- Moon-Forming Regions Around Exoplanets
- Antimicrobial Resistance
- Bird Flu: Avian Influenza
- Internet Through High Altitude Balloons
- NASA's New Spacecraft: NEA Scout
- Moon's Wobble Effect
- Pegasus Spyware
- Hubble Space Telescope
- Nauka Module of Russia

GRB 200826A: Gamma-Ray Burst

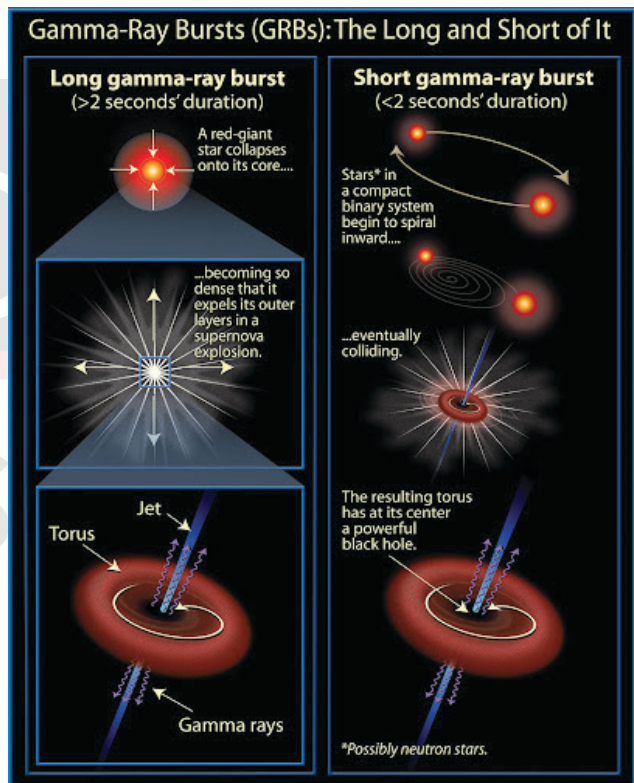
Why in News

Recently, a group of astronomers have detected a **very short, powerful burst of high-energy radiation** also known as **Gamma-Ray Bursts (GRBs)** that lasted for about a second.

- It was named **GRB 200826A** after the date it occurred, which is **26th August 2020**.
- It was detected by **National Aeronautics and Space Administration's (NASA's) Fermi Gamma-ray Space Telescope**

Key Points

- **Gamma-Ray Bursts:**
 - **About:**
 - They are the **most powerful events in the universe**, detectable across billions of **light-years**.
 - A **light-year** is the distance a beam of light travels in a single Earth year, or 9.5 trillion km.
 - Astronomers classify them as **long or short based on whether the event lasts for more or less than two seconds**.
 - **Long GRBs:**
 - They observe **long bursts in association with the demise of massive stars**.
 - When a **star much more massive than the Sun runs out of fuel**, its **core suddenly collapses** and forms a **black hole**.



- **Black hole** refers to a point in space where matter is so compressed as to create a gravity field from which even light cannot escape.
- As **matter swirls toward the black hole**, some of it **escapes in the form of two powerful jets** that rush outward at almost the speed of light in opposite directions.
- Astronomers **only detect a GRB** when one of these **jets happens to point almost directly toward Earth**.

Note:

- Each jet drills through the star, producing a pulse of **gamma rays – the highest-energy form of light** – that can last up to minutes.
- Following the burst, the **disrupted star then rapidly expands as a supernova**.
 - A **supernova** is the name given to an exploding star that has reached the end of its life.
- **Short GRB:**
 - Short GRB, on the other hand, forms when pairs of compact objects – such as **neutron stars**, which also form during stellar collapse – **spiral inward over billions of years and collide**.
 - A **Neutron star** comprises one of the possible evolutionary end-points of high mass stars.
- **GRB 200826A:**
 - It was a **sharp blast of high-energy emission lasting just 0.65 seconds**.
 - After traveling for a very long period of time through the **expanding universe**, the signal had **stretched out to about one-second-long** when it was detected by Fermi's Gamma-ray Burst Monitor.
 - It had been **racing toward Earth for nearly half the present age of the universe**.
 - It is considered to be the **shortest GRB** till now and it occurred caused by the **death of a massive star**.
- **Significance of GRB 200826A:**
 - It has helped to **resolve the long-standing issues related to gamma-ray bursts**. Also, this study triggers to **re-analyse all such known events** to constrain number densities better.
- **Researchers:**
 - The group included **Indian astronomers from Aryabhata Research Institute of Observational Sciences (ARIES)**, The Inter-University Centre for Astronomy and Astrophysics, Pune (IUCAA), National Centre for Radio Astrophysics - Tata Institute of Fundamental Research, Pune (NCRA) and IIT Mumbai.
- **Fermi Gamma-ray Space Telescope:**
 - **About:**
 - Formerly called the **Gamma-ray Large Area Space Telescope (GLAST)**, it is a **space observatory being used to perform gamma-ray astronomy observations** from low Earth orbit.

- It was **launched in June 2008**. It is **named after Enrico Fermi**, an Italian-American scientist who did pioneering work in high-energy physics.
- **Collaboration:**
 - Fermi is an astrophysics and particle physics partnership, developed in collaboration with the **US Department of Energy**, along with important contributions from academic institutions and partners in **France, Germany, Italy, Japan, Sweden, and the U.S.**
- **Major Function:**
 - It **maps the entire sky** every three hours. It **provides an important window into the most extreme phenomena of the universe**, like GRBs, black-hole jets, and pulsars.
 - **Pulsars** are types of neutron stars which emit radio pulses at regular intervals.

Gamma Rays

➤ About:

- They are the **highest-energy light in the universe**. They can have over a **billion times the energy of the type of light visible to our eyes**.
- They are **produced by the hottest and most energetic objects in the universe**, such as **neutron stars** and **pulsars**, **supernova** explosions, and regions around **black holes**.
- The gamma rays possess high energy; **they can pass right through any lens or mirror**, making it very difficult to focus them in a visible-light telescope.

➤ Gamma-Rays on Earth:

- On Earth, gamma rays are **generated by nuclear explosions, lightning**, and the less dramatic activity of **radioactive decay**.
- Gamma-ray astronomy is the **astronomical observation of gamma rays with photon energies above 100 keV (Kilo Electron Volt)**.
- Gamma rays are so energetic that **they are harmful to life on Earth**.
- Earth's **atmosphere absorbs gamma rays**, preventing them from affecting life on the ground.
- Astronomical observations of gamma-ray sources are therefore **done with high-altitude balloons or satellites**, above the protective blanket of Earth's atmosphere.

Note:

Monkeypox

Why in News

Recently, the US started surveillance on people travelling from Nigeria, who may have had contact with the individuals infected with **Monkeypox**.

Key Points

➤ About:

- It is a **viral zoonotic disease** (transmission from animals to humans) and is identified as a pox-like disease among monkeys **hence it is named Monkeypox**. It is **endemic to Nigeria**.
- It is **caused by monkeypox virus**, a member of the **Orthopoxvirus genus in the family Poxviridae**.
- The natural host of the virus remains undefined. But the disease has been reported in many animals.
 - Animals known to be sources of Monkeypox virus include **monkeys and apes, a variety of rodents** (including rats, mice, squirrels and prairie dogs) **and rabbits**.

➤ Outbreaks:

- It was first reported in 1958, in monkeys in the **Democratic Republic of Congo (DRC)** and in humans in 1970, also in the DRC.
- In 2017, Nigeria experienced the largest documented outbreak, 40 years after the last confirmed case.
- Subsequently, the disease has been reported in **many West and Central African countries**.

➤ Symptoms:

- Infected people break out in a **rash that looks a lot like chicken pox**. But the fever, malaise, and headache from Monkeypox **are usually more severe than in chicken pox infection**.
- In the early stage of the disease, Monkeypox **can be distinguished from smallpox because the lymph gland gets enlarged**.

➤ Transmission:

- Primary infection is through **direct contact with the blood, bodily fluids, or cutaneous or mucosal lesions of an infected animal**. Eating **inadequately cooked meat of infected animals** is also a risk factor.
- **Human-to-human transmission** can result from close contact with infected respiratory tract

secretions, skin lesions of an infected person or objects recently contaminated by patient fluids or lesion materials.

- Transmission can also **occur by inoculation or via the placenta** (congenital monkeypox).

➤ Vulnerability:

- It spreads rapidly and **can cause one out of ten deaths** if infected.

➤ Treatment and Vaccine:

- There is **no specific treatment or vaccine available** for Monkeypox infection. In the past, the **anti-smallpox vaccine was shown to be 85% effective** in preventing Monkeypox.
 - But the world was declared free of **smallpox in 1980** so the vaccine isn't widely available anymore.
- Currently, there is **no global system in place to manage the spread of Monkeypox**, with each country struggling to contain any outbreak whenever it occurs.

Near-Surface Shear Layer of the Sun

Why in News

Recently, **Indian astronomers** from **Aryabhata Research Institute of Observational Sciences (ARIES)**, and **Indian Institute of Science, Bangalore**, have for the **first time given the theoretical explanation** of the existence of a **near-surface shear layer (NSSL)** in the Sun.

- **ARIES** is an autonomous institute under the Department of Science and Technology.

Key Points

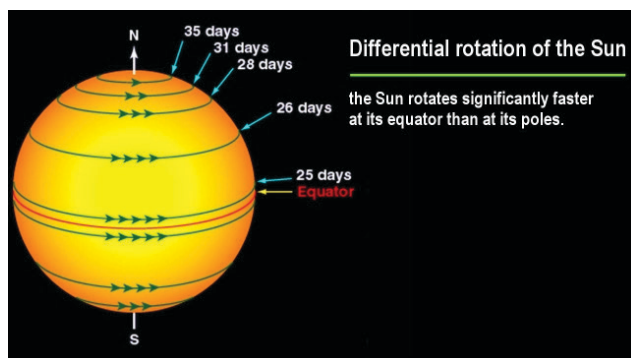
➤ About Near-Surface Shear Layer (NSSL):

- Apart from differentiation rotation between equator and poles, the helioseismology has revealed that the Sun has a **Near-Surface Shear Layer (NSSL)**.
- The NSSL is the region very close to the visible solar surface, where there is a change in the rotation profile of the Sun.
- This layer exists very close to the solar surface, **within which the angular velocity decreases rapidly with radius**.

Note:



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- This NSSL is thought to play a significant role in defining the nature of large-scale convective patterns that drive the Sun's magnetism.

Note:

- **Angular velocity:** It is the time rate at which an object rotates, or revolves, about an axis, or at which the angular displacement between two bodies changes.
- **Helioseismology:** It is a technique of using sound waves to peek inside the Sun.
- **Findings of the Study:**
 - In their study, they have used an equation called the **thermal wind balance equation**.
 - It explains how the slight difference in temperature between solar poles and equator, called **thermal wind**, is balanced by the **centrifugal force appearing due to solar differential rotation**.
 - Understanding NSSL is crucial for the study of **several solar phenomena** like sunspot formation, solar cycle, and it will also help in understanding such phenomena in other stars.
- **About Differential Rotation of the Sun:**
 - It was long known that the Sun has **Differential rotation**, which means different parts of the Sun **rotate at different speeds**.
 - The Sun **rotates faster at the equator than at the poles**.
 - Over time, the Sun's differential rotation rates **cause its magnetic field to become twisted and tangled**.
 - The **"tangles"** in the magnetic field lines can produce very, very strong **localized magnetic fields**.
 - These localised magnetic fields on the surface of the Sun are active regions where **sunspots** occur.
 - Sunspots are areas that appear dark on the surface of the Sun (photosphere). They

appear dark because they are cooler than other parts of the Sun's surface.

- Further, these active regions often generate **solar storms**: solar flares and coronal mass ejections (CMEs).

Moon-Forming Regions Around Exoplanets

Why in News

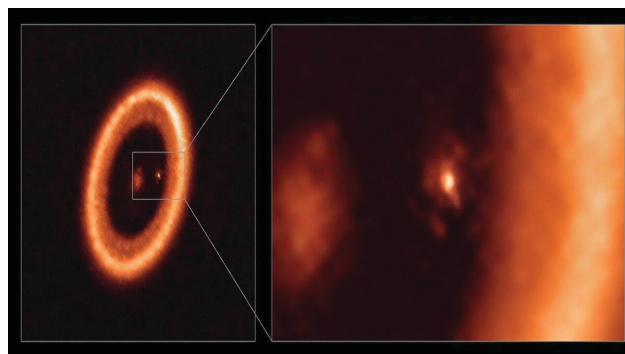
Recently, scientists for the first time have spotted a **Moon-Forming Region** around a planet **beyond our solar system (Exoplanet)**.

Exoplanets

- An exoplanet or extrasolar planet is a **planet outside the Solar System**. The **first** confirmation of detection of exoplanets occurred in **1992**. More than **4,400 exoplanets** have been discovered till now.
- Exoplanets are very **hard to see directly with telescopes**. They are **hidden by the bright glare of the stars** they orbit. So, astronomers use other ways to detect and study exoplanets such as **looking at the effects these planets have on the stars they orbit**.

Key Points

- **Observation & Findings:**
 - Scientists detected a **disc of swirling material** accumulating **around two exoplanets** seen orbiting a young star called **PDS 70**.
 - **PDS 70** is located a relatively close **370 light years from Earth**.
 - A **light year** is the distance light travels in a year, about **9.5 trillion km**.
 - It is called a **circumplanetary disc**, and it is **from these that moons are born**. The disc around PDS



Note:

70c (The Exoplanet), with a diameter about equal to the distance of the Earth to the sun, possesses enough mass to **produce up to three moons the size of Earth's moon**.

- **PDS 70c** orbits its star at 33 times the distance of the Earth from the sun, **similar to the planet Neptune in our solar system**.

- The orange-coloured star **PDS 70**, roughly the same mass as our Sun, is about **5 million years old**. The **two planets are even younger**. Both planets are **similar** (although larger) to **Jupiter**, a gas giant.
- It was **around one of the two planets, called PDS 70c, that a moon-forming disc was observed**.
- Both planets are still in their youth and are at a dynamic stage in which **they are still acquiring their atmospheres**.

➤ **Instrument Used:**

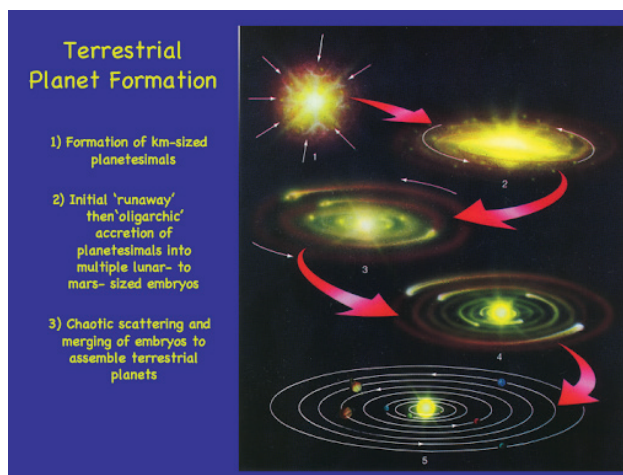
- They used the **Atacama Large Millimeter/submillimeter Array (ALMA)** observatory in Chile's Atacama desert. It is the **most complex astronomical observatory ever built on Earth**.
 - Teams from **North America, East Asia, and Europe** merged projects to develop this breakthrough scientific instrument.
- It uses **66 high-precision dish antennas** of two sizes: 54 of them are 12 meters across and 12 of them are 7 meters across.

➤ **Other Moon Forming Regions:**

- **No circumplanetary discs had been found** until now because all the known **exoplanets** resided in "mature" – fully developed – solar systems, **except the two infant gas planets orbiting PDS 70**.
- In our solar system, the impressive **rings of Saturn**, a planet around which more than 80 moons orbit, represent a relic of a **primordial moon-forming disc**.

➤ **Planet & Moon Formation:**

- Stars burst to life within clouds of interstellar gas and dust scattered throughout galaxies. **Leftover material spinning around a new star then coalesces into planets**, and **circumplanetary discs surrounding some planets similarly yield moons**.
- The dominant mechanism thought to underpin planet formation is called **"core accretion"**.
 - **Core accretion** occurs from the **collision and coagulation of solid particles into gradually larger bodies** until a massive enough planetary



embryo is formed (10-20 Earth masses) to accrete a gaseous envelope.

- In this scenario, **small dust grains, coated in ice, gradually grow to larger and larger sizes through successive collisions with other grains**.
- This continues until the grains have grown to a size of a planetary core, at which point the **young planet has a strong enough gravitational potential to accrete gas** which will form its atmosphere.
- Some **nascent planets attract a disc of material around them**, with the same process that gives rise to planets around a star **leading to the formation of moons around planets**.

Antimicrobial Resistance

Recently, the **Ministry of Health and Family Welfare** highlighted **various measures to address the challenges posed by Antimicrobial Resistance (AMR)** in the country.

Key Points

➤ **About:**

- Antimicrobial resistance is the **resistance acquired by any microorganism** (bacteria, viruses, fungi, parasite, etc.) **against antimicrobial drugs** (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.
- As a result, **standard treatments become ineffective**, infections persist and may spread to others.
- Microorganisms that develop antimicrobial resistance are sometimes referred to as **"superbugs"**.

➤ **Reasons for Spread of AMR:**

Note:

- The **misuse of antimicrobials in medicine and inappropriate use in agriculture.**
- **Contamination around pharmaceutical manufacturing sites** where untreated waste releases large amounts of active antimicrobials into the environment.
- **AMR in India:**
 - India, with its combination of large population, rising incomes that facilitate purchase of antibiotics, **high burden of infectious diseases and easy over-the-counter access to antibiotics**, is an important locus for the generation of resistance genes (such genes help bacteria in surviving on being exposed to antibiotics).
 - The multi-drug resistance determinant, **New Delhi Metallo-beta-lactamase-1 (NDM-1)**, emerged from this region to spread globally.
 - Africa, Europe and other parts of Asia have also been affected by multi-drug resistant typhoid originating from South Asia.
 - In India, **over 56,000 newborn deaths each year due to sepsis are caused by organisms that are resistant to first line antibiotics.**
- **Measures Taken to Address AMR:**
 - **National Programme on AMR containment:** Launched in 2012. Under this programme, AMR Surveillance Network has been strengthened by establishing labs in State Medical College.
 - **National Action Plan on AMR:** It focuses on **One Health approach** and was launched in April 2017 with the aim of involving various stakeholder ministries/departments.
 - **AMR Surveillance and Research Network (AMRSN):** It was launched in 2013, to generate evidence and capture trends and patterns of drug resistant infections in the country.
 - **AMR Research & International Collaboration:** **Indian Council of Medical Research (ICMR)** has taken initiatives to develop new drugs /medicines through international collaborations in order to strengthen medical research in AMR.
 - ICMR along with Research Council of Norway (RCN) initiated a joint call for research in antimicrobial resistance in 2017.
 - ICMR along with the Federal Ministry of Education and Research (BMBF), Germany has a joint Indo-German collaboration for research on AMR.
- **Antibiotic Stewardship Program:** ICMR has initiated antibiotic stewardship program (AMSP) on a pilot project across India to control misuse and overuse of antibiotics in hospital wards and ICUs.
 - DCGI has banned 40 fixed dose combinations (FDCs) which were found inappropriate.
- **Integrated One Health Surveillance Network for AMR:** To assess the preparedness of Indian Veterinary laboratories to participate in integrated AMR surveillance network.
 - ICMR has also created a veterinary standard operating procedure (Vet-SOPs) for enabling comparison of antimicrobial resistance patterns in animals and humans.
- **Others:**
 - India has undertaken many activities like **Mission Indradhanush** — to address **low vaccination coverage** — strengthened micro-planning and additional mechanisms to improve monitoring and accountability.
 - The Ministry of Health & Family Welfare (MoHFW) identified AMR as one of the top 10 priorities for the ministry's collaborative work with the World Health Organisation (WHO).
- **WHO's take on AMR:**
 - The **World Health Organization (WHO)** has identified AMR as one of the top ten threats to global health.
 - WHO recommends that countries must prioritize their national action plans to scale up financing and capacity building efforts, put in place stronger regulatory systems and support awareness programmes for responsible and prudent use of antimicrobials by professionals in humans, animals and plants health.
 - The WHO also suggests a number of steps that can be taken at various levels to reduce the impact and also limit the spread of this resistance.

Bird Flu: Avian Influenza

Why in News

Recently, the **first human death** was recorded **due to Bird Flu** in India this Year. This was caused by **H5N1 Avian Influenza Virus**.

- Earlier, **China** reported the **first human infection of H10N3 bird flu**.

Note:

Key Points

➤ About:

- A disease caused by **avian influenza (AI) Type A viruses** found naturally in wild birds worldwide.
 - AI viruses are broadly classified as **low pathogenic AI (LPAI)** and **highly pathogenic AI (HPAI) viruses**, based on their **pathogenicity**. H5N1 strains come under HPAI viruses.
- The virus **can infect domestic poultry** including chickens, ducks, turkeys and there have been reports of H5N1 infection among **pigs, cats, and even tigers** in Thailand zoos.

➤ Impact:

- Outbreaks can lead to **devastating consequences for the country**, particularly the **poultry industry**.
- Farmers might experience **a high level of mortality in their flocks**, with **rates often around 50%**.

➤ Infection in Humans:

- The most common route of virus transmission is **direct contact with infected birds**, either dead or alive, or contact with contaminated surfaces or air near the infected poultry.
- **Human-to-human transmission** of the H5N1 virus is **very rare**.
- **Children and adults below 40** were seen to be the most affected and mortality was high in 10-19 years olds.

➤ Symptoms in Humans:

- It ranges from **mild to severe influenza-like illnesses** such as fever, cough, sore throat, muscle aches, nausea, abdominal pain, diarrhea, and vomiting.
- People can also develop **severe respiratory illness** (e.g., difficulty breathing, **pneumonia**, **acute respiratory distress**, viral pneumonia) and altered mental status, seizures etc.

➤ Prevention and Eradication:

- Strict **biosecurity measures and good hygiene** are essential in protecting against disease outbreaks.
- If the infection is detected in animals, **a policy of culling infected and contact animals is normally used** in an effort to rapidly contain, control and eradicate the disease.
- **WHO's** global laboratory system, the **Global Influenza Surveillance and Response System (GISRS)**, identifies and monitors strains of circulating

influenza viruses, and provides advice to countries on their risk to human health and available treatment or control measures.

➤ Status of Bird Flu in India:

- Fresh cases of bird flu were reported in different states of India between **December 2020-January 2021** causing alarm across the country.
- Previously in **2019, India was declared free from Avian Influenza (H5N1)**, which had also been notified to the **World Organization for Animal Health (OIE)**.
 - The OIE is an intergovernmental organisation responsible for improving animal health worldwide. It is headquartered in Paris, France.

Types of Influenza Virus

- There are four types of influenza viruses: **influenza A, B, C, and D**.
 - **Influenza A and B** are the two types of influenza that cause epidemic seasonal infections nearly every year.
 - **Influenza C mainly occurs in humans**, but has been known to also occur in dogs and pigs.
 - **Influenza D is found mainly in cattle**. It's not known to infect or cause illness in humans yet.

Avian influenza Type A viruses

- Type A viruses are classified based on two proteins on their surfaces – **Hemagglutinin (HA)** and **Neuraminidase (NA)**. There are about **18 HA subtypes and 11 NA subtypes**.
- Several combinations of these two proteins are possible e.g., **H5N1, H7N2, H9N6, H17N10, H18N11 etc.**
- All known subtypes of influenza A viruses **can infect birds**, except subtypes **H17N10 and H18N11**, which have only been found in **bats**.

Internet Through High Altitude Balloons

Why in News

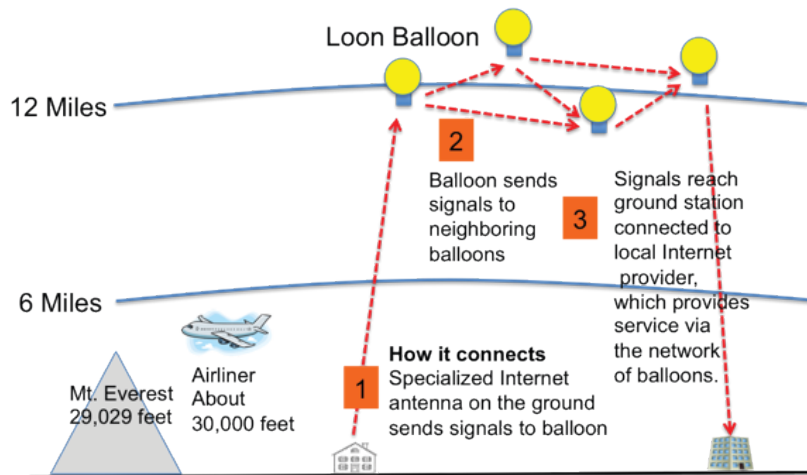
Recently, the US has planned to transmit the Internet to the people in Cuba via **high-altitude balloons** when their government has blocked access.

Note:

- There is an ongoing **protest in Cuba** against long standing restrictions on rights, scarcity of food and medicines, and the government's poor response to the **Covid-19** pandemic.

Key Points

- **High Altitude Balloons for Internet:**
 - They are commonly known as **Loon Balloons** as the first High Altitude Balloon for providing internet was used under **Project Loon**.
 - They are **made of the commonplace plastic polyethylene** and are the **size of a tennis court**.
 - They are **powered by solar panels** and controlled by **software on the ground**.
 - While up in the air, **they act as floating cell towers**, transmitting internet signals to ground stations and personal devices.
 - They float **60,000 to 75,000 feet, above the Earth**, well above commercial jetliner routes.
 - They last for **well over 100 days in the stratosphere** before being returned to earth.
 - Each balloon can serve thousands of people. But they **had to be replaced every five months or so because of the harsh conditions in the stratosphere**. And the balloons can be difficult to control.
- **Requirements:**
 - **Network:**
 - Beyond the balloons themselves, it **needed network integration** with a telecom to provide service and some equipment on the ground in the region.
 - **Permission:**
 - It also needs **permission from local regulators**.
- **Significance:**
 - **Cheap:**
 - By allowing phone companies **to expand their coverage where needed**, the balloons are **intended to offer countries a cheaper option** than laying cables or building cell towers.
 - **Access to Remote Areas:**
 - They are able to **bring Internet access to remote and rural areas** poorly served by existing



provisions, and **to improve communication during natural disasters to affected regions.**

Challenges:

- **Need Unused Band:**
 - It would need an **unused band of spectrum**, or **radio frequencies**, to transmit a connection, and spectrum use is **typically controlled by national governments**.
 - Anyone trying this would have to find a **free block of spectrum** that wouldn't be interfered with.
- **Uneconomical:**
 - Balloon - or **drone**-powered networks **aren't likely to be economical over the long term**.
- **Operational Challenges:**
 - Developing **algorithms** to appropriately map balloon positions, determining a good strategy **to deal with unpleasant weather** and addressing the concern of **relying on the non-renewable resources** are among other challenges.

Project Loon

- It was **started in 2011** by Alphabet, the parent company of Google. It was a **network of stratospheric balloons** designed to bring Internet connectivity to rural and remote areas.
- It **shut down that project in January 2020** as it **wasn't commercially viable**.
- Prior to the shutdown, Loon balloons **had been providing service in mountainous areas in Kenya** through a partnership with a local telecom.
- The service **also helped provide wireless communications in Puerto Rico** in the aftermath of **Hurricane Maria**.

Note:



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NASA's New Spacecraft: NEA Scout

Why in News

Recently, **National Aeronautics and Space Administration (NASA)** has announced that its new spacecraft, named **Near-Earth Asteroid Scout or NEA Scout**, has completed all required tests and has been safely tucked inside the **Space Launch System (SLS) rocket**.

Key Points

➤ About NEA Scout:

- Near-Earth Asteroid Scout, or NEA Scout, is a **miniaturized spacecraft**, known as a **CubeSat**, developed under **NASA's Advanced Exploration Systems (AES) Program**.
 - AES pioneers new approaches for rapidly developing prototype systems, demonstrating key capabilities, and validating operational concepts for future human missions beyond **low-Earth orbit**.
- Its **main mission** is to fly by and collect data from a **near-Earth asteroid**.
 - It will take about **two years to cruise to the asteroid** and will be about **93 million miles away from Earth** during the asteroid encounter.
- It will also be **America's first interplanetary mission** using a **special solar sail propulsion**.
 - So far, **spacecraft have been using solar energy to power them** and execute critical functions.
 - This will be the **first time that a spacecraft uses it as wind to generate thrust and move forward**.
- It is **one of several payloads** that will hitch a ride on **Artemis I**, which is expected to be launched in **November, 2021**.
 - **Artemis I** will be an **uncrewed testflight** of the **Orion spacecraft and SLS rocket**.
 - It is the first in a series of increasingly complex missions that will enable human exploration to the Moon and Mars.
- NEA Scout **launches to the Moon in 2021 with a fleet of other small satellites aboard Artemis 1**.
 - At the Moon, NEA Scout will deploy its 86-square-meter solar sail and slowly spiral out of lunar orbit.

- It will travel to a near-Earth asteroid and perform a slow fly-by, capturing up-close images of the surface.

➤ Significance:

- The images gathered by NEA Scout will **provide critical information** on the asteroid's physical properties such as orbit, shape, volume, rotation, the dust and debris field surrounding it, plus its surface properties.
- The spacecraft **will pave the way for the Solar Cruiser**, which will use a sail 16 times larger when it flies in 2025.
- **Studying Near-Earth asteroids can help in developing strategies for reducing the potential damage** caused in the event of an impact.
- Data can be used to determine what is required to **reduce risk, increase effectiveness, and improve the design and operations of robotic and human space exploration**.

➤ Near-Earth Objects (NEOs):

- NEOs are **comets and asteroids** pushed by the gravitational attraction of nearby planets into orbits which allow them to enter the Earth's neighbourhood.
- These objects are **composed mostly of water ice with embedded dust particles**.
- NEOs occasionally approach close to the **Earth as they orbit the Sun**.
- NASA's **Center for Near-Earth Object Study (CNEOS)** determines the time and distances of these objects, when their approach to the Earth is close, through the **Asteroid Watch Widget**.

Asteroids

- These are **rocky objects that orbit the Sun**, much smaller than planets. They are also called minor planets.
- According to NASA, **9,94,383 is the count of known asteroids**, the remnants from the formation of the solar system over 4.6 billion years ago.
- Asteroids are divided into three classes:
 - **First**, those found in the **main asteroid belt between Mars and Jupiter**, which is estimated to contain somewhere between 1.1-1.9 million asteroids.
 - The **second group** is that of **trojans**, which are asteroids that share an orbit with a larger planet.

Note:



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- The third classification is **Near-Earth Asteroids (NEA)**, which have orbits that pass close to the Earth. Those that **cross the Earth's orbit** are called **Earth-crossers**.
 - More than 10,000 such asteroids are known, out of which over 1,400 are classified as **Potentially Hazardous Asteroids (PHAs)**.
 - **PHAs** are currently defined based on parameters that measure the asteroid's potential to make threatening close approaches to the Earth.
 - Specifically, all asteroids with an Earth Minimum Orbit Intersection Distance (MOID) of 0.05 au or less and an absolute magnitude (H) of 22.0 or less are considered PHAs.

Moon's Wobble Effect

Why in News

Recently, the **National Aeronautics and Space Administration (NASA)** has highlighted **Moon's Wobble** as a **potential problem in the near future**.

Key Points

- **Moon's Wobble:**
 - When the Moon makes its **elliptical orbit**, its **velocity varies and alters causing our perspective of the "light side"** to appear at **slightly different angles**. This is what it calls the Moon's wobble or that is how it appears to our eyes.
 - It is a **cyclical shift in the moon's orbit**, it is a **regular swaying (Oscillation) in the moon's orbit**.
 - It was first documented **way back in 1728**. This wobble takes **over an 18.6-year** period to complete. It acts as a background of **sea level rise**.
- **Impact of Wobble on Earth:**
 - The moon wobble impacts the gravitational pull of the moon, and therefore, indirectly influences the **ebb and flow of tides** on the Earth.
 - Each wobble cycle has the **power to amplify and suppress the tides on Earth**.
 - During **half of the Moon's orbit of 18.6 years**, the **Earth's regular tides are suppressed** i.e. high tides are lower than normal and low tides higher than normal (Current situation).

- In the **other half**, the effect is reversed, which is called the **tide-amplifying phase** of the Moon.

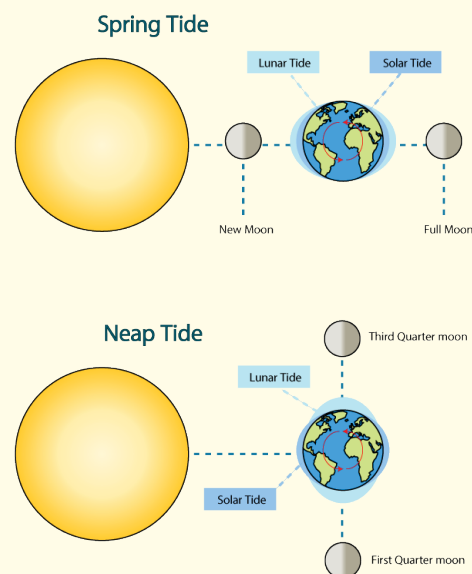
➤ Related Concerns:

- The **lunar cycle is expected to shift again by mid-2030**, and in the coming phase, the **tides will amplify once again**.
- The upcoming changes in the lunar cycle will pose a serious threat, as the amplified **high tides coupled with the rising sea levels** will make the risk of flooding far greater across **all coastal regions of the globe**.
 - It raises **the baseline**, and the more the baseline is raised, the smaller the weather event to cause flooding.
- The **high tide-associated floods**—also known as nuisance floods or sunny day floods—**may occur in clusters that could last for months** or even for longer periods.
 - This surge will be closely associated with the **position of the Moon, Earth and the Sun**.

Tides

➤ About:

- Tides can be defined as the **alternate rise and fall of the ocean water**.



➤ Occurrence:

- It is caused by the combined effects of the **gravitational force** exerted on Earth **by the Sun**, the gravitational force exerted on Earth **by the Moon** and **rotation of the Earth**.

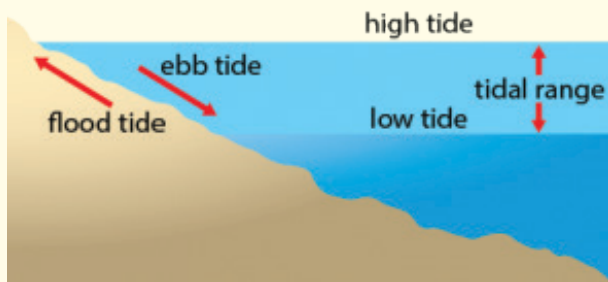
Note:

➤ Types:

- **Spring Tide:** It occurs during the **full moon and new moon days** when the sun, the moon and the earth are in the same line twice each lunar month all year long, without regard to the season.
- **Neap Tide:** It occurs when the moon is in its **first and last quarter**, the ocean waters get drawn in **diagonally opposite directions** by the gravitational pull of sun and earth resulting in low tides.

➤ Stages of Tidal Changes:

- **High tide** is the stage when the tidal crest arrives at a particular location on shore, raising the local sea level.
- **Low tide** is the stage when the trough arrives, lowering the local sea level.
- **Flood tide** is a rising or incoming tide between low tide and high tide.
- **Ebb tide** is a falling or outgoing tide between high tide and low tide.
 - The vertical distance between high tide and low tide is the tidal range.



➤ Impact:

- Tides affect other aspects of **oceanic life, including the reproductive activities** of fish and ocean plants.
- High tides **help in navigation**. They raise the water level close to the shores which helps the **ships to arrive at the harbour more easily**.
- Tides stir the ocean water that **makes habitable climatic conditions** and balance the temperatures on the planets.
- The fast movement of water **during the inflow and outflow** will provide a source of renewable energy to communities living along the coast.

Pegasus Spyware

Why in News

Recently, it has been reported that **Pegasus**, the **malicious software**, has allegedly been used to secretly monitor and spy on an extensive host of public figures in India.

Key Points

➤ About Pegasus:

- It is a type of malicious software or **malware classified as a spyware**.
 - It is **designed to gain access to devices, without the knowledge of users**, and gather personal information and relay it back to whoever it is that is using the software to spy.
- Pegasus has been **developed by the Israeli firm NSO Group** that was set up in 2010.
- The earliest version of Pegasus discovered, which was captured by researchers in 2016, **infected phones through what is called spear-phishing** – text messages or emails that trick a target into clicking on a malicious link.
- Since then, however, NSO's attack capabilities have become more advanced. Pegasus infections can be achieved through so-called **"zero-click" attacks**, which do not require any interaction from the phone's owner in order to succeed.
 - These will often exploit **"zero-day" vulnerabilities**, which are flaws or bugs in an operating system that the mobile phone's manufacturer does not yet know about and so has not been able to fix.

➤ Targets:

- Human Rights activists, journalists and lawyers around the world have been targeted with phone malware sold to authoritarian governments by an Israeli surveillance firm.
- Indian ministers, government officials and opposition leaders also figure in the list of people whose phones may have been compromised by the spyware.
 - In 2019, **WhatsApp filed a lawsuit** in the US court against Israel's NSO Group, alleging that the firm was incorporating **cyber-attacks** on the application by infecting mobile devices with malicious software.

Note:



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➤ **Recent Steps Taken in India:**

- **Cyber Surakshit Bharat Initiative:** It was launched in 2018 with an aim to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.
- **National Cyber security Coordination Centre (NCCC):** In 2017, the NCCC was developed to scan internet traffic and communication metadata (which are little snippets of information hidden inside each communication) coming into the country to detect real-time cyber threats.
- **Cyber Swachhta Kendra:** In 2017, this platform was introduced for internet users to clean their computers and devices by wiping out viruses and malware.
- **Indian Cyber Crime Coordination Centre (I4C):** I4C was recently inaugurated by the government.
 - National Cyber Crime Reporting Portal has also been launched pan India.
- **Computer Emergency Response Team - India (CERT-IN):** It is the nodal agency which deals with cybersecurity threats like hacking and phishing.
- **Legislation:**
 - **Information Technology Act, 2000.**
 - **Personal Data Protection Bill, 2019.**

➤ **International Mechanisms:**

- **International Telecommunication Union (ITU):** It is a specialized agency within the **United Nations** which plays a leading role in the standardization and development of telecommunications and cyber security issues.
- **Budapest Convention on Cybercrime:** It is an international treaty that seeks to address Internet and computer crime (cybercrime) by harmonizing national laws, improving investigative techniques, and increasing cooperation among nations. It came into force on 1st July 2004.
 - **India is not a signatory** to this convention.

Types of Cyber Attacks

- **Malware:** It is short for malicious software, refers to any kind of software that is designed to cause damage to a single computer, server, or computer network. Ransomware, Spy ware, Worms, viruses, and Trojans are all varieties of malware.

- **Phishing:** It is the method of trying to gather personal information using deceptive e-mails and websites.
- **Denial of Service attacks:** A Denial-of-Service (DoS) attack is an attack meant to shut down a machine or network, making it inaccessible to its intended users.
 - DoS attacks accomplish this by flooding the target with traffic, or sending it information that triggers a crash.
- **Man-in-the-middle (MitM) attacks:** Also known as eavesdropping attacks, occur when attackers insert themselves into a two-party transaction.
 - Once the attackers interrupt the traffic, they can filter and steal data.
- **SQL Injection:** SQL stands for **Structured Query Language**, a programming language used to communicate with databases.
 - Many of the servers that store critical data for websites and services use SQL to manage the data in their databases.
 - A SQL injection attack specifically targets such kinds of servers, using malicious code to get the server to divulge information it normally wouldn't.
- **Cross-Site Scripting (XSS):** Similar to an SQL injection attack, this attack also involves injecting malicious code into a website, but in this case the website itself is not being attacked.
 - Instead the malicious code the attacker has injected, only runs in the user's browser when they visit the attacked website, and it goes after the visitor directly, not the website.
- **Social Engineering:** It is an attack that relies on human interaction to trick users into breaking security procedures in order to gain sensitive information that is typically protected.

Hubble Space Telescope

Why in News

NASA has returned the science instruments on the **Hubble Space Telescope (HST)** to operational status, almost a month after suspending their work due to trouble with its payload computer.

Key Points

- **About:**
 - It is **named after the astronomer Edwin Hubble**.

Note:

- The observatory is the **first major optical telescope** to be placed in space and has made groundbreaking discoveries in the field of astronomy since its launch (into **Low Earth orbit** in 1990).
 - It is said to be the “most significant advance in astronomy since **Galileo’s telescope**.”
- It is a part of **NASA’s Great Observatories Program** - a family of four space-based observatories, each observing the Universe in a different kind of light.
 - The other missions in the program include the visible-light **Spitzer Space Telescope**, **Compton Gamma-Ray Observatory (CGRO)**, and the **Chandra X-Ray Observatory (CXO)**.
- **Large and Versatile:**
 - It is larger than a school bus in size (13.3 meters), and has a 7.9 feet mirror.
 - It **captures images of deep space** playing a major role in helping astronomers understand the universe by observing the most distant stars, galaxies and planets.
- **Data Open to People:**
 - NASA also allows **anyone from the public to search the Hubble database for which new galaxy it captured**, what unusual did it notice about our stars, solar system and planets and what patterns of ionised gases it observed, on any specific day.
- **Important Contribution of HST:**
 - **Expansion of the Universe was accelerating (1990s)**, this in turn led to a conclusion that most of the cosmos was made up of mystery “stuff” called **dark energy**.
 - **Snapshot of Southern Ring Nebula (1995)**, it showed two stars, a bright white star and a fainter dull star at the centre of the nebula where the dull star was indeed creating the whole **nebula**.
 - **Collusion of two dwarf galaxies (1998)** one of which is I Zwicky 18. This led to the **formation of a new Star**.
 - **Colourful patterns of gases** in a black hole powered galaxy known as the ‘**Circinus Galaxy**’(1999).
 - **Collision between two galaxies UGC 06471 and UGC 06472 (2000)**.
 - **Snapshot of Neptune (2011)**: The image of the most distant planet revealed the formation of high-altitude clouds composed of methane ice crystals.
- The **disc surrounding a star ‘Beta Pictoris’**, which was discovered in 1984, was found to be constituted by two planets, light-scattering dust and debris in 2012.
- It **captured the ‘Galaxy Cluster Abell 2744’** in 2013. It is 3.5 billion light-years away and has several clusters of small galaxies in it.
 - It also poses a strong gravitational field which acts as a lens to reflect the light of almost 3,000 background galaxies.
- Captured an **encounter of a comet named C/2013 A1 with Mars in 2014**.
 - The ‘**Comet Siding Spring**’ passed with a distance of just 87,000 miles to that of Mars.
- The ‘**Gum 29**’, a **vibrant stellar** being ground, which is 20,000 light-years away, consisting of a giant cluster of 3,000 stars was captured in 2014.
 - This behemoth cluster of stars is called ‘**Westerlund 2**’.
- Captured the **disintegration of an ancient comet 332P/Ikeya-Murakami** in 2016.
- The **Triangulum Galaxy was snapped** depicting the specific areas of star birth with a bright blue light spreading across the galaxy in beautiful nebulas of hot gas.
- Picture of ‘**Galaxy ESO 243-49**, which had a **medium-sized black hole** in 2012.
 - The 20,000 suns sized black hole was positioned on a glacial plane of the galaxy.
- **Successor of HST:**
 - A successor to Hubble, the **James Webb Space Telescope (JWST)**, is scheduled to launch later this year.
 - But many astronomers hope that the two will be able to operate alongside each other - at least for some period of time.

James Webb Space Telescope

- The James Webb Space Telescope (also called JWST or Webb) will be a large infrared telescope with a 6.5-meter primary mirror.
- The telescope will be launched on an Ariane 5 rocket from **French Guiana in 2021**.
- It will study every phase in the history of our Universe, ranging from the first luminous glows after the Big Bang, to the formation of solar systems capable of

Note:



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supporting life on planets like Earth, to the evolution of our own Solar System.

- Webb is an **international collaboration between NASA, the European Space Agency (ESA), and the Canadian Space Agency (CSA).**

Nauka Module of Russia

Why in News

Recently, the **Russian Space Agency Roscosmos, launched its biggest space laboratory named Nauka to the International Space Station (ISS).**

International Space Station

- ISS is a habitable artificial satellite - the **single largest man-made structure in low earth orbit.**
- It is a collaborative effort between **five participating space agencies: NASA** (National Aeronautics and Space Administration), **Roscosmos (Russia)**, **JAXA (Japan)**, **ESA (Europe)** and **CSA (Canada).**
- A space station is **essentially a large spacecraft that remains in low-earth orbit for extended periods of time.**
- It is like a large laboratory in space, and allows astronauts to come aboard and stay for weeks or months to carry out experiments in microgravity.

Other Space Stations

- **China** has launched an unmanned module **"Tianhe"** of its permanent space station that it plans to complete by the end of 2022.
- **India** is also planning to launch its **own space station by 2030**, joining the league of US, Russia, and China to an elite space club.
- Earlier, **four astronauts were launched to the ISS from Florida** as part of a **collaboration between NASA and**

SpaceX under the Commercial Crew Program. The mission is called **Crew-2.**

Key Points

➤ About Nauka Module:

- Nauka **means Science** in Russian. This is **Russia's most ambitious research facility in space** and is fitted with an oxygen generator, robotic cargo crane, a toilet and a bed for Russian astronauts.
- This was **sent into orbit using a Proton rocket** (family of rockets in Russia - the most powerful in Russia's space inventory) and will **take eight days to reach the ISS.**
 - During this period, engineers and flight controllers will test Nauka in space, and prepare for its arrival on the space station.
- It will **replace Pirs**, and **will be attached to the critical Zvezda module**, which provides all of the space station's life support systems and serves as the structural and functional centre of the Russian Orbital Segment (ROS).
 - **Pirs** has been part of the space station since September 2001, functioning as a docking port for Russian visiting spacecraft and an airlock for Russian spacewalks.

➤ Significance:

- It will **increase the habitable volume of the ISS to 70 cubic Metres.** Cosmonauts will use the extra space to conduct experiments and to store cargo.
- Nauka will serve as a **new science facility, docking port, and spacewalk airlock for future operations.**
- For more than 20 years, people **have been carrying out research under microgravity conditions** which is not possible on earth, this module will help augment the ongoing research.
 - Research is being carried out in various disciplines such as, biology, human physiology, and physical, material and space science.



Note:

Environment and Ecology

Highlights

- Sutlej River Pollution
- International Tiger Day
- Gross Environment Product (GEP)
- G20 Energy and Climate Meet
- Earth Overshoot Day, 2021
- Supreme Court Dismisses Plea Against Ban On Firecrackers
- Genome of Salt-secreting Mangrove Species Decoded
- New Initiatives in Building Energy Efficiency
- Changing Landscape of Alps: Europe
- Roadmap for India's Offshore Wind Energy
- New Gecko Species: Odisha
- Amazon Forests: No Longer Carbon Sinks
- India's Forest Cover & Wasteland

Sutlej River Pollution

Why in News

The pollution in river Sutlej has posed serious health threats to the people living around the **Indira Gandhi Canal**.

- The **National Green Tribunal (NGT)** has directed Punjab and Rajasthan governments to submit quarterly compliance reports to **Jal Shakti ministry** about remedial action being taken to curb the inflow of effluent discharge into the **Satluj** and **Beas**.

Key Points

- **Source of Sutlej's Pollution:**
 - **Three Major Sources Polluting the Buddha Nallah:** **Buddha Nallah (Tributary)** is a major source of pollution in the river Sutlej.
 - **Untreated sewage waste** from Ludhiana city sewage treatment plants (STP).
 - Untreated industrial effluents from **dyeing units and outlets** that directly release sewage and industrial waste into the stream.
 - **Small-scale industries** like units on **electroplating, hosiery, steel rolling mills**, etc mainly contribute to the wastewater in the nallah.
 - **High Biological Oxygen Demand (BOD):** Buddha Nallah contributes about 16,672 kilogram a day of **BOD load** and **East Bein (a rivulet in Doaba in Punjab)** contributes about 20,900 kg / day of BOD load.

- The more organic matter there is (e.g., in sewage and polluted bodies of water), the greater the BOD; and the greater the BOD, the lower the amount of dissolved oxygen available for higher animals such as fishes.

- **Leather Industry:** Another **seasonal rivulet, Chitti Bein** and its **sub-drain, Kala Sanghian drain**, in the Jalandhar district are equally responsible for high pollution in the Sutlej river.

- The untreated discharge from Jalandhar's leather goods industry is one of the major reasons behind Chitti Bein's pollution.

➤ Component of Pollutants:

- Traces of **chromium** and **arsenic** can be found in the Sutlej after the confluence of Buddha Nallah.
- Prevalence of **mercury, lead, chromium, cadmium** and **selenium** in more than permissible limits (MPL) in the groundwater and surface water in and around drains like Buddha Nallah, Chitti Bein and Kala Sanghian.
- **Heavy metals** and **pesticides** were also detected in fodder, vegetable, milk, urine and blood samples.

➤ Impact on Indira Gandhi Canal:

- The **Indira Gandhi Canal** is the **longest canal** in the country.
 - It starts from **Harika Barrage**, a few kilometres below the confluence of the Satluj and Beas rivers in Punjab, flows through Ludhiana and terminates in the **Thar Desert** in northwest Rajasthan.

Note:

- The canal is a **source of drinking and irrigation** in the north and western Rajasthan.
 - It provides water to 1.75 crore people living in 7,500 villages across eight districts in the state.
- The water in the Indira Gandhi canal has apparently turned black due to the presence of pollutants in it.
 - The pollution has caused several health complications among people such as skin diseases, gastroenteritis, indigestion and loss of eyesight.

Sutlej River

- The ancient name of Sutlej River is **Zaradros** (Ancient Greek) **Shutudri or Shatadru** (Sanskrit).
- It is the longest of the five tributaries of the **Indus River** that give the Punjab (meaning "Five Rivers") its name.
- Jhelum, Chenab, Ravi, Beas and Sutlej are main tributaries of Indus.
- It rises on the north slope of the Himalayas in **Lake La'nga** in **southwestern Tibet**.
 - Flowing northwestward and then west-southwestward through Himalayan gorges, it enters and crosses Himachal Pradesh before beginning its flow through the Punjab plain near Nangal.
 - Continuing southwestward in a broad channel, it receives the Beas River (and forms 65 miles (105 km) of the India-Pakistan border before entering Pakistan and flowing another 220 miles (350 km) to join the Chenab River west of Bahawalpur.
 - Sutlej River meets the Beas River in **Harike** in the **Ferozpur district** before entering Pakistan.
 - The combined rivers then form the Panjnad, the link between the Five Rivers and the Indus.
- **Luhri Stage-I Hydro Electric Project** is located on River Sutlej in Shimla and Kullu districts of Himachal Pradesh.



International Tiger Day

Why in News

Recently, at the virtual meeting celebrating **International Tiger Day (29th July)**, Prime Minister of India reiterated India's commitment to ensuring safe habitats for its tigers and nurturing tiger-friendly eco systems.

- Also, at this meeting, **14 Tiger Reserves in India** received the **accreditation of the Global Conservation Assured | Tiger Standards (CA|TS)**.

Key Points

- 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.
- 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.
 - Further, the significance of Tiger conservation can be reflected by the **Status of Leopards, Co-predators and Megaherbivores-2018' report**.
 - According to the report, the overall leopard population in the tiger range landscape of India in 2018 was estimated at 12,852.
 - This is a **significant increase** from the 2014 figure that was 7,910 in forested habitats of 18 tiger bearing states of the country.

Note:

- The report is a testimony to the fact that conservation of tigers leads to the conservation of the entire ecosystem.

➤ Tiger Conservation Projects in India:

- **Project Tiger 1973:** Project Tiger is a **Centrally Sponsored Scheme** of the Ministry of Environment, Forests and Climate Change (MoEFCC) launched in 1973. It provides havens for tigers in the country's national parks.
- **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.

➤ India's Tiger Conservation Status:

- India is home to over **70% of the tiger population globally**.
- India is home to **51 tiger reserves** spread across 18 states and the last **tiger census of 2018** showed a rise in the tiger population.
- India achieved the target of doubling the tiger population **four years ahead of schedule (2022)** of the **St. Petersburg Declaration** on tiger conservation.
- India's strategy of tiger conservation attaches topmost importance to **involving local communities**.



➤ Conservation Assured | Tiger Standards (CA|TS):

- CA|TS has been agreed upon as an accreditation tool by the **global coalition of Tiger Range Countries (TRCs)** and has been developed by tiger and protected area experts.

- There are currently **13 tiger range countries** - India, Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.

- CA|TS is a **set of criteria** which allows tiger sites to check if their management will lead to successful tiger conservation.
- It was officially launched in 2013.
- The **Global Tiger Forum (GTF)**, an international NGO working on tiger conservation, and **World Wildlife Fund India** are the two implementing partners of the **National Tiger Conservation Authority** for CATS assessment in India.
- 14 Tiger Reserves which have been accredited are:
 - **Manas, Kaziranga** and **Orang Tiger Reserve** in Assam,
 - **Satpura, Kanha** and **Panna Tiger Reserve** in Madhya Pradesh,
 - **Pench Tiger Reserve** in Maharashtra,
 - **Valmiki Tiger Reserve** in Bihar,
 - **Dudhwa Tiger Reserve** in Uttar Pradesh,
 - **Sunderbans Tiger Reserve** in West Bengal,
 - **Parambikulam Tiger Reserve** in Kerala,
 - **Bandipur Tiger Reserve** of Karnataka
 - **Mudumalai** and **Anamalai Tiger Reserve** in Tamil Nadu.

Gross Environment Product (GEP)

Why in News

Recently, the **Uttarakhand government** has announced that it will **initiate valuation of its natural resources** in the form of '**Gross Environment Product**' (GEP).

- It is along the lines of **Gross Domestic Product (GDP)**. GDP gives the **economic output** from the consumers' side. It is the **sum of private consumption, gross investment in the economy, government investment, government spending and net foreign trade** (the difference between exports and imports).

Key Points

➤ About GEP:

- It was established back in **1997** by ecological economists like **Robert Costanza at the global level**.

Note:



drishti

- It is an **assessment system to measure ecological status**.
- It is considered as the **product and service value that the ecosystem provides for human welfare and economic and social sustainable development**, including provisioning, regulating and cultural ecosystem services.
- Overall, GEP accounts for the economic value of the ecosystem in providing products and services, and it is one of the **components of green GDP**.
 - Green GDP is an **indicator of economic growth with environmental factors taken into consideration** along with the standard GDP of a country. It factors **biodiversity losses and costs attributed to climate change**.
- The term **“ecosystem services”** was coined in 1981 to attract academics towards this aspect, its definition is still in the process of evolution.
- Ecosystems that can be measured include **natural ecosystems** such as forests, grassland, wetland, desert, freshwater and ocean, and **artificial systems** that are based on natural processes like farmland, pastures, aquaculture farms and urban green land, etc.

Major Ecosystem services	Providers	Receivers
Carbon sequestration	Forest management communities, national parks, forest departments	Global community
Recreation and scenic beauty	Government and forest management communities	Domestic and foreign tourists
Watershed protection	Upstream forest management communities, watershed managers	Downstream communities- local and regional
Biodiversity conservation	Local communities, forest department, national parks, farmers	Local, regional and global communities
Soil formation and replenishment of fertility	Upland farmers, local mountain communities, forest department	Downstream farmers- local and regional
Pollination	Forest managers; tree growers	Downstream Farmers
Colonization	Managers; tree growers	Government, forest growing communities, forest owners

➤ **Need:**

- Uttarakhand, through its biodiversity, gives services to the tune of **Rs 95,112 crore per year** to the nation.
- The state has over **71% area under forests**.
- It is also **home to the Himalayas** and also is the origin point of rivers like **Ganga, Yamuna and Sharada** as well as home to wildlife reserves like **Corbett and Rajaji Tiger Reserves**.
- Uttarakhand is a state which provides a lot of **environment services** and in continuity as a result of which, there is a **natural degradation in those services**.

➤ **Significance:**

- The value of ecosystem services is about **twice as much as the global GDP**. Therefore, it would **help in the conservation of the environment** and also help save us from the **effects of climate change**.

➤ **Issues:**

- The decision **appears to be a welcome step**, but going ahead with the jargon raises serious doubts on the intent of the government. It may **confuse policy makers and negate the past efforts**.
- The purpose of introducing GEP is **not transparent**.
 - Is it a process of simple valuation of a state's ecological wealth, or to assess what part of the GDP it contributes.
 - Is it an attempt to claim a budget from the centre against ecosystem services the state provides to the rest of the country and / or a process of providing benefits to its own residents.

G20 Energy and Climate Meet

Why in News

At the recent **G20 Climate Meet**, India **urged the group of 20 nations (G20)** having per capita **greenhouse gas (GHG) emissions** above the global average to **bring it down to the world average**, thereby **vacating 'some' carbon space for developing nations**.

- This will support the developmental aspirations of the developing nations.
- Presently, **Italy holds the G20 Presidency** and the Climate Meet is being seen as a **prelude to the UN Climate Change Conference of Parties (COP 26) meeting in Glasgow, Scotland in November 2021**.

Key Points

➤ **India's Stand:**

- There is a **need to cut absolute emissions rapidly** while **taking into account the Paris Agreement** which emphasized on:
 - Respective historical responsibilities,
 - Delivery of promised climate finance and technologies at low cost keeping in perspective per capita emissions,
 - Differences in per capita **GDP (Gross Domestic Product)** and
 - The unfinished agenda for **sustainable development**.

Note:

G20

- The G20 is an informal group of 19 countries and the **European Union**, with representatives of the International Monetary Fund and the World Bank.
 - The G20 membership comprises a mix of the world's largest advanced and emerging economies, representing about two-thirds of the world's population, 85% of global gross domestic product, 80% of global investment and over 75% of global trade.
 - The **members of the G20** are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the European Union.
 - It **does not have any permanent secretariat or headquarters.**
- India noted the **pledges made by some countries to achieve Net Zero GHG emissions or carbon Neutrality** by or around mid century.
 - However, this **may not be adequate** in view of fast depleting available carbon space.
 - **Keeping in view the legitimate need of developing countries to grow**, it urged G20 countries to commit to **bringing down per capita emissions to Global average by 2030.**
 - **Carbon neutrality** means having a balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks.
 - **Carbon space** is the amount of carbon (or CO₂) that can be put into the atmosphere without this leading to a level of warming—or underlying concentrations of CO₂—that can be considered dangerous or otherwise undesirable.
 - **Stressed on Common But Differentiated Responsibilities (CBDR)** to combat climate change.
 - Mentioned its plans of installing **450 GW (Giga Watt) of RE (Renewable Energy)** by 2030, enhanced ambitions in **bio-fuels, India's NDCs (Nationally Determined Contributions)** and various other initiatives taken by India on Urban Climate Action.
 - **India's initiatives under Urban Climate Action:**
 - **Climate Smart Cities Assessment Framework (CSCAF): CSCAF initiative** intends to inculcate a climate-sensitive approach to urban planning and development in India.

Common But Differentiated Responsibilities (CBDR)

- **Common But Differentiated Responsibilities (CBDR)** is a principle within the United Nations Framework Convention on Climate Change (UNFCCC).
- It acknowledges different capabilities and differing responsibilities of individual countries in addressing climate change.
- The principle of 'common but differentiated responsibility' evolved from the notion of the '**common heritage of mankind**'.
- The principle of CBDR is enshrined in **Earth Summit 1992, held in Rio de Janeiro, Brazil.**
- CBDR is based on **two elements of responsibilities:**
 - One is the **common responsibility** of all the states to cater to the **concerns of environmental protection and sustainable development.**
 - Another is of **differentiated responsibility enabling the states to act, for environment protection**, in their national capacity and as per their national priority.
- The principle recognizes **historical differences in the contributions of developed and developing States** to global environmental problems and differences in their respective economic and technical capacity to tackle these problems.
 - To provide a clear roadmap for cities towards combating Climate Change while planning and implementing their actions, including investments.
- **National Mission on Sustainable Habitat** is one of the eight missions under **national climate change action plan** and aims to make cities sustainable through improvements in energy efficiency in buildings, management of solid waste & shift to public transport.
- **Climate Practitioners India Network (CPIN):** It is first-of-its-kind network developed by **Climate Centre for Cities (C-Cube)** to support Cities and Practitioners across India.
 - C-Cube wants to create a platform for Climate Practitioners across all cities in India to collaborate and contribute towards implementing Climate Actions.
- **Urban Forestry:** The government of India in 2020 launched the **Nagar Van Scheme**. The Nagar Van (Urban Forests) aims to develop 200 Urban Forests across the country in the next five years.

Note:



- Urban forestry is defined as the planting, maintenance, care and protection of tree populations in urban settings.

➤ **India led Global Collaborations to Fight Climate Change:**

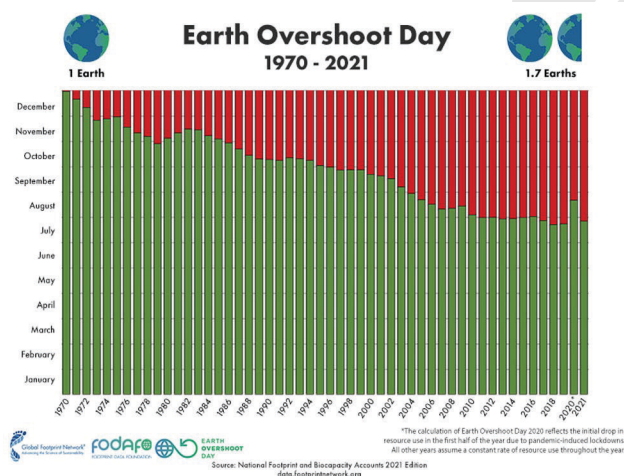
- **International Solar Alliance**
- **Coalition of Disaster Resilient Infrastructure**

Earth Overshoot Day, 2021

Why in News

According to the **World Wide Fund for Nature (WWF)**, humanity has again **used up all biological resources that our planet regenerates** during the entire year **by 29th July, 2021**.

- **Humanity currently uses 74% more** than what the planet's ecosystems can regenerate — or 1.7 Earths.
- From Earth Overshoot Day until the end of the year, **humanity operates on ecological deficit spending**.



Key Points

- **About:**
 - The day marks the date when **humanity's demand for ecological resources (fish and forests, for instance) and services** in a given year exceeds what the Earth can regenerate in that year.
 - The **concept of Earth Overshoot Day** was first conceived by **Andrew Simms of the UK think tank New Economics Foundation**, which partnered with Global Footprint Network in 2006 to launch the first global Earth Overshoot Day campaign.

- **Global Footprint Network** is an **international non profit organization** founded in the year 2003. It's key strategy has been to make **available robust Ecological Footprint data**.

- The Ecological Footprint is a metric that comprehensively **compares human demand on nature against nature's capacity to regenerate**.

- Earth Overshoot Day is **computed by** dividing the planet's biocapacity (the amount of ecological resources Earth is able to generate that year), by humanity's Ecological Footprint (humanity's demand for that year), and multiplying by 365, the number of days in a year:

- $(\text{Earth's Biocapacity} / \text{Humanity's Ecological Footprint}) \times 365 = \text{Earth Overshoot Day}$

➤ **Causes:**

- The prime driver was the **6.6% increase in the global carbon footprint** in 2020.

- According to the **World Health Organization (WHO)**, a carbon footprint is a measure of the **impact people's activities** have on the amount of **carbon dioxide (CO₂) produced through the burning of fossil fuels** and is expressed as a weight of CO₂ emissions produced in tonnes.

- There was also a **0.5% decrease in 'global forest biocapacity'** due to a rise in **deforestation of the Amazon's rainforests**.

- Some **1.1 million hectares of rainforest were lost in Brazil alone**, which is home to the largest swathe of Amazonian rainforest.

➤ **Predictions:**

- Even worse, there would be a **43% year-over-year increase in deforestation in 2021**.

- The **carbon footprint of transportation** will be **lower this year** than pre-pandemic levels.

- CO₂ emissions **from road transport and domestic air travel** will be 5% below 2019 levels.
- CO₂ emissions due to **international aviation** will be 33% below 2019 levels.

- But **global energy-related CO₂ emissions** will **increase 4.8% from last year** as economies try to recover from the **impact of Covid-19**.

- **Global coal use** is estimated to constitute **40% of the total carbon footprint**.

➤ **Suggestions:**

Note:

- A business-as-usual scenario will simply not work if the date for World Overshoot Day is to be pushed behind.
- A number of measures can be taken such as **cutting down on food wastage, commercial technologies for buildings, industrial processes and electricity production and cutting down on transportation.**
- **Related Global Initiatives:**
 - **The Conference of the Parties (COPs):**
 - For nearly three decades the **United Nations (UN)** has been bringing together almost **every country on earth for global climate summits** called COPs.
 - In that time **climate change** has gone from **being a fringe issue to a global priority.**
 - This year will be the **26th annual summit** – giving it the name **COP26** will take place in **Glasgow, UK.**
 - **Paris Agreement:**
 - It is a legally binding **international treaty on climate change.** It was adopted by 196 Parties at COP 21 in Paris in December 2015 and entered into force in November 2016.
 - Its goal is to limit **global warming to well below 2, preferably to 1.5 degrees Celsius,** compared to pre-industrial levels.
- **Some Indian Initiatives:**
 - **National Clean Air Programme (NCAP)**
 - **Bharat Stage-VI (BS-VI) emission norms**
 - **UJALA scheme**
 - **National Action Plan on Climate Change (NAPCC)**

Supreme Court Dismisses Plea Against Ban On Firecrackers

Why in News

Recently, the Supreme Court has dismissed appeals challenging the **National Green Tribunal's (NGT) order** which had imposed a complete ban on the sale and use of all firecrackers during the Covid-19 pandemic in NCR and other cities in India.

- The order was given in the context of a poor **Air Quality Index (AQI)**, owing to the burning of crackers.

Key Points

- **Background:**

- In 2017, the Supreme court had **banned the use and sale of toxic crackers** during the **celebration owing to diwali, Christmas, etc.,** on the basis of a petition filed by two infants.
 - They had said the air pollution caused by various factors, especially firecrackers, had made **Delhi a gas chamber.**
 - They pleaded for their **right to life.**
- The court **dismissed arguments** that **bursting crackers was a fundamental right** and an essential practice during religious festivals like Diwali.
 - The court held that the **Right to Freedom of Religion (Article 25) is subject to Right to life (Article 21).**
 - If a particular religious practice is threatening the health and lives of people, such practice is not entitled to protection under Article 25.
- **NGT Order:**
 - The NGT in its December 2020 order said that only **green crackers** (which use less polluting raw materials) would be permitted for Christmas and New Year, in areas where the ambient air quality was in the moderate or below categories.
 - However, owing to **Covid-19 pandemic**, NGT again prohibited the sale and use of firecrackers.
 - The firecrackers companies argued that the ban was an impediment to their livelihoods.
 - In reply to the argument, the Tribunal had reasoned that the **"right to business is not absolute (Article 19 (1) (g)) and there is no right to violate air quality and noise level norms.**
- **Harmful Effects of Crackers:**
 - Firecrackers contain lots of **heavy metals and toxic chemicals** like cadmium, lead, chromium, aluminium, magnesium, nitrates, carbon monoxide, copper, potassium, sodium, zinc oxide, manganese dioxide etc.
 - These chemicals, if inhaled or ingested, can cause **severe effects in the health of people** like heart diseases, respiratory or nervous system disorders.
 - Further, **noise pollution** causes restlessness, temporary or permanent hearing loss, high blood pressure; sleep disturbance and even poor cognitive development in kids.

Note:

Genome of Salt-secreting Mangrove Species Decoded

Why in News

Recently, the scientists for the first time have decoded the reference-grade whole **genome sequence** of a highly salt-tolerant and salt-secreting mangrove species, *Avicennia marina*.

- This study was led by the **Department of Biotechnology (DBT)-Institute of Life Sciences, Bhubaneswar**.

Key Points

- **Avicennia Marina:**
 - It is **one of the most prominent mangroves species** found in all mangrove formations in India.
 - It is a **salt-secreting and extraordinarily salt-tolerant mangrove** species that grows optimally in 75% seawater and tolerates >250% seawater.
 - It is **among the rare plant species, which can excrete 40% of the salt** through the salt glands in the leaves, besides its extraordinary capacity to exclude salt entry to the roots.
 - It is also **referred to as grey mangrove or white mangrove**.
- **Significance of Study:**
 - This study assumes significance as **agriculture productivity globally is affected due to abiotic stress factors** such as limited water availability and salinization of soil and water.
 - Availability of water is a significant challenge to crop production in dryland areas, accounting for 40% of the world's total land area.
 - Salinity is prevalent in 900 million hectares globally (with an estimated 6.73 million ha in India), and it is estimated to cause an annual loss of 27 billion USD.
 - The genomic resources generated in the study **will pave the way for researchers to study the potential of the identified genes for developing drought and salinity tolerant varieties** of important crop species of the coastal region that is significant for India with 7,500 m of coastline and two major island systems.

Mangrove

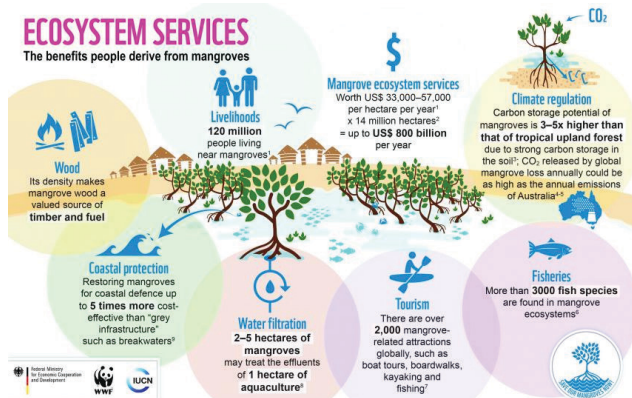
- **About:**
 - A mangrove is a **small tree or shrub that grows along coastlines**, taking root in salty sediments, often underwater.
 - The word 'mangrove' **may refer to the habitat as a whole or to the trees and shrubs** in the mangrove swamp.
 - Mangroves are **flowering trees, belonging to the families** Rhizophoraceae, Acanthaceae, Lythraceae, Combretaceae, and Arecaceae.
- **Features of Mangroves:**
 - **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. Hence the mangrove root system absorbs oxygen from the atmosphere.
 - Mangroves have special roots for this purpose called **breathing roots or pneumatophores**.
 - These roots have numerous pores through which oxygen enters the underground tissues.
 - **Succulent leaves:** Mangroves, like desert plants, store fresh water in thick succulent leaves.
 - A waxy coating on the leaves seals in water and minimises evaporation.
 - **Viviparous:** Their seeds germinate while still attached to the parent tree. Once germinated, the seedling grows into a propagule.
 - The mature propagule then drops into the water and gets transported to a different spot, eventually taking root in a solid ground.
- **Threat:**
 - **Constructions:** At least one third of all mangrove forests has been lost during the last few decades. Coastal development, including construction of shrimp farms, hotels, and other structures, is the primary threat to mangroves.
 - Mangrove forests are cleared to make room for agricultural land and human settlements.
 - **Overharvesting:** Mangrove trees are used for firewood, construction wood, charcoal production, and animal fodder.

Note:

- In some parts of the world, there has been overharvesting which is no longer sustainable.
- **Others:** Overfishing, pollution, and rising sea levels are the other threats to mangrove forests and their ecosystem.

➤ **Area Covered:**

- **Global:** Mangroves can be found in over 118 countries and territories in the **tropical and subtropical regions** of the world.
- **Asia** has the **largest coverage of the world's mangroves**, followed by Africa, North and Central America, Oceania and South America.
- Approximately 75% of the world's mangrove forests are found in just 15 countries.
- **India:**
 - According to the **State of Forest Report 2019**, **mangrove cover** in the country is 4,975 sq km, which is **0.15%** of the country's total geographical area.
 - Mangrove cover in the country **has increased by 54 sq km (1.10%)** as compared to the previous assessment (2017).
 - The deltas of the **Ganges, Mahanadi, Krishna, Godavari**, and the **Cauvery** rivers contain mangrove forests.
 - The **backwaters in Kerala** have a high density of mangrove forest.
 - The **Sundarbans** in West Bengal is the largest mangrove region in the world and a **UNESCO World Heritage Site**.
 - It spans from the **Hooghly River** in West Bengal to the **Baleswar River** in Bangladesh.
 - The **Bhitarkanika mangrove system** in Odisha is India's second largest mangrove forest.



- **Pichavaram in Tamil Nadu** has a vast expanse of water covered with mangrove forests. It is home to many aquatic bird species.
- **West Bengal** has **42.45%** of **India's mangrove cover**, followed by Gujarat 23.66% and A&N Islands 12.39%.

New Initiatives in Building Energy Efficiency

Why in News

Recently, “**Aiming for Sustainable Habitat: New Initiatives in Building Energy Efficiency 2021**” was launched by the **Bureau of Energy Efficiency (BEE)**.

- These initiatives **seek to enhance energy efficiency in the building sector** and were launched as part of ‘**Azadi Ka Amrut Mahotsav**’.

Bureau of Energy Efficiency

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

Key Points

- **Initiatives Launched:**
 - **Eco Niwas Samhita 2021:**
 - It is an **Energy Conservation Building Code for Residential Buildings (ECBC-R)** to give a further fillip to India's energy conservation efforts.
 - It specifies code compliance approaches and minimum energy performance requirements for building services, and verification framework with **Eco Niwas Samhita 2021**.
 - **Hand Book for Learning:**
 - The web-based platform ‘**The Handbook of Replicable Designs for Energy Efficient Residential Buildings**’ as a learning tool, which can be used to create a pool of ready-to-use resources of replicable designs to construct energy-efficient homes in India.

Note:

- **Online Directory of Building Materials:**
 - Creating an Online Directory of Building Materials that **would envisage the process of establishing standards for energy efficient building materials.**
- **NEERMAN Awards:**
 - **NEERMAN Awards**, (National Energy Efficiency Roadmap for Movement towards Affordable & Natural Habitat) were announced, with the **goal of encouraging exceptionally efficient building designs** complying with BEE's Energy Conservation Building Codes.
- **Online Star Rating Tool:**
 - It **provides performance analysis to help professionals** decide the best options to pick for energy-efficiency of their homes.
 - It was launched for **Energy Efficient Homes**, created to improve energy-efficiency and reduce energy consumption in individual homes.
- **Training:**
 - Training of over 15,000 Architects, Engineers and Government officials on **Energy Conservation Building Code (ECBC) 2017** and **Eco Niwas Samhita 2021.**
- **Significance:**
 - The **building sector is the second largest consumer of electricity** after industry but it is expected to become the **largest energy consuming sector by 2030.**
 - These initiatives will **help enhance the energy-efficiency levels in residential buildings across the country**, thereby leading to sustainable habitation.
 - The initiatives will go a long way to **make India more energy-efficient.**

Energy Efficiency in India

- **Energy Efficiency:**
 - Energy efficiency means **using less energy to perform the same task** – that is, **eliminating energy waste.**
 - Energy efficiency **brings a variety of benefits:** reducing **GreenHouse Gas (GHG)** emissions, reducing demand for energy imports, and lowering our costs on a household and economy-wide level.
- **Transition:**
 - India's energy sector is set for a transition with recent developmental ambitions of the government

e.g. **175 GW of installed capacity of renewable energy by 2022**, 24x7 Power for all, **Housing for all by 2022**, 100 **smart cities mission**, promotion of e- mobility, electrification of railway sector, 100% electrification of households, Solarization of agricultural pump sets, and promotion of clean cooking.

➤ **Potential of Energy Efficiency:**

- Energy Efficiency **has the maximum GHG abatement potential** of around 51% followed by renewables (32%), biofuels (1%), nuclear (8%), carbon capture and storage (8%) as per the **World Energy Outlook (WEO 2010).**
 - World Energy Outlook (WEO) is the flagship publication of the **International Energy Agency.**
- India can **avoid building 300 GW of new power generation up to 2040** with implementation of ambitious energy efficiency policies.

➤ **Positives:**

- Successful implementation of Energy Efficiency Measures contributed to electricity **savings of 7.14% of total electricity consumption of the country** and **emission reduction of 108.28 million tonnes of CO₂ during 2017-18.**

➤ **Other initiatives to Promote Energy Conservation and Energy Efficiency:**

- **PAT Scheme:**
 - **Perform Achieve and Trade Scheme (PAT)** is a market based mechanism to enhance the cost effectiveness in improving the Energy Efficiency in Energy Intensive industries through certification of energy saving which can be traded.
 - It is a part of the National Mission for Enhanced Energy Efficiency (NMEEE), which is one of the eight missions under the **National Action Plan on Climate Change (NAPCC).**
- **Standards and Labeling:**
 - The scheme was **launched in 2006** and is currently invoked for equipments/appliances Room Air Conditioner (Fixed/VariableSpeed), Ceiling Fan, Colour Television, Computer, Direct Cool Refrigerator, Distribution Transformer, Domestic Gas Stove, General Purpose Industrial Motor, LED Lamps, Agricultural Pumpset, etc.
- **Energy Conservation Building Code (ECBC):**
 - It was developed for **new commercial buildings in 2007.**

Note:

- It sets **minimum energy standards for new commercial buildings** having a connected load of 100kW (kilowatt) or contract demand of 120 KVA (kilovolt-ampere) and above.
- **Demand Side Management:**
 - DSM is the **selection, planning, and implementation of measures** intended to have an influence on the demand or customer-side of the electric meter

Changing Landscape of Alps: Europe

Why in News

A recent study by the **ETH technical university in Zurich, Switzerland** shows that **climate change** has dramatically altered the **Swiss Alp landscape**.

Key Points

- **Important Findings:**
 - Melting **glaciers** have **created more than 1,000 new lakes** across the mountains.
 - The inventory of Swiss Glacial lakes showed that almost **1,200 new lakes have formed in formerly glaciated regions of the Swiss Alps** since the end of the Little Ice Age around 1850 and around **1,000 of them still exist today**.
 - Glaciers in the **Swiss Alps are in steady decline**, losing a full 2% of their volume last year alone.



- Even if the world were to fully implement the **2015 Paris Agreement**, two-thirds of the Alpine glaciers will likely be lost.

- The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, in December 2015.

➤ Alps:

- **About:**
 - The Alps **emerged during the Alpine orogeny** (mountain-building event), an event that began about **65 million years** ago as the **Mesozoic Era** was drawing to a close.
 - Alps are **young fold mountains** with rugged relief and high conical peaks.
 - They are the **most prominent of western Europe's physiographic regions**. Some **750 miles long** and more than **125 miles wide** at their broadest point between Garmisch-Partenkirchen, Germany, and Verona, Italy, the **Alps cover more than 80,000 square miles**.
 - The Alps extend north **from the subtropical Mediterranean coast** near Nice, France, **to Lake Geneva before trending east-northeast to Vienna, Austria**. There they touch the **Danube River** and meld with the adjacent plain.
 - Because of their **arclike shape**, the Alps **separate the marine west-coast climates of Europe from the Mediterranean areas of France, Italy, and the Balkan region**.
- **Countries Covered:**
 - The Alps form part of **France, Italy, Switzerland, Germany, Austria, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, and Albania**.
 - Only **Switzerland and Austria** can be considered **true Alpine countries**.
- **Important Peaks:**
 - **Mont Blanc** is the highest peak in the Alps and in Europe, reaching a lofty 4,804 meters above sea level. It is located in the Graian Alps and lies within France, Switzerland, and Italy.
 - **Monte Rosa** is a massif (a compact group of mountains) consisting of several peaks. The highest peak in this range (**Dufourspitze**) has an elevation of 4,634 meters, claiming the title of **Switzerland's highest peak**.

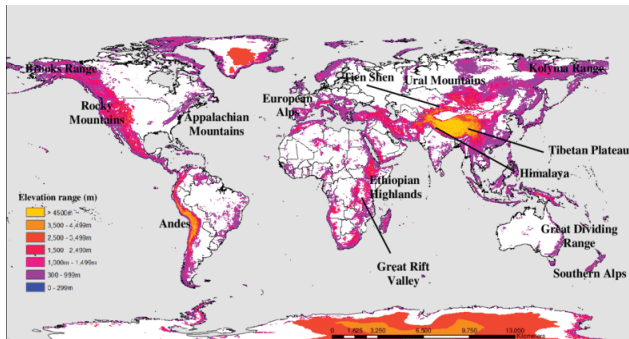
Note:



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- **Dom**, which is located near Monte Rosa, Dom stands at **4,545 meters** and is known as one of the “easier” tall peaks in the Alps to summit because of its **straightforward routes**.
- **Other** major peaks are Liskamm, Weisshorn, Matterhorn, Dent Blanche, Grand Combin etc.

Major Mountain Ranges of the World



Roadmap for India's Offshore Wind Energy

Why in News

Recently, the **Ministry of New and Renewable Energy (MNRE)** has set a target of installing 5 GW of offshore capacity by 2022 and 30 GW by 2030.

- India can generate 127 GW of offshore wind energy with its 7,600 km of coastline.

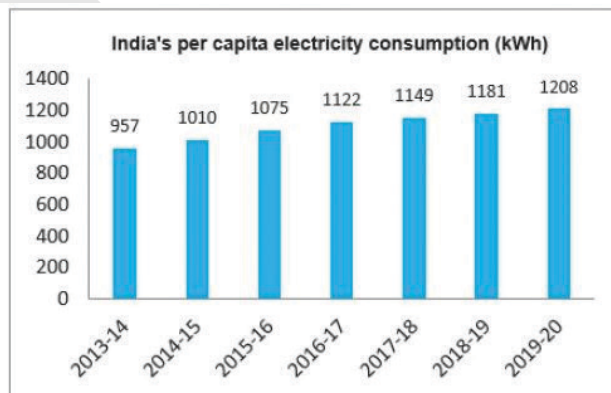
Key Points

- **About Offshore Wind Energy:**
 - **Wind energy** today typically comes in **two different “types”**: **onshore wind farms** which are large installations of **wind turbines located on land**, and **offshore wind farms** which are **installations located in bodies of water**.
 - Offshore wind energy refers to the **deployment of wind farms inside the water bodies**. They utilise the sea winds to generate electricity. These wind farms either use fixed-foundation turbines or floating wind turbines.
 - A **fixed-foundation turbine is built in shallow water**, whereas a **floating wind turbine is built in deeper waters** where its foundation is anchored in the seabed. Floating wind farms are still in their infancy.

- Offshore wind farms must be **at least 200 nautical miles** from the shore and **50 feet deep in the ocean**.
- Offshore wind turbines produce electricity which is **returned to shore through cables buried in the ocean floor**.

➤ Status of Wind Energy in India:

- India's **electricity generation from wind reached 39.2 gigawatts (GW) a year** in March 2021. An addition of **another 20 GW** over the next five years is expected to happen soon.
- The **compound annual growth rate for wind generation** has been **11.39% between 2010 and 2020**, and for installed capacity, it has been **8.78%**.
- More than 95% of commercially exploitable resources are **located in seven states**: Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu.



Source: Central Electricity Authority

➤ Benefits:

- Wind speed **over water bodies is high** and is consistent in direction. As a result, offshore wind farms **generate more electricity** per installed capacity.
- Fewer offshore turbines are required **to produce the same capacity** of energy as **compared to onshore ones**.
- Offshore wind farms **have a higher CUF** (capacity utilisation factor) than onshore wind farms. Therefore, offshore wind power **allows for longer operating hours**.
 - A wind turbine's CUF is equal to the average output power divided by the maximum power capabilities.
- It's **possible to build bigger and taller** offshore windmills, resulting in increased energy harvest.

Note:



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- Furthermore, the **wind flow is not restricted by hills or buildings.**
- **Challenges:**
 - **Higher Installation Cost:**
 - Local substructure manufacturers, installations vessels and **trained workers are lacking in India.** Offshore wind turbines **require stronger structures and foundations** than onshore wind farms. This **can cause higher installation costs.**
 - **Higher Maintenance Cost:**
 - The action of **waves and even high winds**, particularly during storms or hurricanes, **can damage wind turbines.** Eventually, offshore wind farms **require maintenance** that is **more costly and difficult to perform.**
- **Policies related to Wind Energy:**
 - **National Wind-Solar Hybrid Policy:** The main objective of the National Wind-Solar Hybrid Policy, 2018 is to provide a framework for promotion of large grid connected wind-solar PV hybrid systems for optimal and efficient utilization of wind and solar resources, transmission infrastructure and land.
 - **National Offshore Wind Energy Policy:** The National Offshore wind energy policy was notified in October 2015 with an objective to develop the offshore wind energy in the Indian **Exclusive Economic Zone (EEZ)** along the Indian coastline of 7600 km.

New Gecko Species: Odisha

Why in News

Recently, Odisha's forest officials have announced measures to preserve the **newly discovered tiny gecko species** of the genus **Hemiphyllodactylus**.

Key Points

- **About:**
 - This was **first spotted in Ganjam district, Odisha in 2014.** The new species of Hemiphyllodactylus minimus is the **smallest member of the genus** with a maximum body size of little over six cm.
 - It is called **Ganjam Slender Gecko.**
 - The new species is the **seventh Indian species** of the genus, the **second from the northern Eastern Ghats** and 41st globally. It is the **first non-island**



species of the genus which is distributed in lowland habitats.

- **Geckos:**
 - Geckos are reptiles and are **found on all the continents except Antarctica.** These colorful lizards have **adapted to habitats from rainforests, to deserts, to cold mountain slopes.**
 - **Most geckos are nocturnal**, which means they are active at night, but day geckos are active during the day and **depend on insects, fruits, and flower nectar.**
 - **Geckos are spread across six families:** Carphodactylidae, Diplodactylidae, Eublepharidae, Gekkonidae, Phyllodactylidae, and Sphaerodactylidae.
- **Other Species of Gecko in India:**
 - **Indian Golden Gecko** (family Gekkonidae) is native to India (Tamil Nadu, Orissa, Andhra Pradesh). It is listed in **Schedule 1 of WPA (Wildlife Protection Act).**
 - **IUCN Red List:** Least Concern (LC)
 - **Tokay Gecko** (family Gekkonidae) is widespread in the Indo-Malayan region **Protection Status:**
 - **Schedule 4** of WPA.
 - **IUCN Red List:** Least Concern (LC).

Amazon Forests: No Longer Carbon Sinks

Why in News

According to a recent study, **Amazon Forests have started emitting Carbon dioxide (CO₂)** instead of absorbing it.

Note:

- **Growing trees and plants have taken up about a quarter of all fossil fuel emissions** since 1960, with the Amazon playing a major role as the **largest tropical forest**.

Key Points

- **Findings:**
 - A **significant amount of deforestation (over the course of 40 years)** in eastern and southeastern Brazil has turned the forest into a source of CO₂ that has the ability to warm the planet.
 - It might have also **affected a long-term decrease in rainfall and increase in temperatures** during the dry season.
 - A **part of the Amazon emitting carbon even without fires** was particularly worrying. This was most likely the **result of each year's deforestation and fires making adjacent forests more susceptible** the next year.
- **Reasons for Deforestation:**
 - State policies that encourage economic development, such as railway and road expansion projects **have led to "unintentional deforestation"** in the **Amazon and Central America**.
 - Deforestation started in the **1970s and 1980s** when large-scale **forest conversion for cattle ranching and soy cultivation** began.

Amazon Rainforests

- These are **large tropical rainforests** occupying the drainage basin of the **Amazon River** and its tributaries in **northern South America**.
 - Tropical forests are **closed-canopy forests** growing within 28 degrees north or south of the equator.
 - They are **very wet places**, receiving **more than 200 cm rainfall per year**, either seasonally or throughout the year.
 - Temperatures are uniformly high - **between 20°C and 35°C**.
 - Such forests are found in Asia, Australia, Africa, South America, Central America, Mexico and on many of the Pacific Islands.
- The Amazon rainforests **cover about 80% of the Amazon basin** and they are **home to nearly a fifth of the world's land species** and is also **home to about 30 million people** including hundreds of indigenous groups and several isolated tribes.

- The Amazon basin is huge with an area covering over **6 million square kilometres**, it is **nearly twice the size of India**.
- The **basin produces about 20% of the world's flow of freshwater** into the oceans.
- Comprising about **40% of Brazil's total area**, it is bounded by the **Guiana Highlands to the north**, the **Andes Mountains to the west**, the **Brazilian central plateau to the south**, and the **Atlantic Ocean to the east**.



India's Forest Cover & Wasteland

Why in News

Recently, the Minister for Environment, Forests and Climate Change (MoEFCC) informed **Rajya Sabha** about the **forest area in the country**.

- The data provided was as per the **India State of Forest Report, 2019** that is the **16th biennial assessment of India's forests** by Forest Survey of India, Dehradun an organisation under the MoEFCC.
- Information about the **Wasteland** in the country was also provided as per the **Wasteland Atlas, 2019**.

Key Points

Note:

➤ Definition of Forest:

- The word 'forest' is not defined in any Central Forest Act, namely the **Indian Forest Act (1927)**, or the **Forest Conservation Act (1980)**.
 - The Central government has **not laid down any criterion to define forest**.
 - The Indian Forest Act, 1927 **gives states the rights to notify Reserved Forests in their areas**.
- States are responsible for determining their definition of forests; this prerogative stems from a **Supreme Court** order called the **T.N. Godavarman Thirumulpad vs the Union of India 1996** judgment.
 - In the judgement, the **Supreme Court** interpreted that the word "forest" must be understood according to its **"dictionary meaning"**.
 - This description **covers all statutorily recognised forests, whether designated as reserved, protected or otherwise**.

➤ Total Forest Area:

- The recorded forest area in the country is **7,67,419 sq km**, however the ministry has so far **not quantified the forest area that has been under dispute**.

➤ Category-Wise Forest:

- **Reserved Forests category:**
 - It is under **direct supervision of the Government**.
 - **No public entry** allowed for the commercial purpose of cattle grazing.
 - Total area under this category is **4,34,853 sq km**.
- **Protected Forests category:**
 - It is **looked after by the government**.
 - **Local people are allowed** to collect forest produce and cattle grazing without causing any serious damage.
 - Total area under this category is **2,18,924 sq km**.
- **Unprotected Forest Category:**
 - They are unclassified Forests.
 - No restriction on cutting trees or grazing cattle.
 - Total area under this category is **1,13,642 sq km**.

➤ Wasteland:

- As per the **Wasteland Atlas, 2019**, published by the Ministry of Rural Development, the **total wasteland in the country is 5,57,665.51 sq km**.
- Wasteland is defined not as desertified land, but **land that is not used for agriculture, commercial use or as forest land**.

Constitutional Provisions for Forests

- Forests are included in the **Concurrent List** in the (Seventh Schedule) of the Constitution of India.
- Through the **42nd Amendment Act, 1976** Forests and Protection of Wild Animals and Birds were transferred from State to Concurrent List.
- **Article 51 A (g)** of the Constitution states that it shall be the **fundamental duty** of every citizen to protect and improve the natural environment including forests and Wildlife.
- **Article 48 A** in the **Directive Principles of State policy**, mandates that the State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country.

Legislations

- India's forests are currently governed by the **National Forest Policy, 1988** which has environmental balance and livelihood at its centre.
- The **Scheduled Tribes And Other Traditional Forest Dwellers (Recognition Of Forest Rights) Act, 2006** recognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources, on which these communities were dependent for a variety of needs, including livelihood, habitation and other socio-cultural needs.

- For instance, it could use grasslands that are used by communities for grazing.

➤ Governments Initiatives:

- **National Mission for a Green India:**
 - It is one of the eight Missions under the **National Action Plan on Climate Change (NAPCC)**.
 - It was launched in February, 2014 with the objective **to safeguard the biological resources of our nation and associated livelihoods against the peril of adverse climate change** and to recognise the vital impact of forestry on ecological sustainability, biodiversity conservation and food-, water- and livelihood-security
- **National Afforestation Programme (NAP):**
 - It has been implemented since 2000 for the afforestation of degraded forest lands.
 - It is being implemented by the MoEFCC.
- **Compensatory Afforestation Fund Management and Planning Authority, (CAMPA Funds):**

Note:



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- Launched in 2016, **90% of the fund is to be given to the states while 10% is to be retained by the Centre.**
- The **funds can be used for** treatment of catchment areas, assisted natural generation, forest management, wildlife protection and management, relocation of villages from protected areas, managing human-wildlife conflicts, training and awareness

generation, supply of wood saving devices and allied activities.

○ **National Action Programme to Combat Desertification:**

- It was **prepared in 2001 to address issues of increasing desertification** and to take appropriate actions.
- It is implemented by the Ministry of Environment, Forest and Climate Change.



Note:

History

Highlights

- Chandra Shekhar Azad

- Tipu Sultan

Chandra Shekhar Azad

Why in News

On 23rd July, India paid tribute to the freedom fighter **Chandra Shekhar Azad** on his **birth anniversary**.

Key Points

- **Birth:** Azad was born on **23rd July 1906** in the **Alirajpur district of Madhya Pradesh**.
- **Early Life:** Chandra Shekhar, then a 15-year-old student, joined a **Non-Cooperation Movement** in December 1921. As a result, he was arrested.
 - On being presented before a magistrate, he gave his name as **"Azad" (The Free)**, his father's name as **"Swatantrata"** (Independence) and his residence as **"Jail"**.
 - Therefore, he came to be known as **Chandra Shekhar Azad**.
- **Contribution to Freedom Movement:**
 - **Hindustan Republican Association:** After the suspension of the non-cooperation movement in 1922 by Gandhi, Azad joined Hindustan Republican Association (HRA).
 - HRA was a revolutionary organization of India established in 1924 in East Bengal by revolutionaries like **Sachindra Nath Sanyal, Narendra Mohan Sen and Pratul Ganguly** as an offshoot of **Anushilan Samiti**.
 - **Members:** Bhagat Singh, Chandra Shekhar Azad, Sukhdev, Ram Prasad Bismil, Roshan Singh, Ashfaqulla Khan, Rajendra Lahiri.
 - **Kakori Conspiracy:** Most of the fund collection for revolutionary activities was done through **robberies of government property**. In line with the same, Kakori Train Robbery near Kakori, Lucknow was done in **1925 by HRA**.

- The **plan was executed** by Chandrashekhar Azad, Ram Prasad Bismil, Ashfaqulla Khan, Rajendra Lahiri, and Manmathnath Gupta.

- **Hindustan Socialist Republican Association:** HRA was later reorganised as the Hindustan Socialist Republican Army (HSRA).

- It was established in **1928** at Feroz Shah Kotla in New Delhi by Chandrasekhar Azad, Ashfaqulla Khan, **Bhagat Singh**, Sukhdev Thapar and Jogesh Chandra Chatterjee.

- HSRA planned the **shooting of J. P. Saunders**, a British Policeman at Lahore in 1928 **to avenge the killing of Lala Lajpat Rai**.

- **Death:** He died at **Azad Park in Allahabad** on 27th February 1931.

Tipu Sultan

Why in News

Recently, naming a garden on **Tipu Sultan** in Mumbai sparked a controversy.

Key Points

- **Brief Profile:**
 - Born in **November 1750**, Tipu Sultan was **Haidar Ali's son** and a great warrior, also known as the **Tiger of Mysore**.
 - He was a **well educated man** fluent in Arabic, Persian, Kanarese and Urdu.
 - Mysore had grown in strength under the leadership of powerful rulers like **Haidar Ali (ruled from 1761 to 1782)** and his famous son **Tipu Sultan (ruled from 1782 to 1799)**.
 - Tipu **introduced a number of administrative innovations** during his rule, including his **coinage**, a new **Mauludi lunisolar calendar**, and a new **land revenue system** which initiated the **growth of Mysore silk industry**.

Note:

- Embracing **western military methods** like artillery and rockets **alongside traditional Indian weapons** including war elephants, he ensured his forces could **overwhelm his Indian rivals and match the British armies** sent against him.
- **Maintenance of Armed Forces:**
 - He organised **his army on the European model** with Persian words of command.
 - Though he took the **help of the French officers to train his soldiers**, he never allowed them (French) to develop into a pressure group.
 - He was well **aware of the importance of a naval force**.
 - In 1796, he set up a **Board of Admiralty and planned** for a fleet of 22 battleships and 20 large frigates.
 - He **established three dockyards** at Mangalore, Wajedabad and Molidabad. However, **his plans did not fructify**.
- **Fought Against Marathas:**
 - In **1767, Tipu commanded** a corps of cavalry **against the Marathas** in the Carnatic (Karnataka) region of western India, and **he fought against the Marathas** on several occasions **between 1775 and 1779**.
- **Role in Anglo-Mysore Wars:**
 - **British saw Haidar and Tipu as ambitious, arrogant and dangerous** – rulers who had to be controlled and crushed.
 - **Four wars** were fought with Mysore (**1767-69, 1780-84, 1790-92 and 1799**).
 - **1767-69:** Treaty of Madras.
 - **1780-84:** Treaty of Mangalore.
 - **1790-92:** Treaty of Seringapatam.
 - **1799:** Subsidiary Alliance.
 - **Only in the last – the Battle of Seringapatam** – did the Company ultimately win a victory. **Tipu Sultan was killed** defending his capital Seringapatam.
 - **Mysore was placed under the former ruling dynasty of the Wodeyars** and a **subsidiary alliance was imposed** on the state.
- **Other Related Points:**

- He was **also a patron of science and technology** and is credited as the '**pioneer of rocket technology**' in India.

Subsidiary Alliance

- In 1798, it was introduced by Wellesley in India, the ruler of the allying **Indian state was compelled to pay a subsidy** for the maintenance of British army in return for getting protection from the British against their enemies.
- Those native princes or rulers **who would enter into the Subsidiary Alliance were not free to declare war** against any other power or enter into negotiations **without the consent of the British**.
- The Subsidiary Alliance was a policy of non-interference in the internal affairs of the allied state, but this was a promise seldom kept by the British.
- The payment of the arbitrarily-fixed and artificially-bloated subsidy invariably disrupted the economy of the state and impoverished its people.
- On the other hand, the **British could now maintain a large army** at the cost of the Indian states.
 - They controlled the defence and foreign relations of the protected ally, and had a powerful force stationed at the very heart of his lands.
- Lord Wellesley **signed his first Subsidiary Treaty with the Nizam of Hyderabad** in 1798.
- The **Nawab of Avadh** was forced to sign a Subsidiary Treaty in **1801**.
- **Peshwa Baji Rao II (Maratha)** signed the Subsidiary Treaty at Bassein in **1802**.
 - He wrote a **military manual (Fathul Mujahidin)** explaining the operation of rockets.
- Tipu was a **great lover of democracy** and a **great diplomat** who gave his **support to the French soldiers** at Seringapatam in setting up a **Jacobin Club in 1797**.
 - Tipu himself became a **member of the Jacobin Club** and allowed himself to be called **Citizen Tipu**.
 - He **planted the Tree of Liberty** at Seringapatam.



Note:

Geography

Highlights

- Cloudbursts
- Events of Extreme Weather
- Landslide and Flash Floods

Cloudbursts

Why in News

Recently, cloudbursts have been reported from several places in India.

Key Points

➤ About:

- Cloudbursts are **short-duration, intense rainfall events over a small area.**
- It is a weather phenomenon with unexpected **precipitation exceeding 100mm/h over a geographical region of approximately 20-30 square km.**
- In the Indian Subcontinent, it **generally occurs when a monsoon cloud drifts northwards**, from the Bay of Bengal or the Arabian Sea across the plains then on to the Himalaya that sometimes brings 75 millimetres of rain per hour.

➤ Occurrence:

- The **relative humidity and cloud cover is at the maximum level with low temperature and slow winds** because of which a high amount of clouds may get condensed at a very rapid rate and result in a cloudburst.
- **As temperatures increase, the atmosphere can hold more and more moisture and this moisture comes down as a short very intense rainfall for a short duration** probably half an hour or one hour resulting in flash floods in the mountainous areas and urban floods in the cities.

➤ Cloudburst are Different from Rainfall:

- Rain is condensed water falling from a cloud while cloudburst is a sudden heavy rainstorm.
- Rain **over 100 mm per hour is categorised as a cloudburst.**

- The cloudburst is a natural phenomenon, but occurs quite unexpectedly, very abruptly, and rather drenching.

➤ Impact of Climate Change:

- Several studies have shown that climate change **will increase the frequency and intensity of cloudbursts** in many cities across the globe.
 - In May 2021, the **World Meteorological Organization** noted that there is about a **40% chance of the annual average global temperature temporarily reaching 1.5°C above the pre-industrial level** in at least one of the next five years.
 - It added that there is a **90% likelihood of at least one year between 2021 and 2025 becoming the warmest on record and dislodge 2016** from the top rank.
- It is seen that **more cloudbursts are happening in Himalayan region because the decadal temperature rise** in the Himalayan region is higher than the global rate of rising temperatures.

➤ Consequences of Cloudbursts:

- **Flash floods**
- **Landslides**
- Mudflows
- Land caving

➤ Prediction:

- There is **no satisfactory technique** for anticipating the occurrence of cloud bursts because they develop over a small period of time.
- **A very fine net work of radars is required** to be able to detect the likelihood of a cloud burst and this would be expensive.
- Only the areas likely to receive heavy rainfall can be identified on a short range scale. Much of the damage can be avoided by way of identifying the areas and the meteorological situations that favour the occurrence of cloud bursts.

Note:



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Events of Extreme Weather

Why in News

People around the world have been doubly hit by the **Covid-19 pandemic and extreme weather events** which experts say have been **fuelled by climate change**.

Key Points

➤ Recent Extreme Weather Events:

- The **unprecedented heat wave** that drove temperatures across **Canada and parts of the United States to a record high**, causing hundreds of deaths between June 25 to 30.
- The recent **floods in Germany** that killed over 180 people in the country.
 - **Floods** have also been reported across **several Asian countries, in China, India and Indonesia**.
- **Cyclones Tauktae and Yaas** that hit India's west and east coasts respectively.

➤ Some Causes of Extreme Weather Events:

- **Extreme Temperature:**
 - The **temperature of the Earth is rising every year** and increasing temperature and extreme sunshine on top of it **creates a low-pressure system**.
 - Due to which the hurricanes and other tropical storms get their way to start.
- **High Atmospheric Winds:**
 - The jet stream is found where the **cold air from Earth's poles meets with warm tropical air**.
 - These winds help to continue and control the weather system from west to east in the northern hemisphere and from east to west in the southern hemisphere.
 - Sometimes these winds bring unpleasant weather with them which may lead to the formation of a tornado.
- **When Pressure Systems Meet:**
 - When **too cold high-pressure systems** meet with **too warm low-pressure systems**, the **chances of extremely high waves on sea surface** increases.
 - The too cold high-pressure systems originate from sub-polar land whereas too warm low-pressure systems originate from temperate seas.

○ Improper Weather Systems:

- The weather systems (such as air masses, fronts, etc.) keep on moving in a proper way which helps to maintain the weather conditions in a smoother way.
- When the weather conditions come across any disturbance in between, it **creates disasters**.

○ Climate Change:

- The world temperature has increased quite high from the past few decades and even keeps on changing year after year.
- One of the **big reasons** for the increase in Earth's temperature **is the level of CO₂**.
- As the **CO₂ is increasing in the atmosphere**, the temperature of the earth is also increasing simultaneously.

○ Global Warming:

- As the world temperature is increasing due to global warming simultaneously the effects of it are also increasing.
- Global warming is contributing to **intensifying heatwaves**.
- Global warming also **boosts the amount of water vapor in the atmosphere** which may lead to causes of severe weather like heavy rainfall, heavy snowstorm, etc.

➤ Concerns:

- The rise in **average global temperature** is linked with **widespread changes in weather patterns**.
 - The **rising average global temperature** is making **heavy rainfall more likely**.
 - **Warmer air carries more moisture**, meaning that more water will be released eventually.
- **Extreme weather events** like **heat waves and extreme rainfall** are likely to become more frequent or more intense with **rising anthropogenic climate change**.
 - The Theory of **Anthropogenic Climate Change** is that **humans are causing most of the current changes** to climate by burning fossil fuels such as **coal, oil, and natural gas**.
- **Temperatures at the Earth's poles** are rising at two to three times the temperature at the equator.
 - This weakens the **jet stream** of the mid-latitudes, situated over Europe.

Note:



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- During summer and autumn, the weakening of the jet stream has a causal effect resulting in slower-moving storms.
- This can result in more severe and longer-lasting storms with increased intensity.

- Also, according to a study, **human-induced global warming** has contributed to the increased frequency and intensity of **cyclonic storms over the Arabian Sea**.

➤ **Related Initiatives:**

- **National Action Plan on Climate Change (NAPCC)**
- **India's Intended Nationally Determined Commitments (INDC)** under Paris Climate Deal.

Landslide and Flash Floods

Why in News

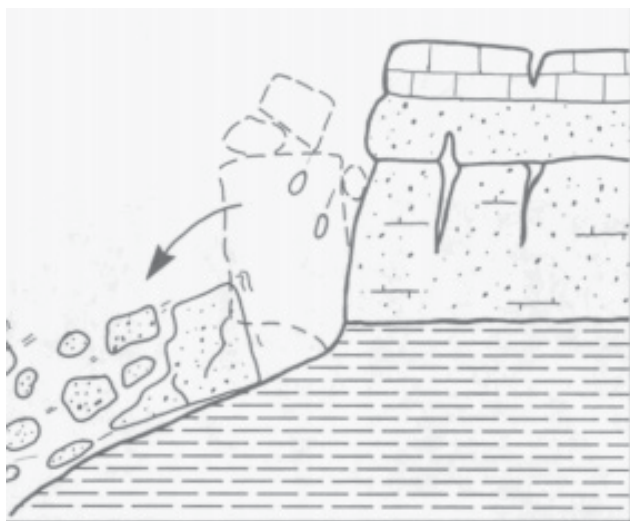
Recently, heavy rains caused **flash floods** and **landslides** in many parts of Himachal Pradesh.

Key Points

Landslide:

➤ **About:**

- A landslide is defined as the **movement of a mass of rock, debris, or earth down a slope**.
- They are a **type of mass wasting**, which denotes any downward movement of soil and rock under the direct influence of gravity.
- The term landslide encompasses **five modes of slope movement: falls, topples, slides, spreads, and flows**.



➤ **Causes:**

- Slope movement occurs **when forces acting downward** (mainly due to gravity) exceed the strength of the earth materials that **compose the slope**.
- Landslides are caused due to three major factors: **geology, morphology, and human activity**.
- **Geology** refers to **characteristics** of the material. The earth or rock might be weak or fractured, or different layers may have **different strengths and stiffness**.
- **Morphology** refers to the **structure** of the land. For example, slopes that lose their vegetation to fire or drought are more vulnerable to landslides.
 - Vegetation holds soil in place, and without the root systems of trees, bushes, and other plants, the land is more likely to slide away.
- **Human activity** which includes agriculture and construction increases the risk of a landslide.

➤ **Landslide-Prone Areas:**

- The entire Himalayan tract, hills/ mountains in sub-Himalayan terrains of North-east India, Western Ghats, the Nilgiris in Tamil Nadu Konkan areas are landslide-prone.

➤ **Mitigation:**

- **Restriction on the construction and other developmental activities** such as roads and dams in the areas prone to landslides.
- **Limiting agriculture to valleys** and areas with moderate slopes.
- **Control on the development of large settlements** in the high vulnerability zones.
- **Promoting large-scale afforestation programmes** and construction of bunds to reduce the flow of water.
- **Terrace farming** should be encouraged in the northeastern hill states where Jhumming (Slash and Burn/Shifting Cultivation) is still prevalent.

➤ **Step Taken:**

- The **Geological Survey of India (GSI)** has done a **national landslide susceptibility mapping** for 85% of the entire 4,20,000 square km landslide-prone area in the country. The **areas have been divided into different zones according to the propensity of the disaster**.

Note:

- Improvement in early warning systems, monitoring and susceptibility zoning can reduce the damage caused by landslides.

Flash Floods:**➤ About:**

- These are **sudden surges in water** levels generally during or following an intense spell of rain.
- These are **highly localised events of short duration** with a very high peak and usually **have less than six hours** between the occurrence of the rainfall and peak flood.
- The **flood situation worsens** in the presence of **choked drainage lines** or encroachments obstructing the natural flow of water.

➤ Causes:

- It may be caused by **heavy rain associated with a severe thunderstorm**, hurricane, tropical storm, or meltwater from ice or snow flowing over ice sheets or snowfields.

- Flash Floods can also occur **due to Dam or Levee Breaks, and/or Mudslides (Debris Flow)**.

- In areas on or near **volcanoes**, flash floods have also occurred after eruptions, when glaciers have been melted by the intense heat.

- The intensity of the rainfall, the location and distribution of the rainfall, the land use and topography, vegetation types and growth/density, soil type, and soil water- content all determine just how quickly the Flash Flooding may occur, and influence where it may occur.

➤ Mitigation:

- Instead of valleys, people should live in areas on slopes with firm ground for safety reasons.
- In areas where ground fissures have developed, appropriate steps should be taken to check the infiltration of rainwater and surface water.
- Banning “indiscriminate” and “unscientific” construction works.



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Note:

Social Issues

Highlights

- Kapu Community Reservation
- SMILE Scheme
- Severe Acute Malnutrition in India
- Garib Nawaz Employment Scheme
- Operation Blue Freedom: Team CLAW
- New Initiatives for Education Sector
- Social Audit of Social Sector Schemes
- Juvenile Justice Amendment Bill, 2021
- Pneumonia
- Kendu Leaf
- I-STEM Enters Phase-II
- Dying Declaration
- Extension to OBC Sub-Categorisation Commission
- Fighting Drug Menace
- National Health Mission
- India Inequality Report 2021: Oxfam
- Fit for 55 Package: EU

Kapu Community Reservation

Why in News

Recently, the **Andhra Pradesh government has announced 10% reservation for the Kapu community and other Economically Weaker Sections (EWS)** for appointments in the initial posts and services in the State government.

- This reservation is extended in accordance with the **Constitution (103rd Amendment) Act, 2019**.

Key Points

- **About Kapu Community:**
 - The Kapus are primarily an **agrarian community based in the Andhra-Telangana region**.
 - It is believed that they **migrated from the Gangetic plains**, probably from Kampilya (near Ayodhya) thousands of years ago.
 - They entered what is present-day Telangana and, after clearing the forests along the **banks of the Godavari, settled down to farming**.
 - The Kapu community is **demanding inclusion in the 'Backward Castes' category** "like they were before independence".
 - The first major protest for the inclusion of the **Kapus in the 'Backward Castes' was held in 1993**.

- A government order was then issued for their inclusion in 'Backward Castes'. However, it was not honoured.

Other Backward Classes

- Other Backward Classes (OBC) is a collective term used by the Government of India to classify castes which are educationally or socially disadvantaged.
- It is one of several official classifications of the population of India, along with General Class, Scheduled Castes and Scheduled Tribes (SCs and STs).
- The OBCs were found to comprise 52% of the country's population by the Mandal Commission report of 1980, and were determined to be 41% in 2006 when the National Sample Survey Organisation took place.
- **National Commission for Backward Classes** is a constitutional body under Article 338B of the Constitution under the Ministry of Social Justice and Empowerment.

Guidelines for EWS Reservation:

- Persons who are **not covered under the existing scheme of reservations** for SCs, STs and Socially and Educationally Backward Classes and whose **gross annual family income is below Rs 8 lakh** are to be identified as EWS for the benefit of reservation.
- The **income includes income from all sources** i.e. salary, agriculture, business, profession etc. for the financial year prior to the year of application.

Note:

- The term **family** for this purpose will include the person who seeks benefit of reservation, his or her parents and siblings below the age of 18 years as also his or her spouse and children below the age of 18 years.
- **103rd Constitutional Amendment Act:**
 - It **introduced an economic reservation (10% quota) in jobs and admissions** in education institutes for Economically Weaker Sections (EWS) by amending **Articles 15 and 16**.
 - It inserted Article 15 (6) and Article 16 (6).
 - It was enacted to promote the welfare of the poor not covered by the 50% reservation policy for SCs, STs and Socially and Educationally Backward Classes (SEBC).
 - It **enables both Centre and the states** to provide reservation to the EWS of society.
- **Status of EWS Reservation:**
 - 10% EWS reservation breaches the 50% limit to reservation in employment opportunities (set by **Indra Sawhney case 1992**) by the Central Government.
 - Government's stand is that though ordinarily 50% is the rule but same **will not prevent the amendment of the Constitution itself** in view of the existing **special circumstances** to uplift the members of the society belonging to economically weaker sections.
 - Currently, **the matter is in the Supreme Court**, where it recently referred the petitions challenging the 103rd Constitutional Amendment Act, 2019 to a five-judge constitution bench, saying it involves '**substantial questions of law**'.
 - According to **Article 145 (3) of the Constitution**, at least five judges need to hear cases that involve 'a substantial question of law as to the interpretation' of the Constitution, or any reference under Article 143, which deals with the power of the President of India to consult the Supreme Court.
 - The Supreme Court bench consisting of at least five judges is called the **Constitution bench**.

SMILE Scheme

Recently, the Ministry of Social Justice and Empowerment has formulated a scheme "**SMILE - Support for Marginalized Individuals for Livelihood and Enterprise**".

- It includes a subscheme - '**Central Sector Scheme for Comprehensive Rehabilitation of persons engaged in Begging**'.

Key Points

- **About:**
 - It is a **new Scheme after the merger of existing Schemes** for Beggars and Transgenders.
 - Scheme provides for the use of the existing shelter homes available with the State/UT Governments and Urban local bodies for rehabilitation of the persons engaged in the act of Begging.
 - In case of non-availability of existing shelter homes, new dedicated shelter homes are to be set up by the implementing agencies.
- **Focus:**
 - The focus of the scheme is extensively on **rehabilitation, provision of medical facilities, counselling, basic documentation, education, skill development, economic linkages** and so on.
 - It is estimated that an **approximate 60,000 poorest persons would be benefited** under this scheme for leading a life of dignity.
- **Implementation:**
 - It will be implemented with the support of State/UT Governments/Local Urban Bodies, Voluntary Organizations, Community Based Organizations (CBOs), institutions and others.
- **Scheme for Comprehensive Rehabilitation of Beggars:**
 - It will be a **comprehensive scheme for persons engaged in the act of begging**.
 - The scheme has been implemented in the selected cities on pilot basis having large concentrations of the Beggar community.
 - During the year 2019-20, this Ministry had released an amount of Rs. 1 Crore to **National Institute of Social Defence (NISD)** and Rs. 70 Lakh to **National Backward Classes Finance & Development Corporation (NBCFDC)** for skill development programmes for beggars.
- **Status of Beggars In India:**
 - According to the **Census 2011**, 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.

Note:



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- **West Bengal tops the chart followed by Uttar Pradesh** and Bihar at number two and three respectively. Lakshadweep merely has two vagrants according to the 2011 census.
- Among the union territories, **New Delhi had the largest number of beggars** 2,187 followed by 121 in Chandigarh.
- Among the northeastern states, Asam topped the chart with 22,116 beggars, while Mizoram ranked low with 53 beggars.
- Recently, the Supreme Court has agreed to examine a plea for **decriminalising begging** which has been made an offence in various states under Prevention of Begging Act.

National Backward Classes

Finance & Development Corporation

- NBCFDC is a Government of India Undertaking under the aegis of Ministry of Social Justice and Empowerment.
- It was incorporated under **Section 25 of the Companies Act 1956** on 13th January 1992 as a **Company not for profit**.
- Its objective is **to promote economic and developmental activities** for the benefit of **Backward Classes** and to assist the poorer section of these classes in skill development and self-employment ventures.

National Institute of Social Defence

- The NISD is an **Autonomous Body** and is registered under **Societies Act XXI of 1860 with the Government of National Capital Territory (NCT), Delhi**.
- It is a **central advisory body** for the Ministry of Social Justice and Empowerment.
- It is the nodal training and research **institute in the field of social defence**.
- The institute **currently focuses on human resource development** in the areas of drug abuse prevention, welfare of senior citizens, beggary prevention, transgender and other social defence issues.
- The mandate of the institute is **to provide inputs for the social defence programmes** of the Government of India through **training, research & documentation**.

Severe Acute Malnutrition in India

Why in News

According to the **Women and Child Development Ministry**, **more than 9.2 lakh children** (from six months to six years) in India were 'severely acute malnourished' till **November, 2020**.

- It underscores concerns that the **Covid-19 pandemic** could exacerbate the health and nutrition crisis among the poorest of the poor.

Key Points

➤ About Severe Acute Malnutrition (SAM) :

- **WHO's Definition:** The **World Health Organisation (WHO)** defines 'severe acute malnutrition' (SAM) by very **low weight-for-height** or a **mid-upper arm circumference less than 115 mm**, or by the presence of **nutritional oedema**.
 - Children suffering from SAM are **nine times more likely to die** in case of diseases due to their weakened immune system.
 - **Nutritional oedema: Abnormal fluid retention in the tissues** (oedema) resulting especially from lack of protein in states of starvation or malnutrition.
 - Oedema can, however, occur in starvation even if the blood levels of albumin are not lowered.

➤ Related Findings:

- **Number of SAM Children (National scenario):** An estimated 9,27,606 'severely acute malnourished' children from six months to six years were identified across the country till November 2020.
- **States with SAM Children:**
 - The **most in Uttar Pradesh (3,98,359)** followed by Bihar (2,79,427).
 - Uttar Pradesh and Bihar are **also home to the highest number of children** in the country.
 - **Maharashtra (70,665)** > Gujarat (45,749) > Chhattisgarh (37,249) > Odisha (15,595) > Tamil Nadu (12,489) > Jharkhand (12,059) > Andhra Pradesh (11,201) > Telangana (9,045) > Assam (7,218) > Karnataka (6,899) > Kerala (6,188) > Rajasthan (5,732).

Note:

- **States with No Severely Malnourished Children:** Ladakh, Lakshadweep, Nagaland, Manipur and Madhya Pradesh reported no severely malnourished children.
- **National Family Health Survey Findings:**
 - The **National Family Health Survey-4 (NFHS-4)**, 2015-16 suggests that prevalence of severe acute malnutrition among children was at 7.4%.
 - **NFHS-5** suggests that **malnutrition** increased among children in 2019-20 from 2015-16 in 22 states and UTs.
 - **Stunted:** Around 13 states and UTs out of the 22 surveyed **recorded a rise in percentage of children under five years** who are stunted in comparison to 2015-16.
 - **Stunting** is when a child has a low height for their age, usually due to malnutrition, repeated infections, and/or poor social stimulation
 - **Wasted:** 12 states and UTs recorded **a rise in the percentage** of children under five years who are wasted.
 - **Wasting** is low weight for their height among children, reflecting acute undernutrition. It is a strong predictor of mortality among children under five years of age.
 - **Severely wasted and underweight:** 16 states and UTs **recorded a rise** in the percentage of children under five years who are severely wasted and underweight in 2019-20.
- **Impact of Covid-19:**
 - Covid-19 is pushing millions into poverty, reducing incomes of many more and disproportionately affecting the economically disadvantaged, who are also most vulnerable to malnutrition and food insecurities.
 - The pandemic-prompted lockdowns disrupted essential services, such as supplementary feeding under **Anganwadi centres, mid-day meals, immunisation, and micro-nutrient supplementation** which exacerbated malnutrition.

Steps Taken by Government

- **POSHAN Abhiyaan:** The government of India has launched the **National Nutrition Mission (NNM)** or **POSHAN Abhiyaan** to ensure a “**Malnutrition Free India**” by 2022.

- **Anemia Mukh Bharat Abhiyan:** Launched in 2018, the mission aims at accelerating the annual rate of **decline of anaemia from one to three percentage points**.
- **Mid-day Meal (MDM) scheme:** It aims to **improve nutritional levels among school children** which also has a direct and positive impact on enrolment, retention and attendance in schools.
- **The National Food Security Act (NFSA), 2013:** It aims to ensure food and nutrition security for the most vulnerables through its associated schemes and programmes, making access to food a legal right.
- **Pradhan Mantri Matru Vandana Yojana (PMMVY):** Rs.6,000 is transferred directly to the bank accounts of pregnant women for availing better facilities for their delivery.
- **Integrated Child Development Services (ICDS) Scheme:** It was launched in 1975 and the scheme aims at providing food, preschool education, primary healthcare, immunization, health check-up and referral services to children under 6 years of age and their mothers.

Note:

The **Sustainable Development Goal (SDG 2: Zero hunger)** aims to end all forms of hunger and malnutrition by 2030, making sure all people – especially children – have access to sufficient and nutritious food all year round.

Garib Nawaz Employment Scheme

Why in News

Recently, the **Union Minister for Minority Affairs** replied in Parliament that **a total number of 371 training centers under the Gharib Nawaz Employment Scheme were opened** across the country.

Key Points

- **About Gharib Nawaz Employment Scheme:**
 - It was **launched by the Ministry of Minority Affairs in 2017**.
 - **Maulana Azad Education Foundation**, an autonomous body under the aegis of Ministry of Minority Affairs, implements the Scheme.
 - The main aim of this scheme is **to provide short term job oriented skill development courses to**

Note:

minorities' youth in order to enable them for skill based employment.

- This scheme is implemented **as per common norms of the Ministry of Skill Development & Entrepreneurship (MSD&E)** through the empanelled **Program Implementation Agencies (PIAs)**.
- The PIA is **mandated to place minimum 70% trainees** out of total trained trainees.
- The **monthly stipend for maximum of three months and post placement support for maximum of two months** after getting employment are also being paid to the beneficiaries directly into their account.

Minorities

- The term **"Minority"** is not defined in the **Indian Constitution**. However, the Constitution **recognises only religious and linguistic minorities**.
 - **6 Minority Communities** in India: Jain, Parsi, Buddhist, Christian, Sikh and Muslim (notified by the Government).
- **Constitutional Provisions:**
 - **Article 29:** It provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
 - It grants protection to both religious minorities as well as linguistic minorities.
 - **Article 30:** Under the article, all minorities shall have the right to establish and administer educational institutions of their choice.
 - The **protection under Article 30 is confined only to minorities** (religious or linguistic) and does not extend to any section of citizens (as under Article 29).
 - **Article 350-B:** The **7th Constitutional (Amendment) Act 1956** inserted this article which provides for a Special Officer for Linguistic Minorities appointed by the President of India.
- **Legal Provisions:**
 - **National Commission for Minorities (NCM) Act, 1992.**
 - **National Commission for Minority Education Institution (NCMEI) Act, 200**
- **Other Schemes for Minority Communities:**
 - **Prime Minister's 15 Point Programme**
 - **Pradhan Mantri Jan Vikas Karyakram**

- Seekho aur Kamao
- Usttad (Upgrading the Skills and Training in Traditional Arts/Crafts for Development)
- Garib Nawaz Kaushal Vikas Yojana
- Nai Manzil (for formal skilling of school dropouts)
- Nai Roshni (for leadership Development of Minority Women)
- Begum Hazrat Mahal Girls scholarships

Operation Blue Freedom: Team CLAW

Why in News

Recently, the Government of India has accorded sanction to **Team CLAW** to lead a team of people with disabilities to scale **Siachen Glacier** and create a **new world record for the largest team of people with disabilities**.

- This is the land world record expedition, part of **'Operation Blue Freedom Triple World Records'** being undertaken.
- Triple Elemental World Records is a series of world records being attempted by the team in 2021 of collectives of people with disabilities achieving great feats on land, in air and underwater.

Siachen Glacier

- The Siachen Glacier is located in the **Eastern Karakoram range** in the Himalayas, just northeast of Point NJ9842 where the Line of Control between India and Pakistan ends.
- It is the **Second-Longest glacier** in the World's Non-Polar areas.
 - **Fedchenko Glacier, located in Yazgulem Range, Tajikistan** is the **Longest glacier** in the World's Non-Polar areas.
- The Siachen Glacier lies immediately south of the great drainage divide that separates the Eurasian Plate from the Indian subcontinent in the extensively glaciated portion of the Karakoram sometimes called the **"Third Pole"**.
- The Siachen Glacier is part of Ladakh which has now been **converted into a Union Territory**.
- The Siachen Glacier is the world's highest battlefield.
- The entire Siachen Glacier has been under the administration of India since 1984 (**Operation Meghdoot**).

Note:



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Key Points

- **About the Expedition:**
 - Initially, a team of **20 people with disabilities** would be selected to undergo training, after which the final expedition team shall be selected.
 - Final expedition team (including a minimum of 6 people with disabilities), who will trek from the **Siachen Base Camp to Kumar Post**.
 - Kumar post is located at an altitude of about **15,632 feet**.
- **Team CLAW and Operation Blue Freedom:**
 - **Team CLAW:** Team CLAW (**Conquer Land Air Water**) is a team of ex-Indian Special Forces commandos.
 - Generally, all are either from **Indian Army Para Commandos** or the **Naval Marine Commandos**, also known as the **MARCOS**.
 - These veterans have **multiple specialisations** - not just in combat but also in other elite skills such as **skydiving, scuba diving, mountaineering, emergency medical response** and all-terrain survival amongst others.
 - The initiative was **taken by Major Vivek Jacob**, a Para (Special Forces) officer.
 - **Operation Blue Freedom:** Operation Blue Freedom is a **social impact venture** aimed at **rehabilitating people with disabilities through adaptive adventure sports**.
 - It aims to **shatter the common perception of pity, charity and inability associated with people with disabilities** and recreate it to one of **dignity, freedom and ability**.

- Further, their focus is to **'design and implement sustainable large-scale employment solutions'** for people with disabilities, especially in the **'Environment conservation and Sustainability'** space.
- It was **launched in 2019 by Team CLAW**.

- **CLAW Global:** Team CLAW is in the process of **setting up centres across the globe where-in Special Forces Veterans** and **People with Disabilities** are merging in action for creating a better life experience, for not only persons with disability but the non-disabled as well.

New Initiatives for Education Sector

Why in News

Recently, the Prime Minister launched **multiple initiatives in the education sector** at a conference, to mark the completion of one year of reforms under the **National Education Policy 2020** which aims at making India a global knowledge superpower.

- The Prime Minister also noted the role played by portals like **Digital Infrastructure for Knowledge Sharing (DIKSHA)** and **Study Webs of Active Learning for Young Aspiring Minds (SWAYAM)** in online education during the **pandemic**.

Key Points

- **Academic Bank of Credit:**
 - It is **envisaged as a digital bank** that holds the **credit earned by a student** in any course. It is a **major instrument for facilitating multidisciplinary and holistic education**. It will provide **multiple entry and exit options** for students in **Higher education**.
 - It will make the youth **future-oriented and open the way for an Artificial Intelligence(AI)-driven economy**.
- **Engineering in Regional Languages:**
 - 14 engineering colleges in **eight States** are going to start engineering studies in five Indian languages: **Hindi, Tamil, Telugu, Marathi and Bangla**.
 - This emphasis on mother tongue as the medium of instruction will **instil confidence in the students from poor, rural and tribal backgrounds**.

Note:

- In a recent survey, the **All India Council of Technical Education (AICTE)** discovered that **42% of the students surveyed nationally, favoured pursuing Engineering in regional languages.**
- The **AICTE** is creating a **database of resources to allow colleges to offer more programmes in regional languages** and developed a tool to translate engineering content into **11 languages.**
- **Vidya Pravesh & SAFAL:**
 - Vidya Pravesh, a **three month play based school preparation module for Grade 1** students will be released along with **SAFAL (Structured Assessment For Analyzing Learning Levels)**, a **competency based assessment framework for Grades 3, 5 and 8 in CBSE schools.**
- **National Digital Education Architecture (NDEAR):**
 - It will help in **building up a new education ecosystem that will create a digital foundation leading to self-governance** of all parties involved, particularly states and the Centre.
 - It lets **educationists do evaluation based on talents and abilities**, helping students understand their area of specialties that can be utilised in their future profession.
- **National Education Technology Forum (NETF):**
 - It will provide independent **evidence-based advice to central and state government agencies** on technology-based interventions. A **special focus will be on improving technology access** at the grassroot education level.
 - Schools will be required to **have skilled professionals.** In addition, **schools will have to hire qualified candidates** to teach emerging technological skills to students.
 - Once the forum is set up, **school-wise information will be sought on how technology is being used** for imparting academic content and what steps are being taken to enhance research.
 - It will be **funded by the government** but at a later stage, **private funding and support from industry bodies would be invited.**
- **NISHTHA 2.0:**
 - It will provide **training to teachers as per their needs** and they will be able to give their suggestions to the department. It will have **68 modules including 12 generic and 56 subject-specific modules** and will cover around **10 lakh teachers.**

- **NISHTHA** is the largest teachers' training programme, first of its kind in the world to motivate and equip teachers to encourage and foster critical thinking in students.

➤ **Sign Language as a Subject:**

- Indian sign language, **for the first time, has been accorded the status of language subject.** Students will be able to study it as a language also.
- There are more than 3 lakh students who need sign language for their education. This will give a boost to Indian sign language and will help the **divyang people.**

Related Previous Initiatives

- **National Programme on Technology Enhanced Learning.**
- **Rashtriya Uchchar Shiksha Abhiyan (RUSA).**
- **Prime Minister's Research Fellowship (PMRF).**
- **Scheme for Promotion of Academic and Research Collaboration (SPARC).**
- **Sarva Shiksha Abhiyan.**
- **NEAT.**
- **PRAGYATA.**
- **Mid Day Meal Scheme.**
- **Right To Education (RTE) Act, 2009.**
- **Beti Bachao Beti Padhao.**

Social Audit of Social Sector Schemes

Why in News

The **Ministry of Social Justice and Empowerment** has formulated a scheme, namely **Information-Monitoring, Evaluation and Social Audit (I-MESA)** in FY 2021-22.

Key Points

- **About the I-MESA Scheme:**
 - Under this scheme, Social Audits are to be conducted for all the schemes of the Department starting FY 2021-22.
 - These social audits are done through **Social Audit Units (SAU)** of the **States** and **National Institute for Rural Development and Panchayati Raj.**
- **Important Schemes of the Ministry of Social Justice and Empowerment:**

Note:

- **Schemes for Economic Development:**
 - Credit Enhancement Guarantee Scheme for the Scheduled Castes (SCs)
 - **National Safai Karamcharis Finance and Development Corporation (NSKFC)**
 - **National Scheduled Castes Finance and Development Corporation (NSFDC)**
 - Special Central Assistance to Scheduled Caste Sub Plan (SCA to SCSP)
 - Scheme of Assistance to Scheduled Castes Development Corporations (SCDCs)
- **Self Employment:**
 - **Scheme for Rehabilitation of Manual Scavengers (SRMS)**
 - **Venture Capital Fund For Scheduled Castes**
- **Schemes for Social Empowerment:**
 - Centrally Sponsored Scheme for implementation of the **Protection of Civil Rights Act, 1955** and the **Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989**
 - **Pradhan Mantri Adarsh Gram Yojana (PMAGY)**

Social Audit

- **About:**
 - **Meaning:** Social Audit is the **audit of a scheme jointly by the Government and the people**, especially by those who are affected by the scheme or its beneficiaries.
 - **Benefits:** It is a powerful tool to **promote transparency, accountability and people's participation** in the schemes meant for them.
 - A social audit helps to **narrow gaps between vision/goal and reality**, between **efficiency and effectiveness**.
 - **Status:**
 - **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** was the **first Act to mandate Social Audit** by the **Gram Sabha** of all the projects taken up in the Gram Panchayat.
 - Most States have set up an independent **Social Audit Unit (SAU)** and some have even begun to facilitate Social Audit in other programmes, including **Pradhan Mantri Awas Yojana, National Social Assistance Programme, Midday Meal Scheme** and **Public Distribution System**.

- **Challenges:**
 - The **lack of adequate administrative and political will** in institutionalising social audits to deter corruption has meant that social audits in many parts of the country are not independent of the influence of implementing agencies.
 - Social audit units, including village social audit facilitators, **continue to face resistance and intimidation** and find it difficult to even access primary records for verification.
 - **People's participation has been minuscule** due to the lack of education, awareness and capacity building among the common masses.
 - There is **an absence of an independent agency** to investigate and act on social audit findings.
- **Suggestions:**
 - Citizens groups need to **campaign for strengthening social audits** and make real progress in holding the political executive and implementing agencies accountable.
 - **Team of social audit experts should be established** in each district who are responsible for training social audit committee members (stakeholders).
 - **Training programmes should be created on social auditing methods** such as conducting and preparing social audit reports, and presentation at Gram Sabha.
 - The **system of social audits needs a synergetic endorsement** and a push by multiple authorities to establish an institutionalised framework which cannot be undermined by any vested interests.

Juvenile Justice Amendment Bill, 2021

Why in News

Recently, the **Juvenile Justice (Care and Protection of Children) Amendment Bill, 2021**, was passed in the Rajya Sabha.

- The bill seeks to amend the **Juvenile Justice Act, 2015**.

Key Points

- **Background:**
 - The **National Commission for Protection of Child Rights (NCPCR)** audit of **Child Care Institutions**

Note:



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(CCIs) in 2020, 90% of which are run by NGOs, found that 39% CCIs were not registered, even after the 2015 amendment was brought in.

- It also found that **less than 20% CCIs, especially for girls, had not been set up in some states**, 26% child welfare officers were not there.
- Moreover, **three-fifths have no toilets, one-tenth have no drinking water and 15% of homes don't have provisions for separate beds** or diet plans.
- **Rehabilitation of children is not a priority** for childcare homes and children are reportedly kept in such institutions to get funds.

➤ **Key Amendments Proposed by the Bill:**

- **Serious Offences:** Serious offences will also include offences for which **maximum punishment is imprisonment of more than seven years**, and minimum punishment is not prescribed or is of less than seven years.
 - Serious offences are those for which the punishment under the Indian Penal Code or any other law for the time being is imprisonment between three and seven years.
- **Non-cognizable Offences:**
 - The present Act provides that an offence which is punishable with imprisonment between three to seven years to be cognizable (where arrest is allowed without warrant) and non-bailable.
 - The Bill **amends this to provide that such offences will be non-cognizable.**
- **Adoption:** Presently, the adoption order issued by the court establishes that the child belongs to the adoptive parents. The Bill provides that instead of the court, the **District Magistrate (including Additional District Magistrate) will issue such adoption orders.**
- **Appeals:** The Bill provides that any person aggrieved by an adoption order passed by the District Magistrate **may file an appeal before the Divisional Commissioner, within 30 days** from the date of passage of such order.
- **Additional Functions of the District Magistrate:** These include: supervising the District Child Protection Unit, and conducting a quarterly review of the functioning of the Child Welfare Committee.
- **Designated Court:** The Bill proposes that all offences under the earlier Act be tried in children's court.

- **Child Welfare Committees (CWCs):** It provides that a person will not eligible to be a member of the CWC if he/she
 - has any record of violation of human rights or child rights,
 - has been convicted of an offence involving moral turpitude,
 - has been removed or dismissed from service of the central government, or any state government, or a government undertaking,
 - is part of the management of a child care institution in a district.
- **Removal of Members:** The appointment of any member of the committee **shall be terminated by the state government after an inquiry** if they fail to attend the proceedings of the CWCs consecutively for three months without any valid reason or if they fail to attend less than three-fourths of the sittings in a year.

➤ **Juvenile Justice (Care and Protection of Children), Act, 2015:**

- Parliament introduced and passed the Juvenile Justice (Care and Protection of Children) Act in 2015 to replace the Juvenile Delinquency Law and the Juvenile Justice (Care and Protection of Children Act) 2000.
- The Act **offered provisions to allow trials of juveniles in the age group of 16-18 years** as an adult who were found to be in conflict with the law, especially heinous crimes.
- The Act also **offered provisions regarding adoption.** The Act replaced the Hindu **Adoptions and Maintenance Act (1956)** and Guardians of the ward Act **(1890)** with more universally accessible adoption law.
- The Act enabled smooth functioning of **adoption procedures for orphans, surrendered, and abandoned children** while making the **Central Adoption Resource Authority (CARA)** the statutory body for adoption-related matters.

Pneumonia

Why in News

Recently, the Ministry of Health and Family Welfare reported that **Pneumonia contributes 16.9% of infant**

Note:



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deaths and it is the 2nd highest cause of infant mortality (after prematurity & low birth weight).

- In November 2020, the annual **Pneumonia and Diarrhoea Progress Report** was released by the International Vaccine Access Centre (IVAC).

Key Points

- **About:**
 - Pneumonia is an **acute respiratory infection of the lungs**. It is also a Pneumococcal disease caused by bacteria called **Streptococcus pneumoniae** or **pneumococcus**.
- **Cause:**
 - It doesn't have one single cause – it can develop from either **bacteria, viruses or fungi in the air**.
- **Vulnerability:**
 - **Children whose immune systems are immature** (i.e. newborns) or weakened – such as by undernourishment, or diseases like **HIV** – are more vulnerable to pneumonia.
- **Spread:**
 - Pneumonia is **contagious and can be spread through coughing or sneezing**. It can also be spread **through fluids**, like blood during childbirth, or from contaminated surfaces.
- **Vaccine:**
 - Pneumonia caused by bacteria is **easily preventable with vaccines**. 3 doses of the primary vaccine (**Pneumococcal Conjugate Vaccine (PCV)**) to prevent it are recommended.
 - A new vaccine for one of the main viral causes of pneumonia is under development.
 - India has introduced **nationwide rollout of PCV under Universal Immunisation Programme (UIP)**.
- **Diseases Burden:**
 - **Global:** Together, the **Democratic Republic of Congo, Ethiopia, India, Nigeria and Pakistan** account for **more than half of all deaths** due to pneumonia among children under 5.
 - **Annually, India witnesses** an estimated **71% of pneumonia deaths** and 57% of severe pneumonia cases.
- **Initiatives Related to Pneumonia:**
 - **Social Awareness and Action to Neutralise Pneumonia Successfully (SAANS):** The aim is to reduce child mortality due to pneumonia, which

contributes to around 15% of deaths of children under the age of five annually.

- The government aims to achieve a target of reducing pneumonia deaths among children to **less than three per 1,000 live births by 2025**.
- In 2014, India launched '**Integrated Action Plan for Prevention and Control of Pneumonia and Diarrhoea (IAPPD)**' to undertake collaborative efforts towards prevention of diarrhoea and Pneumonia related under-five deaths.
 - The **WHO and UNICEF** had launched an integrated **Global Action Plan for Pneumonia and Diarrhoea (GAPPD)**.

Kendu Leaf

Why in News

Recently, several children were seen collecting **kendu (Tendu) leaves** in Odisha's Kalahandi district.

Key Points

- **About:**
 - Kendu leaf is called the **green gold of Odisha**. It is a nationalised product like **bamboo** and sal seed. It is one of the **most important non-wood forest products in Odisha**.
 - Botanical name of the Tendu (Kendu) leaf is **Diospyros Melanoxylon**.
 - The leaves are used to **wrap bidis, a popular smoke among the locals**.
- **States Producing Kendu Leaves:**
 - The states producing bidi leaves in India comprises mainly **Madhya Pradesh, Chhattisgarh, Odisha, Andhra Pradesh, Jharkhand, Gujarat and Maharashtra**.



Note:

- **Odisha is the third-largest producer** of kendu leaf, after Madhya Pradesh and Chhattisgarh.

➤ Uniqueness:

- The Uniqueness of Odisha's Tendu (kendu) leaf is **in processed form** whereas the **rest of the states in India produce in Phal Form**.
- In processed form the Kendu leaves are graded into different qualities that are **Grade I to Grade IV** as per the specification of **color, texture, size and body condition of the leaf** and packets will be done by taking Five Kilograms as a Bundle.

➤ Significance:

- **Medicament:**
 - Traditional medical practitioners use these tiny fruits of Kendu to **treat malaria, diarrhoea and dysentery**.
 - Due to their antimicrobial properties, the leaves are applied on cuts and bruises as well.
- **Source of Livelihood:**
 - Kendu leaves are the major source for tribal villages, since it is the most prominent **Minor Forest Produce** of the state.
 - MFP includes all non-timber forest produce of plant origin and includes bamboo, canes, fodder, leaves, gums, waxes, dyes, resins and many forms of food including nuts, wild fruits, honey, lac, tusser etc.
 - They form a major portion of their food, fruits, medicines and other consumption items and also provide cash income through sales.
- **Major Part in Odisha's Forest Revenue:**
 - Of Odisha's total forest revenue of Rs 868 million in 1990-2000, kendu leaves alone account for Rs 635 million.
 - The annual production of bidi leaf in Odisha is around 4.5-5 lakh a quintal, which is about 20% of the county's annual production.

➤ Concern:

- **Low Wage:**
 - Children working at kendu leaf collection centres often step in **during April-May every year**. They mostly engaged in plucking, drying, collecting, etc. They are paid extremely low wages for the work.
- **Exploitation of Children:**

- Children below 14 years can not be engaged as workers and between 14-18 years can only be engaged in non hazardous sectors.
- In such a scenario they are exploited.

I-STEM Enters Phase-II

Why in News

The **Indian Science Technology and Engineering facilities Map (I-STEM)** project has been accorded an **extension for five years**, until 2026 and enters its **second phase** with added features.

Key Points

- **I-STEM:**
 - **About:**
 - I-STEM is a **National Web portal for sharing R&D** (Research and Development) facilities.
 - The portal **facilitates researchers to access slots for the use of equipment**, as well as to share the details of the outcomes, such as, patents, publications and technologies.
 - **Launch:**
 - Launched in January 2020. It is an initiative of Office of the **Principal Scientific Adviser** to the Government of India under the aegis of **Prime Minister Science, Technology and Innovation Advisory Council (PM-STIAC)** mission.
 - **PM-STIAC:** It is an overarching Council that facilitates the Principal Scientific Adviser's Office to **assess the status in specific science and technology domains**, **comprehend challenges in hand**, **formulate specific interventions**, **develop a futuristic roadmap** and **advise the Prime Minister** accordingly.



Note:

○ **Goal:**

- The goal of I-STEM is to strengthen the R&D ecosystem of the country by connecting researchers with resources.
- Promoting **technologies and scientific equipment development indigenously**, and **providing necessary supplies and support to researchers** by enabling them an access to existing publicly funded R&D facilities in the country through the I-STEM web portal.

○ **Phase-I:**

- In the first phase, the portal is listed with more than 20,000 pieces of equipment from 1050 institutions across the country and has more than 20,000 Indian researchers.

➤ **Phase-II:**

- The portal **will host indigenous technology products listed through a digital catalogue**. It will also **host and provide access to selected R&D** (Research and Development) **software** required to undertake research projects by students and scientists.
- The portal will also **provide a platform for the various City Knowledge and Innovation Clusters** to enhance effective use of R&D infrastructure through leveraging collaboration and partnership built on a shared STI (**Science Technology and Innovation**) ecosystem.
- New phase will be designed as a dynamic digital platform that will provide a **boost to research and innovation especially for 2 tier and 3 tier cities** and also for the emerging start-up ecosystem.

Dying Declaration

Why in News

Recently, a special **Central Bureau of Investigation (CBI)** court awarded two policemen life sentences for the **custodial death** of a murder accused on the basis of the '**Dying Declaration**' made by the victim prior to his death.

- **CBI** is the **premier investigating police agency** in India. It functions under the superintendence of the **Deptt. of Personnel, Ministry of Personnel, Pension & Public Grievances** - which falls under the prime minister's office.

Key Points

➤ **About:**

- **Section-32(1) of Indian Evidence Act, 1872**, defines dying declaration as a **statement written or verbal of relevant facts made by a person, who is dead**. It is the statement of a person who had died explaining the circumstances of his death.
 - This is based on the maxim '**nemo maritatus presumuntur mentiri**' i.e. a man will not meet his maker with a lie on his mouth.
- The general rule under Section 60 of the Act is that **all oral evidence must be direct - he heard it, saw it or perceived it**.

➤ **Rules for Admission of Dying Declaration:**

- The grounds of admission under a dying declaration have been **based on two broad rules**:
 - The **victim being generally the only principal eye-witness to the crime**.
 - The **sense of impending death**, which creates a sanction equal to the obligation of an oath in a court.

➤ **Recording Dying Declaration:**

- Anyone can record the dying declaration of the deceased as per law. However, a **dying declaration recorded by a Judicial or Executive Magistrate will add an additional strength** to the prosecution case.
 - A dying declaration may in several cases be the **"primary piece of evidence to prove the genesis of occurrence"**.
- The only requirement for such a declaration to be held perfectly accountable in court is for the **victim to volunteer the statement and be of conscious mind**.
 - The person who records the dying declaration must be satisfied that the victim is in a fit state of mind.

➤ **Situations Where Court Does Not Accept it as a Evidence:**

- Though a dying declaration is **entitled to great weight**, the **accused has no power of cross-examination**.
 - This is the reason the courts have always insisted that the **dying declaration be of such a nature as to inspire full confidence of the court in its correctness**.
- The courts are on guard to check if the **statement of the deceased was a result of either tutoring, prompting or a product of imagination**.

Note:



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➤ **Need of Corroboration (Supporting Evidence):**

- Several judgments have noted that it is neither rule of law nor of prudence that **dying declaration cannot be acted upon without corroboration**.
 - If the court is satisfied that the dying declaration is true and voluntary it can base **conviction on it, without corroboration**.
- Where a dying declaration is **suspicious**, it should **not be acted upon without corroborative evidence** because a dying declaration does not contain the details as to the occurrence.
 - It is not to be rejected, equally merely because it is a brief statement. On the contrary, **the shortness of the statement itself guarantees truth**.

➤ **Validity of Medical Opinion:**

- Normally the court, in order to satisfy whether the deceased was in a fit mental condition to make the dying declaration, can look up the **medical opinion**.
- But where the **eye witness has said that the deceased was in a fit and conscious state** to make this dying declaration, the **medical opinion cannot prevail**.

Extension to OBC Sub-Categorisation Commission

Why in News

Recently, the Union Cabinet has approved a **six-month extension** to the commission appointed to examine **sub-categorisation of Other Backward Classes (OBCs)**, up to 31st January 2022.

- This is the **eleventh extension for the commission**, which was initially due to submit its report in March 2018.

Key Points

➤ **About:**

- It will enable the Commission to **submit a comprehensive report on the issue of sub-categorization of OBCs**, after consultation with various stakeholders.
- Its **objectives** include working out a mechanism, criteria, norm and parameters through a scientific approach for sub-categorisation within the OBCs and identifying the respective castes or communities

or sub-castes or synonyms in the Central List of OBCs and classifying them into their respective sub-categories.

➤ **Commission:**

- Also called Rohini Commission, constituted under **Article 340 of the Constitution** with the approval of the President on 2nd October 2017.
- It had been constituted **to complete the task of sub-categorising 5000-odd castes in the central OBC list** so as to ensure more equitable distribution of opportunities in central government jobs and educational institutions.
- In 2015, the **National Commission for Backward Classes (NCBC)** had recommended that OBCs should be categorised into **extremely backward classes, more backward classes and backward classes**.
 - NCBC has the **authority to examine complaints and welfare measures** regarding socially and educationally backward classes.

➤ **Work Done:**

- It has met **representatives of state governments, state backward classes commissions, community associations etc.** apart from **obtaining caste-wise data of OBCs** in higher educational institutions and recruits in central departments, public sector banks and financial institutions.
- Earlier this year the commission **proposed to divide OBCs into four subcategories** numbered 1, 2, 3 and 4 and **split the 27% into 2, 6, 9 and 10%, respectively**.
- It also recommended **complete digitisation of all OBC records and a standardised system of issuing OBC certificates**.

➤ **Possible Outcomes:**

- The commission may make recommendations which will benefit the communities in the existing list of OBCs which have not been able to get any major benefit of the OBCs reservation scheme for appointment in central government posts and for admission in central government educational institutions.

Article 340 of the Indian Constitution

- The President may by order appoint a Commission consisting of such persons as he thinks **fit to investigate the conditions of socially and educationally backward classes** within the territory of India and

Note:

the difficulties under which they labour and to make recommendations as to the steps that should be taken by the Union or any State to remove such difficulties.

- A Commission **so appointed shall investigate the matters referred to them** and present to the President a report setting out the facts as found by them and making **such recommendations** as they think proper.
- The President shall **cause a copy of the report** so presented together with a memorandum explaining the action taken thereon to be laid before each House of Parliament.

OBC Reservation

- The **Kalelkar Commission, set up in 1953**, was the **first to identify backward classes other than the Scheduled Castes (SCs)** and Scheduled Tribes (STs) at the national level.
- The **Mandal Commission Report, 1980** estimated the **OBC population at 52% and classified 1,257 communities** as backward.
 - It recommended increasing the existing quotas, which were only for SC/ST, from 22.5% to 49.5% to include the OBCs.
- The **central government reserved 27%** of seats in union civil posts and services for OBCs [Article 16(4)]. The quotas were subsequently enforced in central government educational institutions [Article 15 (4)].
 - In 2008, the **Supreme Court** directed the central government to **exclude the creamy layer (advanced sections) among the OBCs**.
- The **102nd Constitution Amendment Act, 2018** provided constitutional status to the National Commission for Backward Classes (NCBC), which was previously a statutory body under the Ministry of Social Justice and Empowerment.

Fighting Drug Menace

Why in News

India has signed **26 bilateral pacts, 15 memoranda of understanding and two agreements on security cooperation** with different countries for **combating illicit trafficking of narcotic, drugs and psychotropic substances**, besides chemical precursors.

Key Points

➤ Drug Menace In India:

- The menace of drug addiction has **spread fast among the youth of India**.
- India is sandwiched between **two largest Opium producing regions of the world** that is **the Golden triangle on one side and the Golden crescent on other**.



- The **golden triangle** area comprises **Thailand, Myanmar, Vietnam and Laos**.
- The **golden crescent** area includes **Pakistan, Afghanistan and Iran**.
- According to the **World Drug Report 2021**, **prescription drugs and their ingredients or 'precursors'** are being increasingly **diverted for recreational use in India**—the **largest manufacturer of generic drugs in the world**.
- India is also **linked to shipment of drugs sold** on the 19 major **darknet** markets analysed over 2011-2020.
- As per the report **Magnitude of Substance Use in India** released by **All India Institute Of Medical Science (AIIMS)** in 2019:
 - **Around 5 crore Indians** reported to have used cannabis and opioids at the time of the survey (conducted in the year 2018).
 - It has been estimated that there are **about 8.5 lakh people who inject drugs**.
 - Of the total cases estimated by the report, more than half of them are contributed by states like **Punjab, Assam, Delhi, Haryana, Manipur, Mizoram, Sikkim and Uttar Pradesh**.
 - About 60 lakh people are estimated to need help for their opioid use problems.

Note:



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➤ **Various Steps taken:**

- **Coordination with Various International Organisations:**
 - The **Narcotics Control Bureau (NCB)** coordinated with various **international organisations** for sharing information and intelligence to combat transnational drug trafficking.
 - They included the **SAARC, BRICS**, Colombo Plan, **ASEAN, BIMSTEC**, United Nations Office on Drugs and Crime, and the International Narcotics Control Board.
- **Coordination among Various Central and State Agencies:**
 - For this, the **Narco Coordination Centre (NCORD) mechanism** was set up by the **Ministry of Home Affairs (MHA)** in 2016 for effective drug law enforcement.
 - This NCORD system was restructured into a **four-tier scheme up to district level** in July 2019, for better coordination.
 - A **Joint Coordination Committee with the NCB Director General** as its chairman was set up in July 2019, to monitor the investigation into cases involving large seizures.
- **SIMS (Seizure Information Management System) Portal:**
 - For **digitisation of pan-India drug seizure data**, the MHA launched an **e-portal called 'SIMS'** in 2019 for all the drug law enforcement agencies under the mandate of **Narcotics Drugs and Psychotropic Substances Act (NDPS)**.
- **National Fund for Control of Drug Abuse:**
 - It was constituted to meet the expenditure incurred in connection with combating illicit traffic in Narcotic Drugs; rehabilitating addicts, and educating the public against drug abuse, etc.
- **National Drug Abuse Survey:**
 - The government is also conducting the Survey to measure trends of drug abuse in India through the Ministry of Social Justice & Empowerment with the help of National Drug Dependence Treatment Centre of AIIMS.
- **Project Sunrise:**
 - It was **launched by the Ministry of Health and Family Welfare in 2016**, to tackle the **rising HIV prevalence** in north-eastern states in India, especially among people injecting drugs.

○ **The Narcotic Drugs and Psychotropic Substances Act, (NDPS) 1985:**

- It prohibits a person from producing, possessing, selling, purchasing, transporting, storing, and/or consuming any narcotic drug or psychotropic substance.
- The NDPS Act has since been amended thrice – in 1988, 2001 and 2014.
- The Act extends to the whole of India and it applies also to all Indian citizens outside India and to all persons on ships and aircraft registered in India.

○ **'Nasha Mukh Bharat', or Drug-Free India Campaign:**

- It focuses on community outreach programs.

➤ **International Treaties and Conventions to Combat Drug Menace:**

○ **India is signatory** of the following International treaties and conventions to combat the menace of Drug Abuse:

- **United Nations (UN) Convention on Narcotic Drugs (1961)**
- **UN Convention on Psychotropic Substances (1971).**
- **UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988)**
- **UN Convention against Transnational Organized Crime (UNTOC) 2000**

National Health Mission

Why in News

Recently, the Union Minister of State for Health and Family Welfare informed the **Rajya Sabha** that **National Health Mission (NHM)** supported health system reforms have resulted in development of resilient health systems.

Key Points

➤ **About:**

- NHM was launched by the government of India in 2013 subsuming the **National Rural Health Mission** (Launched in 2005) and the **National Urban Health Mission** (Launched in 2013).
- The main programmatic components include **Health System Strengthening in rural and urban areas** for - **Reproductive-Maternal-Neonatal-Child and**

Note:



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Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases.

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



GOALS

- Reduce MMR to 1/1000 live births
- Reduce IMR to 25/1000 live births
- Reduce TFR to 2.1
- Prevention and reduction of anemia in women aged 15-49 years
- Prevent and reduce mortality and morbidity from communicable, non-communicable, injuries and emergency diseases
- Reduce household out-of-pocket expenditure on total health care expenditure
- Reduce annual incidence and mortality from Tuberculosis by half
- Reduce prevalence of Leprosy to <1/10000 population and incidence to zero in all districts
- Annual Malaria incidence to be <1/1000
- Less than 1 percent microfilariasis prevalence in all districts
- Kala-Azar Elimination by 2015, <1 case per 10000 population in all blocks

Department of Health and Family Welfare, Government of Karnataka

➤ Support to States & Union Territories (UT):

○ Health Facilities:

- NHM support is provided to States/ UTs for **setting up of new facilities** as per norms and **upgradation of existing facilities** for bridging the infrastructure gaps based on the requirement posed by them.

○ Health Services:

- NHM support is also provided for **provision of a range of free services** related to maternal health, child health, adolescent health, family planning, **universal immunisation programme**, and for major diseases such as **Tuberculosis**, vector borne diseases like **Malaria, Dengue** and **Kala Azar, Leprosy** etc.

➤ Major Initiatives Supported Under NHM:

- **Janani Shishu Suraksha Karyakram (JSSK).**
- **Rashtriya Bal Swasthya Karyakram (RBSK).**
- Implementation of **Free Drugs and Free Diagnostics Service Initiatives.**
- **PM National Dialysis Programme.**
- Implementation of **National Quality Assurance Framework** in all public health facilities.
- **Mobile Medical Units (MMUs) & Tele-consultation services** are also being implemented to improve access to healthcare particularly in rural areas.

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

Achievements of NHM

➤ Improvement in Health Indicators:

- In the 15 years of implementation, the NHM has **enabled achievement of the Millennium Development Goals (MDGs)** for health.
 - The MDGs have been superseded by the **Sustainable Development Goals.**
- It has also led to **significant improvements in maternal, new-born, and child health indicators**, particularly for **maternal mortality ratio, infant and under five mortality rates**, wherein the **rates of decline in India are much higher than the global averages** and these declines have accelerated during the period of implementation of NHM.

➤ Growth in Public Health Facilities:

- NHM adopts a health system **approach and targets to build a network for public health facilities with Health & Wellness Centres at the grassroot level and District Hospitals**, with robust referral linkage, to offer Comprehensive primary and secondary care services to citizens.
- NHM has not only **contributed to increase in the institutional capacities** for service delivery but also has **led to development of capacities for targeted interventions** of the various National Programmes under the NHM.

➤ Equitable Development:

- There was also a sustained focus on the health of tribal populations, those in **Left Wing Extremism** areas, and the urban poor.
- A more recent effort at ensuring equity in access and use, is the **Aspirational district initiative**, in which 115 districts across 28 states, with weak social and human development indicators have been identified for allocation of additional resources and capacity enhancement to catch up with more progressive districts.

➤ National Ambulance Services:

- At the time of launch of NRHM (2005), ambulance networks were non-existent.
- So far, **20,990 Emergency Response Service Vehicles are operational under NRHM.**

Note:

- Besides **5,499 patient transport vehicles** are also **deployed**, particularly for providing “free pickup and drop back” facilities to pregnant women and sick infants.
- **Human Resource Augmentation:**
 - NHM supports states for engaging service delivery HR such as doctors, nurses and health workers and also implements the **world’s largest community health volunteer programme through the Accredited Social Health Activists (ASHAs)**.
 - More than **10 lakhs ASHAs and ASHA facilitators are engaged under NHM**.
 - NHM has also **supported states to acquire staff** with skills in public health, finance, planning and management to plan and implement interventions, freeing up clinical staff to deliver health services.
- **Health Sector Reforms:**
 - NHM enabled the design and implementation of **reforms specifically related to Governance , Procurement and Technology**.
- **Addressing high Out-of-Pocket Expenditure (OOPE):**
 - Recognising the need for reducing the current high levels of OOPE, and that, almost 70% of the OOPE is on account of drugs and diagnostics, the Free Drugs and Free Diagnostics Services Initiatives have been implemented under the NHM.
 - The **National List of Essential Medicines (NLEM)** and the **Essential Diagnostics Lists** have been notified and are periodically updated to include more essential drugs based on new initiatives undertaken.

India Inequality Report 2021: Oxfam

Why in News

The report titled “**India Inequality Report 2021: India’s Unequal Healthcare Story**” released by **Oxfam India** shows that the **socio-economic inequalities** seep into the health sector and disproportionately affect health outcomes of **marginalised communities** due to the absence of **Universal Health Coverage (UHC)**.

- The report suggested that the states which are attempting to reduce existing inequalities and with higher expenditure on health had lower confirmed cases of **Covid-19**.

Key Points

➤ About the Report:

- It provides a comprehensive analysis of the health outcomes across different socioeconomic groups to gauge the level of health inequality that persists in the country.
- The findings are primarily based on secondary analysis from rounds 3 and 4 of the **National Family Health Survey** and various rounds of the **National Sample Survey**.

➤ Finding of the Report:

- **Performance of Different Groups:** The general category performs better than SCs and STs; Hindus perform better than Muslims; the rich perform better than the poor; men are better off than women; and the urban population is better off than the rural population on various health indicators.
 - The Covid-19 pandemic has further exacerbated these inequalities.
- **Performance of States:** The **states that have for the past few years been reducing inequalities**, such as inequalities to access to health between the general category and SC and ST populations, **have less confirmed cases of Covid** – such as Telangana, Himachal Pradesh and Rajasthan.
 - On the other hand, **states that have had higher GDP expenditure on health**, such as Assam, Bihar and Goa, have **higher recovery rates of Covid cases**.
 - **Kerala invested in infrastructure** to create a multi-layered health system, designed to provide first-contact access for basic services at the community level and expanded primary healthcare coverage to achieve access to a range of preventive and curative services.
- **Rural-Urban Divide:** It was highlighted during the second wave of the Covid-19 pandemic, when rural areas witnessed a shortage of tests, oxygen and hospital beds.
- **Doctor-person Ratio:** The National Health Profile in 2017 recorded one government allopathic doctor for every 10,189 people and one state-run hospital for every 90,343 people.
- **Hospital Beds:** The investment in public health infrastructure is so little that the number of beds in the country has actually come down, from

Note:



drishti

9 beds per 10,000 persons in the 2010 Human Development Report, to only 5 beds per 10,000 persons today.

- India also **ranks the lowest in the number of hospital beds per thousand population among the BRICS nations** at 0.5. It is lower than lesser developed countries such as Bangladesh (0.87), Chile (2.11) and Mexico (0.98).
- **Women Literacy:** While women's literacy has improved across social groups over the years, SC and ST women lag behind the general category by 18.6% and 27.9%, respectively.
 - There exists a gap of 55.1% between the top and bottom 20% of the population in 2015-16.
 - Though the female literacy rate among Muslims (64.3%) is lower than all religious groups, inequality has reduced over time.
- **Sanitation:** As far as sanitation is concerned, 65.7% households have access to improved, non-shared sanitation facilities in the general category while SC households are 28.5% behind them and ST are 39.8% behind them.
 - While 93.4% of households in the top 20% have access to improved sanitation, only 6% have access in the bottom 20% — a difference of 87.4%.
- **Immunisation:** The immunisation in ST households at 55.8% is still 6.2% below the national average, and Muslims have the lowest rate across all socio-religious groups at 55.4%.
 - The rate of immunisation of girls continues to be below that of the male child.
 - More than 50% of children still do not receive food supplements in the country.
- **Life Expectancy:** **Life expectancy** based on wealth is 65.1 years for the bottom 20% of the households, while it is 72.7 years for the top 20%.
- **Antenatal Care:** Percentage of mothers who have received full antenatal care declined from 37% in 2005-06 to 21% in 2015-16.
 - The share of institutional deliveries in India has increased from 38.7% in 2005-06 to 78.9% in 2015-16.
- **Infant Mortality Rate:** Overall improvement in **Infant mortality rate (IMR)** is not equal across social groups. Dalits, Adivasis and OBCs have higher IMR as compared to the general category.

- IMR for Adivasis is 44.4 which is 40% more than the general category and 10% more than the national average.

Recommendations

- The **right to health** should be enacted as a **fundamental right** that makes it obligatory for the government to ensure equal access to timely, acceptable, and affordable healthcare of appropriate quality and address the underlying determinants of health to close the gap in health outcomes between the rich and poor.
- The **free vaccine policy** should adopt an **inclusive model** to ensure that everyone, irrespective of their gender, caste, religion or location i.e. people living in hard-to-reach areas, gets the vaccine without any delay.
- **Increase health spending to 2.5 percent of Gross Domestic Product (GDP)** to ensure a more equitable health system in the country; ensure that union budgetary allocation in health for SCs and STs is proportionate to their population.
- Regions with higher concentration of **marginalised population** should be identified and public health facilities should be established, equipped and made fully functional as per the **Indian Public Health Standards (IPHS)**.
- **Widen the ambit of insurance schemes** to include out-patient care. The major expenditures on health happen through out-patient costs as consultations, diagnostic tests, medicines, etc.
- **Institutionalize a centrally-sponsored scheme** that earmarks funds for the provision of free essential drugs and diagnostics at all public health facilities.
- **Regulate the private health sector** by ensuring that all state governments adopt and effectively implement Clinical Establishments Act or equivalent state legislation.
- **Extend the price capping policy** introduced during the Covid-19 pandemic to include diagnostics and non-Covid treatment in order to prevent exorbitant charging by private hospitals and reduce catastrophic out-of-pocket health expenditure.
- **Augment and strengthen human resources and infrastructure** in the healthcare system by regularising services of women frontline health workers.
- **Establishing contingency plans** for scenarios such as the second wave of the pandemic.

Note:

- **Inter-sectoral coordination** for public health should be boosted to address issues of water and sanitation, literacy, etc. that contribute to health conditions.

Conclusion

- To stabilise and equalise this inequality, universal health coverage should be supported strongly by the public sector.
- Persistent underfunding of the public health system, especially primary health care and inadequate health infrastructure in India remain to be addressed by the government even after devastating second wave. Otherwise, health emergencies will only aggravate existing inequalities and work as a detriment for the poor and the marginalised.

Fit for 55 Package: EU

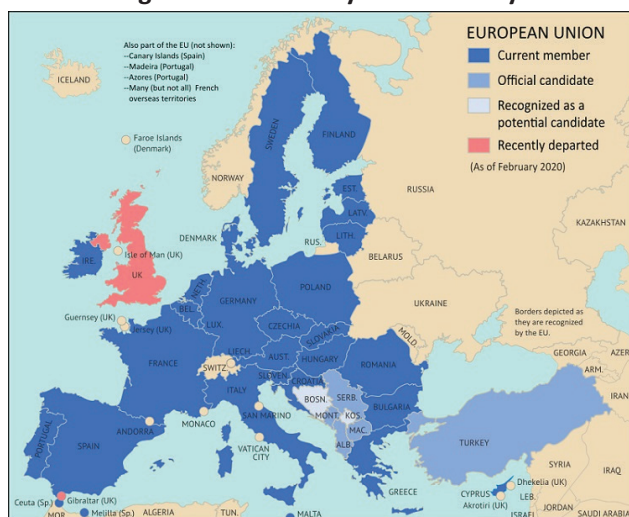
Why in News

Recently, the **European Union (EU)** released a new climate proposal, the **Fit for 55 package**.

- The EU in **December 2020** submitted a **revised Nationally Determined Contribution (NDC)** under the **Paris Agreement**.

Key Points

- **Aim:**
 - The new package **attempts to deliver the NDC and carbon neutrality goal through proposed changes** that would impact the economy, society and industry, as well as ensure a **fair, competitive and green transition by 2030 and beyond**.



- **Climate neutrality** is achieved when a country's emissions are balanced by absorptions and removal of greenhouse gases from the atmosphere. It is also expressed as a state of net-zero emissions.

- It claims to achieve a **balance between “regulatory policies” and market-based carbon pricing** to avoid the pitfalls of each.
- **Major Proposals:**
 - **Renewable Sources:**
 - It proposes to **increase the binding target of renewable sources in the EU's energy mix to 40%**(from 32% earlier) and **improve energy efficiency by 36%** (from 32.5% earlier) **by 2030**.
 - **Vehicular Carbon Emissions:**
 - It must be cut by **55% by 2030 and by 100% by 2035**, which means a phaseout of petrol and diesel vehicles by 2035.
 - It also includes some **provisions that benefit the auto industry**. Public funds will be used to help build **charging stations every 60 kilometers, on major highways**, a move that will encourage sales of electric cars.
 - It will also help finance a network of **hydrogen fueling stations**.
 - **Emissions Trading System:**
 - It calls for the creation of an **Emissions Trading System (ETS)** for **buildings and road transport**, separate from the EU's current ETS, to become operational from 2026.
 - **ETS** are market-based instruments that create **incentives to reduce emissions** where these are most cost-effective.
 - **Social Climate Fund:**
 - To help low-income citizens and small businesses adjust to the new ETS, the EU proposes the creation of a Social Climate Fund, which **will take various forms ranging from funding for renovation of buildings, and access to low carbon transport, to direct income support**.
 - They expect to build up this fund using **25% of revenues from the new ETS**. The current ETS is proposed to extend to the maritime sector between 2023 and 2025.
 - **Carbon-Border Adjustment Mechanism:**

Note:

- Among other market-based mechanisms, the EU is proposing a carbon-border adjustment mechanism, which will **put a price on imports from places that have carbon-intensive production processes**.
- This instrument has been deemed to have a small impact on global carbon dioxide emissions by the **United Nations Conference on Trade and Development**, and could instead have negative impacts on developing countries.
- **Enhance Sink Capacity:**
 - It has set a target to **enhance the EU's sink capacity to 310 million tonnes of CO₂ equivalent**, which it hopes will be achieved through specific national targets by member countries.
- **Analysis:**
 - The EU's NDC target is to reduce **greenhouse gas** emissions by 55% below 1990 levels by 2030. It has also set a long-term goal of achieving **carbon neutrality by 2050**.
 - The EU's target is **more aggressive than that of the US**, which committed to reduce emissions by 40% to 43% over the same period, but **behind Britain**, which pledged a 68% reduction.
 - China, the **world's largest emitter**, has only said it aims for emissions to peak by 2030.
 - Fit for 55 Package **could put Europe at the forefront of new technologies** like electric car batteries, offshore wind generation or aircraft engines that run on hydrogen.

- But the transition **will also be painful for some consumers and companies**, raising the cost of a wide variety of goods and services, like video monitors imported from China, for example, or a vacation flight to a Greek island or even a full tank of gasoline.
 - Companies that make products destined for obsolescence, like parts for internal combustion engines, **must adapt or go out of business**.
- The proposals **could reshape polluting industries** like steelmaking, which directly employs 330,000 people in the EU.

India's INDC, to be achieved primarily, by 2030

- To **reduce the emissions intensity of the Gross Domestic Product** by about a third.
- A total of **40% of the installed capacity for electricity will be from non-fossil fuel sources**.
- India also promised an **additional carbon sink** (a means to absorb carbon dioxide from the atmosphere) of 2.5 to 3 billion tonnes of carbon dioxide equivalent through **additional forest and tree cover by the year 2030**.

Indian Initiatives to Fight Climate Change:

- **National Clean Air Programme (NCAP)**
- **Bharat Stage-VI (BS-VI) emission norms**
- **UJALA scheme**
- **National Action Plan on Climate Change (NAPCC)**
- **Coalition for Disaster Resilience Infrastructure**
- **International Solar Alliance**



Note:

Art & Culture

Highlights

- Kanjeevaram Silk Sari: Tamil Nadu
- India's 40th World Heritage Site: Dholavira
- India's 39th World Heritage Site: Ramappa Temple
- Asadha Poonima Dhamma Chakra Day

Kanjeevaram Silk Sari: Tamil Nadu

Why in News

National award winning artisan weaver, B Krishna-moorthy, has created a repository with samples of all the designs, patterns and motifs traditional to Kanjeevaram silk sari weaving, preserving fine pieces for next generation.

Key Points

➤ About Kanjeevaram Sarees:

- Traditionally, the **Kanjeevaram** is a sari that is usually handwoven in **mulberry silk** and has **pure gold or silver zari** that renders it a festive quality.
 - Handloom silk saree is identified as the most luxurious and classy fabric in Indian traditional clothing.
- Originating from the village '**Kanchipuram**' in **Tamil Nadu**, Kanjeevaram is considered the queen of silk sarees.
- The **temple architecture of south India** and especially around Kanchipuram has historically served as a mood board for **design inspiration for the traditional Kanjeevaram motifs**.



- One can spot motifs such as the **mythical creature called the Yali** (an elephant-lion fusion), the **GandaBerunda** (a two-headed majestic mythical bird) and the **ubiquitous temple border called reku**.

- Tracing its long and rich history from the **Chola Dynasty**, Kanchipuram sarees today are considered as one of the **oldest and rich legacies of the Indian textile industry**.

- Kanchipuram silk has also received **Geographical indication (GI Tag)** in 2005-06.

➤ Other GI tagged Sarees:

- **Tamil Nadu:** Kandangi Saree, Thirubuvanam silk sarees, Kovai Kora Cotton Sarees
- **Uttar Pradesh:** Banaras Brocade
- **Karnataka:** Ilkal Saree, Molakalmuru Saree
- **Andhra Pradesh:** Uppada Jamdani Sarees, Venkatagiri Sarees, Mangalagiri Saree
- **Kerala:** Balaramapuram Sarees, Kasaragod Sarees, Kuthampully Sarees
- **Telangana:** Gadwal Saree, Pochampally Ikat (logo)
- **Madhya Pradesh:** Chanderi Saree, Maheshwar Sarees
- **Odisha:** Orissa Ikat, Bomkai Saree, Habaspuri Saree
- **West Bengal:** Santipore Saree, Baluchari Saree, Dhaniakhali Saree
- **Maharashtra:** Paithani Sarees and Fabrics, Karvath Kati Sarees and Fabrics
- **Chhattisgarh:** Champa Silk Saree
- **Gujarat:** Surat Zari Craft, **Patola Saree**.

➤ Silk Production in India:

- India is the **second largest producer of silk** in the world, producing around **18% of the world's total silk**.

Note:

- There are **five major types of silk of commercial importance**, obtained from different species of silkworms. These are **Mulberry, Oak Tasar & Tropical Tasar, Muga and Eri**.
 - Except mulberry, other non-mulberry varieties of silks are wild silks, known as vanya silks.
- India has the unique distinction of producing all these commercial varieties of silk.
- **South India is the leading silk producing area** of the country and is also known for its famous silk weaving enclaves like Kancheepuram, Dharmavaram, Arni, etc.
- The Government of India in 2017 launched a scheme called **"Silk Samagra"** for the development of sericulture in the country.

India's 40th World Heritage Site: Dholavira

Why in News

Recently, **UNESCO** has announced the Harappan city of **Dholavira** in Gujarat as India's **40th world heritage site**. It is the first site of **Indus Valley Civilisation (IVC)** in India to be included on the coveted list.

- With this successful nomination, India now enters the **Super-40 club for World Heritage Site inscriptions**.
- Apart from **India, Italy, Spain, Germany, China and France** have 40 or more World Heritage sites.
- India has 40 **world heritage sites** overall, which includes 32 cultural, 7 natural and one mixed property. **Ramappa Temple (Telangana)** was India's **39th World Heritage Site**.

Key Points

- **About Dholavira:**
 - It is one of the most remarkable and well-preserved **urban settlements** in South Asia.
 - It was **discovered in 1968 by archaeologist Jagat Pati Joshi**.
 - After **Mohen-jo-Daro, Ganweriwala and Harappa in Pakistan** and **Rakhigarhi in Haryana of India**, **Dholavira is the fifth largest metropolis** of Indus Valley Civilization (IVC).
 - IVC flourished around 2,500 BC, in the western part of South Asia, what today is Pakistan

and Western India. It was basically an urban civilization and the people lived in well-planned and well-built towns, which were also the centers for trade.

- The site contains ruins of an ancient IVC/Harappan city. It comprises two parts: a **walled city** and a **cemetery** to the west of the city.
 - The walled city consists of a **fortified Castle with attached fortified Bailey and Ceremonial Ground**, and a **fortified MiddleTown and a Lower Town**.
 - A series of **reservoirs** are found to the east and south of the Citadel.



Location:

- The ancient city of Dholavira is an archaeological site at **Kachchh District**, in the state of Gujarat, which dates from the 3rd to mid-2nd millennium BCE.
- Dholavira's **location is on the Tropic of Cancer**.
- It is located on Khadir bet island in the **Kachchh Desert Wildlife Sanctuary** in the **Great Rann of Kachchh**.
- Unlike other **Harappan antecedent towns normally located near to rivers and perennial sources of water**, the location of Dholavira in the **island of Khadir bet**.
 - This was **strategic to harness different mineral and raw material sources** (copper, shell, agate-carnelian, steatite, lead, banded limestone, among others).
 - It also facilitated internal as well as **external trade to the Magan (modern Oman peninsula) and Mesopotamian regions**.

Note:

➤ Archeological Findings:

- Artifacts that were found here include **terracotta pottery, beads, gold and copper ornaments, seals, fish hooks, animal figurines, tools, urns**, and some imported vessels.
 - Remains of a copper smelter indicate Harappans, who lived in Dholavira, **knew metallurgy**.
 - It is believed that traders of Dholavira used to **source copper ore from present-day Rajasthan and Oman and UAE and exported finished products**.
 - It was also a **hub of manufacturing jewellery** made of shells and semi-precious stones, like agate and used to export timber.
- **10 large stone inscriptions**, carved in Indus Valley script, perhaps the world's earliest sign board.
- Near the ancient city is **a fossil park where wood fossils are preserved**.
- Unlike graves at other IVC sites, **no mortal remains of humans** have been discovered at Dholavira.

➤ Distinct Features of the Dholavira Site:

- **Cascading series of water reservoirs**.
- Outer **fortification**.
- **Two multi-purpose grounds**, one of which was used for festivities and other as a marketplace.
- **Nine gates** with unique designs.
- Funerary architecture featuring tumulus — **hemispherical structures like the Buddhist Stupas**.
- Multi-layered defensive mechanisms, extensive use of stone in construction and special burial structures.

➤ Decline of Dholavira:

- Its decline also **coincided with the collapse of Mesopotamia**, indicating the **integration of economies**.
 - Harappans, who were maritime people, **lost a huge market**, affecting the **local mining, manufacturing, marketing and export businesses** once Mesopotamia fell.
- Dholavira entered a phase of **severe aridity** due to climate change and rivers like **Saraswati drying up**.
 - Due to a drought-like situation, people started **migrating toward the Ganges valley** or towards south Gujarat and further beyond in Maharashtra.

- Further, the Great Rann of Kutch, which surrounds the Khadir island on which Dholavira is located, used to be navigable, but the sea receded gradually and the **Rann became a mudflat**.

Other Harappan Sites in Gujarat

- **Lothal**: Before Dholavira was excavated, Lothal, in Saragwala village on the **bank of Sabarmati** in Dholka taluka of Ahmedabad district, was the most prominent site of IVC in Gujarat.
 - It was excavated between 1955 and 1960 and was discovered to be an important port city of the ancient civilisation, with structures made of mud bricks.
 - From a graveyard in Lothal, 21 human skeletons were found.
 - Foundries for making copperware were also discovered.
 - Ornaments made of semi-precious stones, gold etc. were also found from the site.
- **Rangpur** on the **bank of Bhadar river** in Surendranagar district was the first Harappan site in the state to be excavated.
- **Rojdi** in Rajkot district, **Prabhas** near Veraval in Gir Somnath district.
- **Lakhabaval** in Jamnagar, and **Deshalpar** in Bhuj taluka of Kutch are among other Harappan sites in the state.

Other World Sites in Gujarat

- Other than Dholavira, there are 3 UNESCO World Heritage Sites in Gujarat.
 - Historic city of Ahmedabad
 - **Rani ki Vav, Patan**
 - Champaner & Pavagadh

India's 39th World Heritage Site: Ramappa Temple

Why in News

Recently, **Rudreswara Temple, (also known as the Ramappa Temple) at Mulugu district, Telangana** has been inscribed on UNESCO's World Heritage list.

- Ramappa Temple was proposed by the government as its only nomination for the **UNESCO World Heritage site** tag for the year 2019.

Note:



Key Points

- **About Rudreshwara (Ramappa) Temple:**
 - The Rudreshwara temple was **constructed in 1213 AD during the reign of the Kakatiya Empire by Recherla Rudra**, a general of Kakatiya king Ganapati Deva.
 - The presiding deity here is **RamalingeswaraSwamy**.
 - It is also known as the **Ramappa temple**, after the **sculptor** who executed the work in the temple for 40 years.
 - The temple stands on a **6 feet high star-shaped platform** with walls, pillars and ceilings adorned with **intricate carvings** that attest to the unique skill of the Kakatiya sculptors.
 - The foundation is built with the “**sandbox technique**”, the flooring is granite and the pillars are basalt.
 - The **lower part of the temple is red sandstone** while the **white gopuram** is built with light bricks that reportedly float on water.
 - An inscription dates the temple to **1135 Samvat-Saka on the eight-day of Magha** (12th January, 1214).
 - The distinct style of Kakatiyas for the gateways to temple complexes, unique only to this region, confirm the **highly evolved proportions of aesthetics in temple** and town gateways in South India.
 - European merchants and travellers were mesmerized by the beauty of the temple and one such traveller had remarked that the temple was the “**brightest star in the galaxy of medieval temples of the Deccan**”.
- **Sandbox Technique:**
 - The technique involved filling the pit — **dug up for laying the foundation** — with a mixture of **sand-lime, jaggery (for binding) and karakkaya** (black myrobalan fruit) before the buildings were constructed on these ‘sandboxes’.

- The sandbox in the foundation acts as a **cushion in case of earthquakes**.
- Most of the vibrations caused by earthquakes lose their strength while passing through the sand by the time they reach the actual foundation of the building.

Asadha Poornima Dhamma Chakra Day

Why in News

Recently, India in partnership with **International Buddhist Confederation (IBC)** celebrated **Asadha Poornima Dhamma Chakra Day 2021** on 24th July 2021.

- The day is also observed as **Guru Poornima** by both Buddhists and Hindus as a day to mark reverence to their Gurus.

Guru Purnima

- According to the Hindu calendar, Guru Purnima generally **falls on a full-moon day in the Hindu month of Ashadh**.
- It is dedicated to Maharshi Veda Vyasa, the sage **who is believed to have edited the sacred Hindu text, the Vedas and created the 18 Puranas, Mahabharata and the Srimad Bhagavatam**.
- For Buddhists, **the festival marks the first sermon of Lord Buddha**, which is said to have been delivered at Sarnath, Uttar Pradesh, on this very day.
- It is also believed to **mark the onset of monsoons**.

Key Points

- **About:**
 - It **commemorates Buddha's first sermon** to his **first five ascetic disciples**. He gave his first knowledge to the world after attaining enlightenment.
 - The day marks the establishment of **the Sangha**, **on a full-moon day of the month of Asadha**, in the Indian Sun calendar at the ‘**Deer Park**’, R̥ṣipatana in the current day **Sarnath, near Varanasi, India**.
 - It is also known as **Esala Poya** in Sri Lanka and **Asanha Bucha** in Thailand.
 - It is the **second most sacred day** for Buddhists after the **Buddha Poornima or Vesak**.

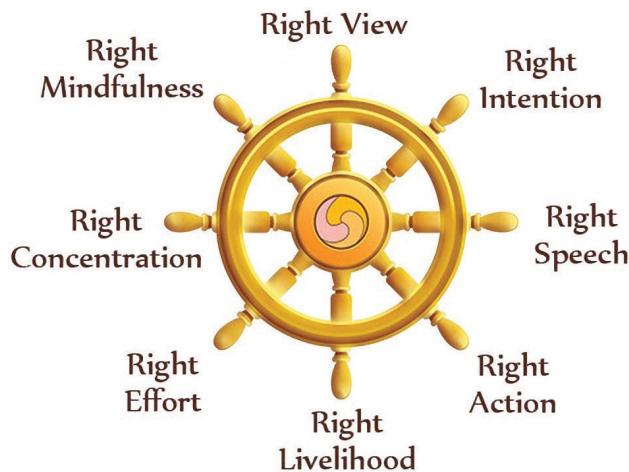
Note:

- This teaching of **Dhamma Chakka- PavattanaSutta (Pali)** or Dharma chakra Pravartana Sutra (Sanskrit) is also known as the **First Turning of Wheels of Dharma** and comprises the **Four Noble Truths** and **Noble Eightfold Path**.

- **Four Noble Truths:**

- Suffering (**dukkha**) is the essence of the world.
- Every suffering has a cause – **Samudya**.
- Suffering could be extinguished – **Nirodha**.
- It can be achieved by following the **Atthanga Magga (Eightfold Path)**.

- **Eightfold Path:**



- The **Rainy Season retreat (Varsha Vassa)** for the Monks and Nuns also starts with this day **lasting for three lunar months from July to October**, during which they remain in a single place, generally in their **temples (Viharas/ Chaityas)** dedicated to intensive meditation.

- **Gautam Buddha:**

- He is believed to be the **eighth of the ten incarnations of Lord Vishnu** (Dashavatar).
- He was born as **Siddhartha Gautama** in circa **563 BCE**, in Lumbini and belonged to the **Sakya clan**.
- Gautam attained **Bodhi (enlightenment)** under a **pipal tree at Bodhgaya, Bihar**.

- Buddha gave his first sermon in the **village of Sarnath, near Varanasi in Uttar Pradesh**.
- He died at the age of **80 in 483 BCE at Kushinagara, Uttar Pradesh**. The event is known as **Mahaparinibban** or **Mahaparinirvana**.

- **Contribution of Buddhism to Indian Culture:**

- The concept of **ahimsa** was its **chief contribution**. Later, it became one of the cherished values of our nation.
- Its contribution to the **art and architecture of India** was **notable**. The stupas at Sanchi, Bharhut, and Gaya are wonderful pieces of architecture.
- It **promoted education through residential universities** like those at **Taxila, Nalanda, and Vikramasila**.
- The language of Pali and other local languages developed through the teachings of **Buddhism**.
- It had also promoted the spread of Indian culture to other parts of Asia.

- **Buddhism's Relevance in Covid-19:**

- Buddha's teaching is relevant today when humanity faces the **Covid-19 pandemic** as the biggest challenge before it. **Buddha's principles bind countries together**, strengthening humanity.
- Today, the nations of the world are also **holding each other's hands and helping each other in the times of pandemic**, following the **path of service to humanity as shown by Buddha**.
- Buddha's **four noble truths and eightfold path** can **help understand the doctrine of Karma** and can help in healing the world and make it a better place.

- **UNESCO's Heritage Sites Related to Buddhism:**

- Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar
- Buddhist Monuments at **Sanchi**, MP
- **Maha Bodhi Temple** Complex at Bodh Gaya, Bihar
- **Ajanta Caves** Aurangabad, Maharashtra.



Note:

Security

Highlights

- Exercise Cutlass Express
- Akash-NG & MPATGM: DRDO
- National Security Council
- Exercise INDRA-21

Exercise Cutlass Express

Why in News

Recently, **Indian Naval Ship Talwar** participated in a multinational training exercise **Cutlass Express 2021**, being conducted along the East Coast of Africa.

Key Points

- **About Exercise Cutlass Express:**
 - The exercise is an annual maritime exercise conducted to promote national and regional maritime security in East Africa and the Western Indian Ocean.
 - The 2021 edition of the exercise involves participation of 12 Eastern African countries, US, UK, India and various international organisations
 - The exercise is designed to assess and improve combined maritime law enforcement capacity, promote national and regional security and increase interoperability between the regional navies.
 - **India's Information Fusion Centre – Indian Ocean Region (IFC-IOR)** is also participating in the exercise.
 - India's participation is in accordance with India's stated policy towards maritime cooperation in the Indian Ocean region and vision **SAGAR (Security and Growth for All in the Region)**.

Akash-NG & MPATGM: DRDO

Why in News

Recently, the **Defence Research & Development Organisation (DRDO)** successfully flight-tested the **New Generation Akash Missile (Akash-NG)** and the **Man Portable Anti Tank Guided Missile (MPATGM)**.

- In **June 2021** a new generation nuclear capable ballistic missile **Agni-P (Prime)** was successfully test-fired by the DRDO.
- In **February 2021** India also successfully test-fired indigenously-developed anti-tank guided missile systems '**Helina**' and '**Dhruvastra**'.

Key Points

- **Akash Missile (Akash-NG):**
 - **About:**
 - It is a **surface-to-air Missile**. It is a new variant of the **Akash missile** that can strike targets at a distance of around 60 km and fly at a speed of up to Mach 2.5.
 - Once deployed, the Akash-NG weapon system will prove to be a force multiplier for the air defence capability of the Indian Air Force.



- **Development & Production:**
 - Developed by **Defence Research & Development Laboratory (DRDL)**, Hyderabad in collaboration with other **DRDO laboratories**.
 - It is being produced by **Bharat Electronics Limited (BEL)** and **Bharat Dynamics Limited (BDL)**.

Note:

○ Akash Missile:

- Akash is **India's first indigenously produced medium range Surface to Air missile** that can engage multiple targets from multiple directions.
 - The missile is unique in the way that it can be **launched from mobile platforms** like battle tanks or wheeled trucks. It has nearly 90% kill probability.
 - The missile is supported by the **indigenously developed radar called 'Rajendra'**.
 - The missile is **reportedly cheaper and more accurate than US' Patriot missiles** due to its solid-fuel technology and high-tech radars.
- It can **engage targets at a speed 2.5 times more than the speed of sound** and can detect and destroy targets flying at low, medium and high altitudes.
- The Akash missile system has been **designed and developed as part of India's 30-year-old Integrated Guided-Missile Development Programme (IGMDP)**.

➤ Man Portable Anti Tank Guided Missile:

- It is an **indigenously-developed** anti-tank guided missile.
 - **Anti Tank guided missile is a medium or long-range missile** whose primary purpose is **to destroy tanks** and other armoured vehicles.
- It is a **low weight, fire and forget** missile. It is incorporated with state-of-the-art **Miniaturized Infrared Imaging Seeker** along with **advanced avionics**.
- It is launched using a tripod designed for a **maximum range of 2.5 km** with a launch **weight of less than 15 Kg**.
- Its successful test marked a major boost for the government's **Atmanirbhar Bharat campaign** and would strengthen the Indian Army.



Integrated Guided-Missile Development Programme

- It was conceived by **Dr. A.P.J. Abdul Kalam** to enable India attain self-sufficiency in the field of missile technology. **It was approved by the Government of India in 1983 and completed in March 2012.**
- The 5 missiles (**P-A-T-N-A**) developed under this program are:
 - **Prithvi**: Short range surface to surface ballistic missile.
 - **Agni**: Ballistic missiles with different ranges, i.e. Agni (1,2,3,4,5)
 - **Trishul**: Short range low level surface to air missile.
 - **Nag**: 3rd generation anti-tank missile.
 - **Akash**: Medium range surface to air missile.

National Security Council

Why in News

Amid the **Pegasus Controversy**, it was reported that the Union Government's **expenditure on the National Security Council secretariat (NSCS) increased ten fold in 2017-18** to Rs 333 crores from Rs 33 cr. in 2016-17.

Key Points

- **About:**
 - NSC of India is a **three-tiered organization** that oversees political, economic, energy and security issues of strategic concern.
 - The **National Security Advisor (NSA)** presides over the NSC, and is also the primary advisor to the prime minister. The current National Security Advisor is Ajit Doval.
- **Formation:**
 - It was formed in 1999, where all aspects of national security are deliberated upon.
- **Three tier Structure:**
 - NSC comprises the three tier structure- Strategic Policy Group (SPG), the National Security Advisory Board (NSAB) and the National Security Council Secretariat.
 - The SPG chaired by the Cabinet Secretary is the principal forum for inter-ministerial coordination and integration of the relevant inputs.
 - The NSAB undertakes long-term analysis and provides perspectives on issues of national security.

Note:

➤ **Function:**

- It operates within the executive office of the prime minister of India, liaising between the government's executive branch and the intelligence services, advising leadership on intelligence and security issues.

➤ **Members:**

- The Ministers of Home Affairs, Defence, External Affairs and Finance are its members.

Exercise INDRA-21

Why in News

The 12th Edition of **Indo-Russia joint military Exercise INDRA** will be held at **Volgograd, Russia** in August 2021.



Key Points

➤ **About Exercise INDRA:**

- The exercise will entail **conduct of counter terror operations** under the **United Nations mandate** by a joint force against international terror groups.
- The **INDRA series of exercises began in 2003** and was conducted as a bilateral naval exercise alternately between the two countries. However, the **first joint Tri-Services Exercise was conducted in 2017**.
- The **last joint, tri-services** exercise between India and Russia was conducted **in India in December 2019**. It was held **simultaneously** at Babina (near Jhansi), Pune, and Goa.

Joint Military Exercise of India with Other Countries

Name of Exercise	Country
Garuda Shakti	Indonesia
Ekuverin	Maldives
Hand-in-Hand	China
Kurukshetra	Singapore
Mitra Shakti	Sri Lanka
Nomadic Elephant	Mongolia
Shakti	France
Surya Kiran	Nepal
Yudh Abhyas	USA

Note:

Miscellaneous

Highlights

- World Youth Skills Day
- UNESCO Delists Liverpool of Its World Heritage Status
- The Gaon Buras
- Dragon Fruit
- Monkey B Virus
- Kargil Vijay Diwas

World Youth Skills Day

Why in News

Every year, 15th July is observed as the **World Youth Skills Day**.

- It was designated by the **United Nations General Assembly (UNGA)** in 2014.

Key Points

- **About:**
 - **Aim:**
 - To equip young people around the world with **essential skills for employment, work, and entrepreneurship**.
 - To achieve the **Incheon Declaration: Education 2030**, "which devotes considerable attention to technical and vocational skills development, specifically regarding access to affordable quality **technical and vocational education and training (TVET) institutions**."
 - This vision is fully captured by **Sustainable Development Goal-4**, which aims to "Ensure **inclusive and equitable quality education and promote lifelong learning opportunities for all**".
 - To eliminate **gender disparity**.
 - **Theme for 2021:**
 - 'Reimagining Youth Skills Post-Pandemic'.
- **State of Youth Employment and Schools during Covid-19:**
 - According to the estimates of **UNESCO**, schools were **shut down for over 30 weeks** in **50% of the countries** between **March 2020 and May 2021**.

- **Respondents to a survey of the TVET**, which was jointly collected by **UNESCO**, the **ILO** and the **World Bank**, revealed that **distance learning was the most common way of imparting skills**.
- Youth employment fell **8.7% last year**, compared with **3.7% for adults**.
- **Announcement by India:**
 - The **Prime Minister** announced the **75 newly sanctioned Jan Shikshan Sansthan (JSSs)** and also launched a **portal** made specifically for JSS.
 - JSSs aim to provide **vocational training to non-literates, neo-literates as well as school dropouts in rural areas**, by identifying skills that might be relevant to the market of that region.
 - Curriculum was launched of **57 new courses aligned with industry demand**.

UNESCO Delists Liverpool of Its World Heritage Status

Why in News

Recently, the city of Liverpool, England has been removed from **UNESCO's (United Nations Educational, Scientific and Cultural Organization)** list of world heritage sites.

- Earlier six Indian places were added to the **tentative list of UNESCO's** world heritage sites.

Key Points

- **Liverpool:**
 - The port city was **included in the prestigious list for its architectural beauty** and in recognition of its role as **one of the world's most important ports** during the **18th and 19th centuries**.

Note:



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- It was **named a World Heritage Site in 2004**, joining cultural landmarks such as the Great Wall of China, the **Taj Mahal**, and the Leaning Tower of Pisa.
 - The city is only the **third place to be removed from the prestigious list**.
- **Reasons for Delisting:**
 - The **new buildings including a football stadium** undermine the attractiveness of its Victorian docks and were destroying the **heritage value of its waterfront**.
 - The over development would **irreversibly damage the heritage of the historic port**.
- **Other Delisted Sites:**
 - **Wildlife sanctuary in Oman in 2007.**
 - **Reason:** poaching and habitat loss.
 - **Dresden Elbe valley in Germany in 2009.**
 - **Reason:** A four-lane motorway bridge was built over the river.

World Heritage Site

➤ About:

- A World Heritage Site is a place that is **listed by UNESCO for its special cultural or physical significance**. The list of World Heritage Sites is maintained by the international **'World Heritage**

Programme', administered by the **UNESCO World Heritage Committee**.

- It seeks to **encourage the identification, protection and preservation of cultural and natural heritage** around the world considered to be of outstanding value to humanity.
- This is embodied in an **international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage**, adopted by UNESCO in **1972**.
 - It provides a **framework for international cooperation in preserving and protecting cultural treasures** and natural areas throughout the world.

➤ Types:

- **Cultural heritage sites** include historic buildings and town sites, important archaeological sites, and works of monumental sculpture or painting.
- **Natural heritage sites** are restricted to natural areas.
- **Mixed heritage sites** contain elements of both natural and cultural significance

➤ Sites in India:

- India has **38 world heritage sites**, including **30 cultural properties, 7 natural properties and 1 mixed site**. The latest one included is **Jaipur city, Rajasthan**.

The Gaon Buras

Why in News

Recently, the **Assam Cabinet announced that Gaon Buras**, village-level functionaries of the district administration, **will be called 'Gaon Pradhans'**.

- The government has reasoned that a number of young men (and women) become Gaon Buras, and thus, the word 'Bura' (meaning old in Assamese) is no longer appropriate.

Key Points

➤ About:

- Gaon Buras are the **village headmen**. They are the eyes, nose, ear of the district administration at the village level.

Note:



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- There are **about 6,000 Gaon Buras in Assam**. **Women 'Gaon Buras' are not very common** and they take over, if their husbands die.

➤ A brief History:

- It **belongs to the colonial era**, when the British appointed the oldest person in the village as the head, who would oversee matters relating to land and revenue in a particular area.
- **Post-independence**, the government continued with the institution and **made the Gaon Bura a formal part of the Assam Revenue and Disaster Management department**, increasing his responsibilities, and eventually introducing a small honorarium for the role.
- In **Arunachal Pradesh, too**, the Gaon Buras (and Buris) are the most important village-level functionaries.

➤ Duties:

- Maintaining a **population register of the village**, maintaining **land records**, helping police investigate crime, etc.
- It **involves now maintaining a log of Covid-19 cases in the village**, organising vaccination camps, functioning as booth-level officers during elections etc.
- To issue a **'Gaon Bura certificate'**, a certificate that determines the permanent residency in a particular village.
 - It became crucial during the **National Register of Citizens (NRC)** for women to establish linkages with their husbands and parents.

Dragon Fruit

Why In News

In June 2021, India exported its first consignment of **dragon fruit** from a farmer of Maharashtra to Dubai in the **United Arab Emirates**.

Key Points

➤ About:

- **Introduction:**
 - The **dragon fruit (*Hylocereus undatus*)** is **indigenous to the Americas**. It is a member of the **cacti family**.
 - It is also known as **'Pitaya', 'Pitahaya', strawberry pear, noblewoman and queen of the night**

throughout the world. In India, it is also known as **'Kamalam'**.

○ Climatic Condition:

- It is hardy and grows in **diverse climatic conditions** with varied soils, especially in the **semi-arid and arid regions** of India.
- It prefers **slightly acidic soil** and **can tolerate some salts** in soil too.
- Flowering and fruiting of dragon fruits **coincide with the monsoon season** in India (June to Nov.).

○ Features:

- Its **flowers are hermaphrodites** (male and female organs in the same flower) in nature and open at night.
- The plant sustains yield for more than 20 years, is **high in nutraceutical properties** (having medicinal effects) and good for **value-added processing industries**.
- It is a **rich source of vitamins and minerals**.

➤ Popularity in India:

- The dragon fruit was **introduced to home gardens in India in the 1990s**.
- The **low maintenance** and **high profitability** of dragon fruits has attracted the farming community throughout India.
- This has led to a **steep increase in dragon fruit cultivation** in Maharashtra, Karnataka, Andhra Pradesh, West Bengal, Telangana, Tamil Nadu, Odisha, Gujarat and the Andaman and Nicobar Islands, as well as in many north eastern states.
- The country **produces approximately 12,000 tonnes of the fruit** every year.

➤ Related Issues:

- **High Investment:** Dragon fruit is a climber that needs support and hence farmers **need to invest around Rs. 3.5 lakh per acre in infrastructure**.
 - **Drip irrigation** also adds cost to the initial investment.
- **Issues in Flowering:** Generally, **sunburn** is a common problem in semi-arid and arid tracts and it can be managed by providing 25-30% shade either by **planting shade-providing trees** (such as moringa, sesbania and Melia dubia) or **installing artificial shade nets** during the harsh summer months.

➤ Government Initiatives:

- The Government of Maharashtra has taken the initiative to promote dragon fruit cultivation in

Note:



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different areas of the state by **providing good quality planting material** and **subsidies** for its cultivation through the **Mission on Integrated Development of Horticulture** (MIDH).

- MIDH is a **Centrally Sponsored Scheme** for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo.
- The **Ministry of Agriculture and Farmers Welfare** is implementing MIDH with effect from 2014-15.

Monkey B Virus

Why in News

Recently, **China** has reported the **first human infection case with Monkey B virus (BV)**.

Key Points

- **About:**
 - Monkey B virus is an **alphaherpesvirus enzootic** (endemic) **in macaques** and it was initially **isolated in 1932**.
 - **Alphaherpesviruses** are pathogens or **neuroinvasive viruses** that establish **lifelong infections in the peripheral nervous system** of humans and many other vertebrates.
 - B virus is also commonly referred to as **herpes B, herpesvirus simiae, and herpesvirus B**.
 - B virus **can survive for hours on surfaces**, particularly when moist.
- **Transmission:**
 - The infection **can be transmitted via direct contact and exchange of bodily secretions of monkeys** and has a **fatality rate of 70% to 80%**.
 - **Human-to-human Transmission:** Till date, **only one case has been documented** of an infected person spreading B virus to another person.
- **Symptoms:**
 - The **first indications** of B virus infection are typically **flu-like symptoms** such as fever and chills, muscle ache, fatigue and headache, following which an infected person **may develop small blisters** in the wound or area on the body that came in contact with the monkey.

- In the later stage, the virus can lead to the **loss of muscle coordination and neurological damage**.

➤ Treatment:

- Currently, there are **no vaccines** that can protect against B virus infection.
- **Timely antiviral medications** could help in reducing the risk to life.

Kargil Vijay Diwas

Why in News

The 22nd anniversary of **Kargil Vijay Diwas** was observed on the 26th of July 2021.

- The day is dedicated to the martyred soldiers of the Kargil war.

Key Points

- **About:**
 - After the Indo-Pak war of 1971, there had been many military conflicts. Both the countries conducted nuclear tests in 1998 which further escalated tensions and finally the Kargil War in 1999.
 - Kargil War, also known as the Kargil conflict, was fought between **May-July of 1999 in the Kargil** (now a district in the UT of Ladakh) **district of Jammu and Kashmir** along the **Line of Control (LoC)** in which India got the victory.
- **Operation Vijay:**
 - In the **year 1999**, India and Pakistan signed the Lahore Agreement to **mutually resolve the Kashmir issue in a peaceful manner**.
 - However, the **Pakistani troops began infiltrating toward Indian side of the Line of Control (LoC) under Operation Badr**, hoping to cut off Indian Troops in Siachen. Indian Army responded by launching Operation Vijay.
 - On 3rd May 1999, **Pakistan started this war** when it had infiltrated into the high altitudes in the rocky mountainous region of Kargil with around 5000 soldiers and captured it.
 - When the Indian Government got the information about it, **'Operation Vijay'** was launched by the Indian army to throw back the intruders who had treacherously occupied Indian Territory.



Note:

Key Points

Details

[illegible]

Summary

Date	Time	Location	Description

[illegible]

Summary