

## HISTORY,ART AND CULTURE

### Mahakal corridor

#### Context:

- Prime Minister to inaugurate the Mahakaleshwar Corridor, constructed in Madhya Pradesh's Ujjain at a cost of Rs 350 crore.

#### Relevance:

- GS I: History

#### Dimensions of the Article:

- What is the Mahakal corridor?
- Significance of Mahakaleshwar temple

#### What is the Mahakal corridor?

- Mahakal Maharaj Mandir Parisar Vistar Yojna is a plan for the expansion, beautification, and decongestion of the Mahakaleshwar temple and its adjoining area in Ujjain district.
- Under the plan, the Mahakaleshwar temple premises of around 2.82 hectares is being increased to 47 hectares, which will be developed in two phases by the Ujjain district administration.
- This will include the 17 hectares of Rudrasagar lake.
- The project is expected to increase annual footfall in the city from the current 1.50 crore to nearly three crore.

#### Significance of Mahakaleshwar temple

- Mahakaleshwar, which means the 'Lord of time', refers to Lord Shiva.
- As per Hindu mythology, the temple was constructed by Lord Brahma and is presently located alongside the holy river Kshipra.
- Mahakaleshwar Jyotirlinga in Ujjain is one of the 12 jyotirlingas considered the most sacred abodes of Shiva. As per records, the temple's Mahakal Lingam is believed to be Swayambhu (self-manifested) and unlike any other jyotirlingas in the country, the idol of Mahakaleshwar faces south.
- The bhasma-aarti is the first ritual conducted at the temple in the morning to wake the god, anoint him, and make the first offering of fire for him. It attracts thousands of devotees across the country.
- The shrine is revered as one of the 18 Maha Shakti Peeth in India.
- The temple in its present form was built by the Maratha general Ranoji Shinde in 1734 CE.
- Before Independence, the Dev Sthan Trust used to look after the temple.
- This was replaced by the municipal corporation of Ujjain post-Independence. The collectorate office of Ujjain district now manages the administration of the temple.

## GEOGRAPHY

### Zombie ice

#### Context:

- The melting of the Greenland ice sheet will unavoidably raise the global sea levels by at least 10.6 inches or 27 centimetres, no matter what climate action the world decides to take right now. This is because of 'zombie ice', which is certain to melt away from the ice cap and blend into the ocean.

#### Relevance:

- GS I: Geography

#### Dimensions of the Article:

- What is 'zombie ice'?
- What happens next?
- What does a 10-inch rise in sea-level mean?

#### What has led to this?

- This is on account of warming that has already happened.
- The research points to an equilibrium state where snowfall from the higher reaches of the Greenland ice cap flows down to recharge edges of the glaciers, and thicken them.
- It says that over the last several decades there has been more melting and less replenishment.

#### What happens next?

- By calculating minimum committed ice loss based on the ratio of recharge to loss, the scientists have projected that 3.3% of Greenland's total ice volume will melt, and this will happen even if the global temperature is stabilized at the current level.
- But given that global warming is predicted to get worse, the melting and the corresponding rise in sea level could be much worse.
- The study says it could reach as much as 30 inches (78 centimetres) if
- Greenland's record melt year (2012) becomes a routine phenomenon.
- However, the research team has not given a timeline. All that it mentions is that this committed melting is likely "within this century".
- But while some have questioned the timeframe being left out as an unknown, others have said the study gives a solid conservative estimate of what is likely to happen.

#### What does a 10-inch rise in sea-level mean?

- The inevitable sea-level rise that the study predicts is particularly a bad news for millions that live in coastal zones.
- According to the UN Atlas of the Oceans, 8 of the world's 10 largest cities are
- near a coast.
- Rising sea levels will make flooding, high tides and storms more frequent and worse as their impact will reach more inland. This, in turn, means a threat to local economies and infrastructure. Also, low lying coastal areas will take a harder hit.
- The World Economic Forum's 2019 Global Risks Report noted that "already an estimated 800 million people in more than 570 coastal cities are vulnerable to a sea-level rise of 0.5 metres by 2050".

## Why forecasting Cloudbursts is a challenge?

### Context:

- Cloudbursts — violent and voluminous amounts of rain pouring down in a short duration over a small area — have been reported since the mid-19th century.
- Yet, the characteristics of these events remain elusive, and our efforts in monitoring and forecasting them is at an embryonic stage.

### Relevance:

- GS-I: Geography (Physical Geography, Climatology, Important Geophysical phenomena), GS- III: Environment and Ecology (Climate Change and its effects), GS-III: Disaster Management

### Dimensions of the Article:

- What is a Cloudburst?
- Why do cloudbursts happen only in the mountains and hilly areas?
- Why does cloudburst cause so many deaths?

### Characteristics

- In India, cloudbursts often occur during the monsoon season, when the southwesterly monsoon winds bring in copious amounts of moisture inland.
- The moist air that converges over land gets lifted as they encounter the hills.
- The moist air reaches an altitude and gets saturated, and the water starts condensing out of the air forming clouds.
- This is how clouds usually form, but such an orographic lifting together with a strong moisture convergence can lead to intense cumulonimbus clouds taking in huge volumes of moisture that is dumped during cloudbursts.
- Tall cumulonimbus clouds can develop in about half an hour as the moisture updraft happens rapidly, at a pace of 60 to 120 km/hr.
- A single-cell cloud may last for an hour and dump all the rain in the last 20 to 30 minutes, while some of these clouds merge to form multi-cell storms and last for several hours.

### How do Cloudbursts occur?

- A cloudburst occurs when moisture-carrying air moves up a hilly terrain, forming a vertical column of clouds known as 'cumulonimbus' clouds.
- Such clouds usually cause rain, thunder and lightning. This upward motion of the clouds is known as an 'orographic lift'.
- These unstable clouds cause an intense rainstorm over a small area after becoming heavy enough and locked in the ridges and valleys between the hills.
- The energy necessary for the cloudburst comes from the upward motion of air. Cloudbursts mostly occur at elevations between 1,000-2,500 metres above sea level.
- The moisture is usually provided by a low-pressure system (usually associated with cyclonic storms in the ocean) over the Gangetic plains associated with low level winds flowing in from the east.
- Sometimes winds flowing in from the north west also aid the occurrence of cloudbursts. The many factors that have to come together to make a cloudburst event happen make them highly unlikely.

#### **Why do cloudbursts happen only in the mountains and hilly areas?**

- Cloudbursts do happen in plains as well, but there is a greater probability of them occurring in mountainous zones; it has to do with the terrain.
- Cloudbursts happen when saturated clouds are unable to produce rain because of the upward movement of very warm current of air.
- Raindrops, instead of dropping down, are carried upwards by the air current.
- New drops are formed and existing raindrops gain in size. After a point, the raindrops become too heavy for the cloud to hold on to, and they drop down together in a quick flash.
- Hilly terrains aid in heated air currents rising vertically upwards, thereby, increasing the probability of a cloudburst situation.
- In addition, as pointed out earlier, cloudbursts get counted only when they result in largescale destruction of life and property, which happens mainly in mountainous regions.

## POLITY AND CONSTITUTION

### What is kurki ?

#### Context:

- Recently, A 65-year-old farmer, died by suicide outside the office of the Muktsar DC. He had been sitting on a dharna outside the administrative complex against kurki orders for his land based on a court case filed against him by the local moneylender for defaulting on loan payment.

#### Relevance:

- GS II: Polity and Governance

#### Dimensions of the Article:

- What is kurki?
- How is kurki executed?
- Why has a total ban on the century-old kurki law not been achieved?
- What is the ground reality?

#### What is kurki?

- Kurki means attachment of a farmer's land, already pledged to the money lending institution or individual, in case of a loan default.
- Apart from banks, private moneylenders, commission agents also get these decrees against farmers from time to time.

#### How is kurki executed?

- Kurki orders are executed under Section 60 of Civil Procedure Code, 1908.
- The land which is pledged by the farmer to the bank or money lender gets registered in their name.
- In some cases, the land is auctioned as well.
- The process begins after the money lender moves court to get kurki orders in case the farmer is unable to pay back his loan.

- In kurki, attachment of farmer's land as well as his tractor can be done as per the Section 60.

### Why has a total ban on the century-old kurki law not been achieved?

- A plea filed in the Punjab and Haryana High Court in 2018 sought complete ban on kurki.
- However, the Punjab government in its affidavit stated that there was no need to ban kurki as relief was being given to farmers in terms of loan waiver, compensation etc.
- Moreover, it stated that Section 60 of Civil Procedure Code, 1908 – under which kurki takes place — was over 110 years old and needed complete revision.

### What is the ground reality?

- Farmers point out that they are made to give post-dated cheques for loan, which are then used to get arrest orders issued in cheque bounce cases.
- They have also accused money lenders of using pronotes signed by them to get kurki orders.
- o “Pro-notes” (promissory notes) are written documents taken from farmers, and signed by them at the time of giving the loan.
- In April 2022, over 2,000 arrest warrants were issued against farmers for non- payment of loans to cooperative societies and Punjab agriculture development banks.
- Meanwhile, over Rs 3,200 crores is outstanding against farmers' names in cooperative societies and Punjab agriculture development banks and over 60% of farmers haven't paid even a penny for the past three years, sources revealed.

## Sedition Law

### Context:

- As per National Crime Records Bureau (NCRB) reports, Assam recorded the most number of Sedition cases in the country in the last eight years.

### Relevance: GS III: Polity and Governance

### Dimensions of the Article:

- What are the Findings of the NCRB?
- What is Sedition?
- About Sedition law
- Criticism of Sedition

### What are the Findings of the NCRB?

- Out of 475 sedition cases registered in the country between 2014 and 2021, Assam accounted for 69 cases (14.52%).
- After Assam, the most number of such cases were reported from Haryana (42 cases), followed by Jharkhand (40), Karnataka (38), Andhra Pradesh (32) and Jammu and Kashmir (29).
- These six states accounted for 250 cases — more than half the number of total sedition cases recorded in the country — in the eight-year period.
- 76 sedition cases were registered across the country in 2021, a marginal

- increase from the 73 registered in 2020.
- States and UTs that did not register even one sedition case in that period were Meghalaya, Mizoram, Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, and Puducherry.

### What is Sedition?

- Sedition, which falls under Section 124A of the Indian Penal Code, is defined as any action that brings or attempts to bring hatred or contempt towards the government of India and has been illegal in India since 1870.

### Historical background of Sedition laws

- Sedition as a concept comes from Elizabethan England, where if you criticised the king and were fomenting a rebellion, it was a crime against the state.
- When they ruled India, the British feared Wahhabi rebellion. They brought the [sedition] law in, and it was used against our freedom fighters as well.
- We must remember that both Mahatma Gandhi and [Bal Gangadhar] Tilak were tried under this law and sentenced.
- Government didn't remove it because every administrator has this thought that dissent is okay, but beyond a certain point it gets dangerous and an administration must have the means to control it.
- Previously policemen were much more independent. But since Indian independence, the independence of the police has also been severely compromised. So, any local leader can almost bully a policeman into registering a case.

### About Sedition law

- The law was originally drafted by Thomas Macaulay. Since its introduction in 1870, meaning of the term, as well as its ambit, has changed significantly.
- Sedition is a cognisable, non-compoundable, and non-bailable offence, under which sentencing can be between three years to imprisonment for life.
- About Section 124A of Indian Penal Code (IPC)
- The Indian Penal Code in Section 124A lays down the offence:
- "Whoever, 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, shall be punished with imprisonment for life, to which fine may be added, or with imprisonment which may extend to three years, to which fine may be added, or with fine."
- A person charged under this law can't apply for a government job. They have to live without their passport and must present themselves in the court as and when required.

### Criticism of Sedition

- Colonial Era law: It is a colonial relic and a preventive provision that should only be read as an emergency measure.
- Right to Freedom of expression: Use of Section 124A by the government might go beyond the reasonable restrictions provided under fundamental right to freedom of speech and expression as per Article 19 of the Constitution.

- Democratic foundation: Dissent and criticism of the government are essential ingredients of robust public debate in a vibrant democracy and therefore, should not be constructed as sedition. The sedition law is being misused as a tool to persecute political dissent.
- Lower Conviction Rate: Though police are charging more people with sedition, few cases actually result in a conviction. Since 2016, only four sedition cases have seen a conviction in court which indicates that sedition as an offence has no solid legal grounding in India.
- Vague provision of sedition laws: The terms used under Section 124A like 'disaffection' are vague and subject to different interpretation to the whims and fancies of the investigating officers.
- Other legal measure for offences against the state: Indian Penal Code and Unlawful Activities Prevention Act (1967), have provisions that penalize "disrupting the public order" or "overthrowing the government with violence and illegal means". These are sufficient for protecting the national integrity. o Similarly, the Prevention of Damage to Public Property Act is also there for offences against the state.
- Perception of law: Globally, sedition is increasingly viewed as a draconian law and was revoked in the United Kingdom in 2010. In Australia, following the recommendations of the Australian Law Reform Commission (ALRC) the term sedition was removed.

### **The Problem of Sedition being constitutional**

- The law of sedition was not struck down by the Supreme Court in 1962 as unconstitutional even though sedition, as defined in Section 124A of the IPC, clearly violates Article 19(1)(a) of the Constitution which confers the Fundamental Right of freedom of speech and expression, the most valuable right of free citizens of a free country.
- Further, this section does not get protection under Article 19(2) on the ground of reasonable restriction.
- It may be mentioned in this context that sedition as a reasonable restriction, though included in the draft Article 19 was deleted when that Article was finally adopted by the Constituent Assembly. It clearly shows that the Constitution makers did not consider sedition as a reasonable restriction.
- However, the Supreme Court was not swayed by the decision of the Constituent Assembly. It took advantage of the words 'in the interest of public order' used in Article 19(2) and held that the offence of sedition arises when seditious utterances can lead to disorder or violence.
- This act of reading down Section 124A brought it clearly under Article 19(2) and saved the law of sedition. Otherwise, sedition would have had to be struck down as unconstitutional.

## **THE HIJAB CASE AND THE DOCTRINE OF ESSENTIAL PRACTICES**

### **Context**

- A two-judge Bench of the Supreme Court of India is currently hearing arguments on the correctness of a Karnataka High Court judgement that upheld the ban on students wearing the hijab in Karnataka. This is concerning because it requires judges to engage in not only legal analysis but also theological study, which a legal education does not prepare one for.

### **Relevance**

- GS Paper – 1, GS Paper – 2: Fundamental Rights, Judiciary, Government Policies & Interventions, Women's Issues

### **Mains Question**

- Discuss the significance of religious freedom in the Indian Constitution. What does the essential religious practises test mean? (250 Words)

### Background

- Over the last few days, counsel for the petitioners has addressed a variety of issues, ranging from student rights to freedom of expression, conscience, and religion to the impact of the ban on Muslim women's right to education.
- Concerning the doctrine of Essential Practice
- Evolution: The essential practises doctrine arose from a speech delivered by B.R. Ambedkar in the Constituent Assembly.
- He emphasised the importance of limiting the definition of religion so that it does not extend beyond beliefs and rituals associated with essentially religious ceremonies.

### Views in Favor of the Ban

- The Supreme Court stated in the case of Hindu Religious Endowment Madras vs Sri Lakshmindra Thirtha Swamiar of Sri Shishur Mutt (1954) that the term "religion" will cover all rituals and practises integral to a religion. It also stated that the "essentiality test" will determine the definition of core religious practises protected by religious freedom. The essentiality test was repeatedly applied by the Court.
- The Supreme Court ruled in 2004 that the Ananda Marga sect had no fundamental right to perform Tandava dance in public streets because it was not an essential religious practise of the sect.
- While these issues are generally understood to be community-based, the court has applied the test to individual freedoms as well. In 2016, for example, the Supreme Court upheld the discharge of a Muslim airman from the Indian Air Force for wearing a beard.
- The Armed Forces Regulations, 1964, prohibit Armed Forces personnel from growing hair, except for "personnel whose religion prohibits cutting of hair or shaving of face." The court basically ruled that having a beard was not a necessary part of Islamic practises.

### Karnataka HC's primary findings

- Hijab is not required for Islamic practise: First, it held that wearing a hijab is not required for Islamic practise. As a result, the right to religious freedom was not violated. The order takes refuge in cases decided by various High Courts to hold that prohibiting the wearing of a headscarf does not violate fundamental rights, particularly freedom of religion.
- In Fathima Tasneem vs State of Kerala 2018, a different HC Bench ruled that collective rights of an institution would take precedence over individual rights of the petitioner.
- In Fathema Hussain Sayed v Bharat Education Society 2003, the Bombay High Court rejected the argument that wearing a headscarf is an essential religious practise that must be protected under the Constitution. The High Court cited relevant Quranic verses and concluded that the book did not mandate the wearing of a headscarf in front of other women.
- No substantive right: Second, it ruled that there is no substantive right to free expression or privacy inside a classroom, and thus these rights were not at issue here.
- Indistinguishable legislation: Third, it held that the ban did not directly result from the government's order, which only called for a uniform dress code to be prescribed by the State or school management committees, and thus the law did not discriminate against Muslim students, either directly or indirectly.

### Possible actions by the Supreme Court

- The Supreme Court does not have to answer all of the questions posed to it in order to determine the correctness of this verdict. A reversal of any of the three High Court findings listed above should result in the ban being lifted.
- Liberal viewpoint: If the petitioners can establish that the law's seemingly neutral language does not nullify the limits of most forms of expression against the singling out of the hijab, and that the ban discriminates against Muslim women, the SC Bench must reverse the High Court's judgement.
- State accountability: Similarly, if the petitioners can demonstrate that nothing significant indicates that there is no right to free expression within the confines of an educational institution, the burden shifts to the State to demonstrate that the ban is proportionate and legitimate.
- The High Court has never conducted this analysis because it believes that classrooms are "qualified public spaces" where individual rights must give way to the interests of "general discipline and decorum."
- Switch discourse: The Supreme Court may also disregard the question of whether the ban violates the right to religious freedom if it concludes the following:
  - The Karnataka High Court made an error in ruling against the petitioners.
  - The petitioners' arguments have significant merit.
  - The Supreme Court should be able to resolve these issues using established constitutional law canons. However, an examination of the law as it currently stands necessitates a study of scriptures and conventions, followed by a determination of how essential the practise is to faith

### The consequences

- The incorporation of the Essential Practices Test into the Court's jurisprudence accomplished at least two things:
- Limit guard: For starters, it has enabled the Court to limit the scope of safeguards available to religious customs.
- Revoked law: Second, it has ruled that legislation that would otherwise advance the cause of social justice cannot, under any circumstances, infringe on matters essential to religious practise.

### An Anti-Exclusion Principle

- In the case of the Sabarimala temple entry ban, Justice D.Y. Chandrachud proposed an alternative to the essential practises test, dubbed "A Principle of anti-exclusion."
- About the doctrine: Applying "A Principle of Anti-Exclusion" would require the Court to assume that a practise asserted by a religious group is, in fact, essential to its adherents.
- However, regardless of such justification, the Constitution will not protect the practise if it excludes people based on caste, gender, or other discriminatory criteria.
- At the same time, the anti-exclusion principle holds that "where a religious practise causes the exclusion of individuals in a way that impairs their dignity or impedes their access to basic goods, religious freedom must yield to the overarching values of a liberal constitution."
- Justification: As Justice Chandrachud put it, "the anti-exclusion principle recognises a religion's right to determine its own religious tenets and doctrines."

### Conclusion

- The Court is bound to apply its tenets until the essential practises doctrine is overruled by a Bench of more than seven judges. The reassessment could occur if a nine-judge Bench formed in the review petitions filed against the Sabarimala case issues a decision.
- For the time being, any Court hearing a case involving a religious issue must act not only as a legal expert but also as a religious expert.

## Draft Indian Telecommunication Bill, 2022

### Context:

- In a bid to do away with British-era laws governing the telecom sector, the Department of Telecommunications (DoT) issued the draft Indian Telecommunication Bill, 2022.

### Relevance:

- GS II: Government policies and Interventions

### Dimensions of the Article:

- About draft Telecommunication Bill
- What are some of the key amendments to existing telecom laws?
- Address issues being faced by the telecom industry

### About draft Telecommunication Bill

- The proposed Bill aims to bring in sweeping changes to how the telecom sector is governed, primarily by giving the Centre more powers in several areas to do so.
- Through the Indian Telecommunication Bill, 2022, the Centre aims to consolidate and amend the existing laws governing the provision, development, expansion and operation of telecommunication services, telecom networks and infrastructure, in addition to assignment of spectrum.
- The draft Bill, which was published by the DoT, consolidates three separate acts that govern the telecommunications sector —
- Indian Telegraph Act 1885,
- Indian Wireless Telegraphy Act 1933,
- The Telegraph Wires, (Unlawful Protection) Act 1950.

### What are some of the key amendments to existing telecom laws?

- One of the key changes is inclusion of new-age over-the-top communication services like WhatsApp, Signal and Telegram in the definition of telecommunication services.
- As per the draft law, providers of telecommunication services will be covered under the licensing regime, and will be subjected to similar rules as other telecom operators.
- This issue has been under contention for several years now with telecom service providers seeking a level-playing field with OTT apps over communication services such as voice calls, messages, etc. where operators had to incur high costs of licences and spectrum, while OTT players rode on their infrastructure to offer free services.

### Other areas where the government has proposed to increase its powers:

- The Centre is also looking to amend the Telecom Regulatory Authority of India Act (TRAI Act) to dilute the sectoral watchdog's function of being a recommendatory body.
- The current TRAI Act mandates the telecom department to seek the regulator's views before issuing a new licence to a service provider.
- The proposed Bill does away with this provision.
- It has also removed the provision that empowered TRAI to request the government to furnish information or documents necessary to make this recommendation.
- Additionally, the new Bill also proposes to remove the provision where if the DoT cannot accept TRAI's recommendations or needs modification, it had to refer back the recommendation for reconsideration by TRAI.

#### **Address issues being faced by the telecom industry:**

- **Insolvency**
- The DoT has also proposed that if a telecom entity in possession of spectrum goes through bankruptcy or insolvency, the assigned spectrum will revert to the control of the Centre.
- So far, in insolvency proceedings, there has been a lack of clarity on whether the spectrum owned by a defaulting operator belongs to the Centre, or whether banks can take control of it.
- **Write off or grant relief**
- The draft Bill also accords the Centre powers to defer, convert into equity, write off or grant relief to any licensee under extraordinary circumstances, including financial stress, consumer interest, and maintaining competition, among other things.
- **Replacing Universal Service Obligation Fund (USOF)**
- It also proposes to replace the Universal Service Obligation Fund (USOF) with the Telecommunication Development Fund (TDF).
- USOF is the pool of funds generated by the 5 per cent Universal Service Levy that is charged upon all telecom fund operators on their Adjusted Gross Revenue.
- The USOF has largely been used to aid rural connectivity. However, with the TDF, the objective is also to boost connectivity in underserved urban areas, R&D, skill development, etc.

#### **Live streaming of SC proceedings**

##### **Context:**

- The Supreme Court in a full court decided to live stream its proceedings in crucial Constitution Bench cases. The decision comes nearly four years after a plea was made in the interest of transparency.

##### **Relevance:**

- GS II: Government policies and Intervention; Polity

##### **Dimensions of the Article:**

- Recommended by A-G
- Live streaming in HCs
- What happens elsewhere
- Concerns around live streaming

##### **Recommended by A-G**

- In his response to the court, Venugopal recommended introducing live streaming as a pilot project in Court No.1, which is the CJI's court, and only in Constitution Bench cases.
- The A-G cited de-congestion of courts and improving physical access to courts for litigants who have to otherwise travel long distances to come to the SC in support of his recommendation.
- The Supreme Court approved a set of guidelines suggested by the A-G, which included allowing transcripts and archiving the proceedings.

**suggested that the court must retain the power to withhold broadcasting, and to also not permit it in cases involving:**

- Matrimonial matters,
- Matters involving interests of juveniles or the protection and safety of the private life of the young offenders,
- Matters of National security,
- To ensure that victims, witnesses or defendants can depose truthfully and without any fear. Special protection must be given to vulnerable or intimidated witnesses. It may provide for face distortion of the witness if she/he consents to the broadcast anonymously,
- To protect confidential or sensitive information, including all matters relating to sexual assault and rape,
- Matters where publicity would be antithetical to the administration of justice, and
- Cases which may provoke sentiments and arouse passion and provoke enmity among communities.

#### **Live streaming in HCs**

- Following the SC's decision, Gujarat High Court began live streaming its proceedings in July 2021.
- Currently, the Jharkhand, Karnataka, Madhya Pradesh, Orissa, and Patna High Courts live stream their proceedings.
- Allahabad High Court is learnt to be considering doing the same.

#### **What happens elsewhere United States of America:**

- While the US Supreme Court has rejected pleas for broadcast of its proceedings, it has since 1955 allowed audio recording and transcripts of oral arguments.

#### **Australia:**

- Live or delayed broadcasting is allowed but the practices and norms differ across courts.

#### **Brazil:**

- Since 2002, live video and audio broadcast of court proceedings, including the deliberations and voting process undertaken by the judges in court, is allowed.
- A public television channel, TV Justiça, and a radio channel, Radio Justiça, were set up to broadcast video and audio.
- Separately, dedicated YouTube channels hold discussions and commentaries on the judicial system, apart from broadcasting proceedings live.

#### **Canada:**

- Proceedings are broadcast live on Cable Parliamentary Affairs Channel, accompanied by explanations of each case and the overall processes and powers of the court.

#### **South Africa:**

- Since 2017, the Supreme Court of South Africa has allowed the media to broadcast court proceedings in criminal matters, as an extension of the right to freedom of expression.

#### **United Kingdom:**

- In 2005, the law was amended to remove contempt of court charges for recording proceedings of the Supreme Court.
- Proceedings are broadcast live with a one-minute delay on the court's website, but coverage can be withdrawn in sensitive appeals.

#### **Concerns around live streaming**

- Fears that irresponsible or motivated use of content could spread disinformation:
- Broadcasting court proceedings is a step in the direction of transparency and greater access to the justice system, but there are concerns around the impact of live streaming both on judges and the people watching the proceedings.
- Video clips of proceedings from Indian courts are already on YouTube and other social media platforms with sensational titles and little context, such as "HIGH COURT super angry on army officer".
- There are fears that irresponsible or motivated use of content could spread disinformation among the public.

#### **Television and Judicial Behavior:**

- Lessons from the Brazilian Supreme Court' that studied the Brazilian Supreme Court concluded that justices behave like politicians when given free television time, they act to maximize their individual exposure.
- There are also studies that investigated the effects on the behaviour of politicians on the introduction of C-SPAN in the US House of Representatives and the US Senate, which concluded that broadcast of proceedings corresponded with a growth in the frequency of filibustering.
- However, sometimes positive systemic corrections have been made possible due to the broadcast of court proceedings.
- A 2017 study by researchers at Northwestern University of archives of the audio proceedings of the US Supreme Court showed that
- Judicial interactions at oral argument are highly gendered, with women being interrupted at disproportionate rates by their male colleagues, as well as by male advocates

#### **UAPA tribunal**

##### **Context:**

- The Popular Front of India (PFI), declared an "unlawful association" under the Unlawful Activities Prevention Act (UAPA) by the Centre, will now have the option to present its case before a tribunal that must confirm the government notification for the ban to continue.

**Relevance:** GS II: Polity and Governance

**Dimensions of the Article:**

- What is a UAPA tribunal?
- The procedure
- Constitution of the tribunal
- Powers of the tribunal

**What is a UAPA tribunal?**

- The UAPA provides for a tribunal under a High Court judge to be constituted by the government for its bans to have long-term legal sanctity.
- Orders to declare an organisation as “unlawful” are issued by the Centre under Section 3 of the UAPA.
- The provision says that “no such notification shall have effect until the tribunal has, by an order made under Section 4, confirmed the declaration made therein and the order is published in the Official Gazette”.
- Thus, a government order would not come into effect until the tribunal has confirmed it.
- However, in exceptional circumstances, the notification can come into effect immediately once the reasons for it are recording in writing. The tribunal can endorse or reject it.

**The procedure**

- According to Section 4 of the UAPA, after the Centre declares an organisation “unlawful”, its notification must reach the tribunal within 30 days to adjudicate “whether or not there is sufficient cause” for the move.
- After this, the tribunal calls upon the association, by notice in writing, to show cause within 30 days why it should not be declared unlawful.
- Once this is done, the tribunal holds an inquiry and decides the matter within six months.

**Constitution of the tribunal**

- The tribunal consists of only one person, who has to be a High Court judge.
- If a vacancy (other than a temporary absence) occurs in the Tribunal, the Centre appoints another judge and the proceedings continue from the stage at which the vacancy is filled.
- The Centre is to provide to the tribunal such staff as necessary for the discharge of its functions.
- All expenses incurred for a tribunal are borne out of the Consolidated Fund of India.

**Powers of the tribunal**

- The tribunal has power to regulate its own procedure, including the place at which it holds its sittings.
- Thus, it can hold hearings in different states for allegations pertaining to those states.
- To make inquiries, the tribunal has the same powers as vested in a civil court under the Code of Civil Procedure, 1908.
- These can be exercised in summoning a witness and examining him on oath; production of any document or other material object producible as evidence; the reception of evidence on affidavits; the requisitioning of any public record from any court or office; and the issuing of any commission for the examination of witnesses.
- All proceeding before the Tribunal are deemed to be judicial proceedings.

**Operation Megh Chakra****Context:**

- The Central Bureau of Investigation (CBI) conducted searches at 59 locations across 20 States and one Union Territory, as part of a pan-India drive against the circulation and sharing of child sexual abuse material.
- The operation code-named “Megh Chakra” was carried out following the inputs received from the Interpol’s Singapore special unit based on the information received from the authorities in New Zealand.

**Relevance:**

- GS-II: Polity and Constitution, Governance

**Dimensions of the Article:**

- About Operation Megh Chakra
- Central Bureau of Investigation (CBI)
- Functions of CBI
- Challenges of CBI

**About Operation Megh Chakra**

- The CBI has registered two cases alleging that a large number of Indian nationals were involved in the online circulation, downloading and transmission of such material using cloud-based storage.
- The searches were carried out in Himachal Pradesh, Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, Maharashtra, Gujarat, Goa, Karnataka, Telangana and Tamil Nadu. The agency seized electronic devices belonging to the suspects.
- A preliminary scrutiny of the devices using cyberforensic tools allegedly revealed that a huge quantity of child pornography material was stored in them.
- The operation sought to collate information from various law enforcement agencies in India, engage with the relevant law enforcement agencies globally and coordinate closely through the Interpol channels on the issue.
- The agency had launched a similar exercise code-named “Operation Carbon”, searching the premises of suspects in 13 States and one Union Territory.
- o The previous operation was conducted at 76 locations. The persons named in the FIRs were booked under the relevant provisions of the IPC and the Information Technology Act, for allegedly being part of the syndicates that uploaded, circulated, sold and viewed such material.
- The CBI had later decided to send requests to several countries for sharing and gathering information under the Mutual Legal Assistance Treaties (MLATs) on those involved in the racket.

**Central Bureau of Investigation (CBI)**

- The Central Bureau of Investigation (CBI) was set up in 1963 after the recommendation of Santhanam committee under Ministry of Home affairs and was later transferred to the Ministry of Personnel and now it enjoys the status of an attached office.
- Now, the CBI comes under the administrative control of the Department of Personnel and Training (DoPT) of the Ministry of Personnel, Public Grievances and Pensions.
- The CBI derives its powers from the Delhi Special Police Establishment Act, 1946, however, it is NOT a Statutory Body.
- CBI is the apex anti-corruption body in the country – Along with being the main investigating agency of the Central Government it also provides assistance to the Central Vigilance Commission and Lokpal.

- The CBI is required to obtain the prior approval of the Central Government before conducting any inquiry or investigation.
- The CBI is also the nodal police agency in India which coordinates investigations on behalf of Interpol Member countries.
- The CBI's conviction rate is as high as 65 to 70% and it is comparable to the best investigation agencies in the world.
- The CBI is headed by a Director and he is assisted by a special director or an additional director. It has joint directors, deputy inspector generals, superintendents of police.

#### **CBI has following divisions**

- Anti-Corruption Division
- Economic Offences Division
- Special Crimes Division
- Policy and International Police Cooperation Division
- Administration Division
- Directorate of Prosecution
- Central Forensic Science Laboratory

#### **Functions of CBI**

- Investigating cases of corruption, bribery and misconduct of Central government employees
- Investigating cases relating to infringement of fiscal and economic laws, that is, breach of laws concerning export and import control, customs and central excise, income tax, foreign exchange regulations and so on. However, such cases are taken up either in consultation with or at the request of the department concerned.
- Investigating serious crimes, having national and international ramifications, committed by organized gangs of professional criminals.
- Coordinating the activities of the anti-corruption agencies and the various state police forces.
- Taking up, on the request of a state government, any case of public importance for investigation.
- Maintaining crime statistics and disseminating criminal information.
- The CBI acts as the "National Central Bureau" of Interpol in India.

#### **Challenges of CBI**

- The CBI has been dubbed a "caged parrot speaking in its master's voice" by the Supreme Court of India due to excessive political influence in its operations. It has frequently been utilised by the government to conceal misdeeds, keep coalition allies in line, and keep political opponents at away. It has been accused of massive delays in concluding investigations, such as in its investigation into high-ranking Jain dignitaries in the Jain hawala diaries case [in the 1990s].
- Loss of Credibility: Improving the agency's image has been one of the most difficult challenges so far, as the agency has been chastised for its mishandling of several high-profile cases, including the Bofors scandal, the Hawala scandal, the Sant Singh Chatwal case, the Bhopal gas tragedy, and the 2008 Noida double murder case (Aarushi Talwar).
- Lack of Accountability: CBI is exempt from the Right to Information Act, which means it is not accountable to the public.

- Acute staff shortage: One of the key causes of the shortfall is the government's mishandling of the CBI's employees, which includes an inefficient and inexplicably biased recruitment policy that was utilised to bring in favoured officials, possibly to the organization's damage.
- Limited Authority: Members of the CBI's investigative powers and jurisdiction are subject to the consent of the State Government, restricting the scope of the CBI's inquiry.
- Restricted Access: Obtaining prior authorisation from the Central Government to initiate an inquiry or probe into Central Government workers at the level of Joint Secretary and above is a major impediment to tackling corruption at the highest levels of government.

## What is a 'terror' organisation?

### Context:

- The National Investigation Agency (NIA) and the Enforcement Directorate (ED) conducted searches at the Popular Front of India's offices (PFI) and houses of PFI state and district level leaders across multiple states over alleged involvement in terrorist activities.
- The searches, based on allegations that members of PFI are involved in organising terror camps and encouraging youth to join terror activities, could also lead to a ban on the organisation under anti-terror laws.

### Relevance:

- GS II: Polity and Governance

### Dimensions of the Article:

- What does a 'ban' on an organisation mean?
- What is a "terrorist" organisation?
- How is an organisation declared a terrorist organisation?
- What are the consequences of declaring an organisation a terrorist organisation?

### What does a 'ban' on an organisation mean?

- The Unlawful Activities Prevention Act gives powers to the government to declare an organisation an "unlawful association" or a "terrorist organisation", which is often colloquially described as a "ban" on the organisations.
- Declaring an organisation a terrorist organisation has serious consequences in law, including criminalising its membership and the forfeiture of the property of the organisation.
- Several resolutions of the United Nations Security Council starting from 1997 require member states
- To take action against certain terrorists and terrorist organisations,
- To freeze their assets and other economic resources,
- To prevent their entry into or the transit through their territory,
- To prevent the direct or indirect supply, sale, or transfer of arms and ammunition to those individuals or entities listed in the Schedule.

### What is a "terrorist" organisation?

- Section 2(m) of the UAPA defines "terrorist organisation" as an organisation listed in the Schedule to the UAPA, or an organisation operating under the same name as an organisation so listed in the Schedule.

- Schedule 1 currently lists 42 organisations, including Hizb-Ul- Mujahideen, Babbar Khalsa International, Liberation Tigers of Tamil Eelam, among others as terrorist organisations.

### How is an organisation declared a terrorist organisation?

- Under Section 35 of the UAPA, the central government has powers to declare an organisation a terrorist organisation “only if it believes that it is involved in terrorism”.
- The Schedule can be amended by the government to add or remove organisations from the list. The law states that an organisation shall be deemed to be involved in terrorism if it, commits or participates in acts of terrorism, or prepares for terrorism, or promotes or encourages terrorism, or is otherwise involved in terrorism.

### What are the consequences of declaring an organisation a terrorist organisation?

- The two crucial consequences of being declared a terrorist organisation is that the funding of the organisation
- the association of individuals with the organisation are criminalised
- Section 38 of the UAPA requires a person who “associates himself, or professes to be associated, with a terrorist organisation with intention to further its activities, commits an offence relating to membership of a terrorist organisation” is punishable with imprisonment for a term not exceeding ten years.
- However, such individuals are exempted from the provision if they have been members before the organisation was declared a terrorist organisation and did not take part in any activities of the organisation at any time during its inclusion in the Schedule.
- Section 20 of the UAPA prescribes punishment for being member of terrorist gang or organisation. It states: “Any person who is a member of a terrorist gang or a terrorist organisation, which is involved in terrorist act, shall be punishable with imprisonment for a term which may extend to imprisonment for life, and shall also be liable to fine.”
- Section 21 prescribes punishment for individuals holding proceeds of terrorism with imprisonment for a term which may extend to imprisonment for life, and shall also be liable to fine.
- The UAPA under Section 24A also provides for forfeiture of proceeds of terrorism. The law states that even if the person is not convicted for being associated with a terrorist organisation, “proceeds of terrorism” can be forfeited to the Central Government or the State Government.

### What is the recourse in law available to a terrorist organisation?

- An application can be made to the central government to remove an organisation from the Schedule by the organisation itself or any person affected by inclusion of the organisation in the Schedule as a terrorist organisation.
- A review committee is then appointed which is headed by a sitting or former judge of a High Court to “judicially review” the application.
- The organisation will be removed if the review committee “considers that the decision to reject was flawed when considered in the light of the principles applicable on an application for judicial review”.

## Criminal Procedure (Identification) Act, 2022

Context:

- Recently, the Ministry of Home Affairs (MHA) notified the rules governing The Criminal Procedure (Identification) Act, 2022.

**Relevance:**

- GS II: Polity and Governance

**Dimensions of the Article:**

- About Criminal Procedure (Identification) Act, 2022
- What is the use of identification details in criminal trials?
- Identification of Prisoners Act, 1920:
- Main highlights and differences in both the legislations
- What are some of the concerns with the present legislation?

**About Criminal Procedure (Identification) Act, 2022**

- The Act seeks to repeal the Identification of Prisoners Act, 1920, which is over 100-years-old.
- The old Act's scope was limited to capturing of finger impression, foot-print impressions and photographs of convicted prisoners and certain category of arrested and non-convicted persons on the orders of a Magistrate.
- The legislation would enable police and central investigating agencies to collect, store and analyse physical and biological samples including retina and iris scan of arrested persons.
- The Statement of Objects and Reasons of the bill when it was introduced in Parliament said that new "measurement" techniques being used in advanced countries are giving credible and reliable results and are recognised world over.
- It said that the 1920 Act does not provide for taking these body measurements as many of the techniques and technologies had not been developed then.
- The Act empowers a Magistrate to direct any person to give measurements, which till now was reserved for convicts and those involved in heinous crimes.
- It also enables the police upto the rank of a Head Constable to take measurements of any person who resists or refuses to give measurements.
- As per the rules, "measurements" include finger-impressions, palm-print, footprint, photographs, iris and retina scan, physical, biological samples and their analysis, behavioural attributes including signatures, handwriting or any other examination referred to in Section 53 or Section 53A of the Code of Criminal Procedure, 1973 (2 of 1974).
- Though it has not been specified, analysis of biological samples could also include DNA profiling.

**What is the use of identification details in criminal trials?**

- Measurements and photographs for identification have three main purposes.
- To establish the identity of the culprit against the person being arrested
- To identify suspected repetition of similar offences by the same person
- To establish a previous conviction.

**Identification of Prisoners Act, 1920:**

- Even though the police has powers of arrest, mere arrest does not give them the right to search a person.

- The police requires legal sanction to search the person and collect evidence.
- These legal sanctions are designed so as to maintain a balance between the rights of an individual and the interests of society in prosecution and prevention of offences.
- The Identification of Prisoners Act, 1920 became a necessity when the recording of newer forms of evidence such as fingerprints, footprints and measurements started becoming more accurate and reliable.
- The Statement of Objectives and Reasons of the Identification of Prisoners Act, 1920 states that “the value of the scientific use of finger impressions and photographs as agents in the detection of crime and identification of criminals is well known”.
- It further goes on to state that although lack of legal sanction has not created problems before, there were increasing instances of prisoners refusing to allow their fingerprints or photographs to be recorded.
- Therefore, “to prevent such refusals in the future ...[and] to place the taking of measurements etc which is a normal incident of police work in India, as elsewhere, on a regular footing” it was considered necessary to enact the Identification of Prisoners Act, 1920.

### **Main highlights and differences in both the legislations**

- Like the Identification of Prisoners Act, 1920, the new Criminal Procedure (Identification) Act, 2022 provides for legal sanction to law enforcement agencies for the collection of measurements.
- The purpose is to create a useable database of these measurements.
- While at the State level, each State is required to notify an appropriate agency to collect and preserve this database of measurements, at the national level, the National Crime Records Bureau (NCRB) is the designated agency to manage, process, share and disseminate the records collected at the State level.

### **What are some of the concerns with the present legislation?**

- Since the Identification of Prisoners Act, 1920 was a colonial legislation, its duplication in the Criminal Procedure (Identification) Act, 2022, a post-independence legislation has raised some concerns related to the protection of fundamental rights.

### **Right to privacy:**

- The legislation comes in the backdrop of the right to privacy being recognised as a fundamental right.
- A fundamental facet of the right to privacy is protection from the invasion of one’s physical privacy.
- As per the Puttaswamy judgment, for a privacy intrusive measure to be constitutional, there is a need for the measure to be taken in pursuance of a legitimate aim of the state, be backed by the law and be “necessary and proportionate” to the aim being sought to be achieved.
- In this case, while the first two tests are satisfied, as “prevention and investigation of crime” is a legitimate aim of the state and “measurements” are being taken under a valid legislation, the satisfaction of the third test of necessity and proportionality has been challenged on multiple counts.

### **Crime and Criminal Tracking Network and Systems (CCTNS):**

- Such collection can also result in mass surveillance, with the database under this law being combined with other databases such as those of the Crime and Criminal Tracking Network and Systems (CCTNS).

### **Right against self-incrimination:**

- concerns are being raised that the present law violates the right against self- incrimination enshrined in Article 20(3) of the Constitution of India.
- However, this argument is nebulous since the Supreme Court has already settled this point.
- In the State of Bombay vs Kathi Kalu Oghad, the Supreme Court had conclusively held that “non-communicative” evidence i.e. evidence which does not convey information within the personal knowledge of the accused cannot be understood to be leading to self-incrimination.
- Therefore, no challenge lies to the law on this ground.

## Objectionable content on the social media

### **Context:**

- Recently, As allegations of an objectionable video of women students of Chandigarh University being leaked surfaced, triggering an outrage, challenges are ahead of the Punjab Police to tackle the situation.

### **Relevance:**

- GS II: Polity and Governance

### **Dimensions of the Article:**

- What is the first step to tackle objectionable content that goes viral?
- What happens after the social media intermediaries are identified?
- Can an investigating agency or individual approach the grievances redressal officer of social media sites independently in India?

### **What is the first step to tackle objectionable content that goes viral?**

- The first task for the investigation agency is to identify the social media intermediary through which the objectionable content in any form i.e., picture, video, voice message, is being spread.
- Usually, investigation agencies rely on the disclosure of the first arrested accused, who discloses about the first method through which the content was shared.
- In complicated cases in which the content is being shared on multiple social media platforms, agencies can take up the matter with all social media intermediaries including Facebook, WhatsApp, Twitter etc.

### **What happens after the social media intermediaries are identified?**

- After identifying one or multiple social media intermediaries, the investigation agency communicates with the regulating authorities/headquarters of these intermediaries.
- There are two methods for communication:
- First is the emergency disclosure, in which the agency seeks the phone number and IP address of a device which was used to creating/recording the objectionable/vulnerable content. Routine matters in which there is no urgency are pursued through this method.

- Second is the emergency response. Matters related to national security, threat to the human lives and child abuse are followed through this method. Regulating authorities of social media take prompt decisions over applications sent through the second method.
- Indeed, it is up to the investigation agency to satisfy the social media headquarters through communication about the urgency of the request.
- Once the regulating authorities satisfy, they promptly delete, remove the content from their platforms.

### **Can an investigating agency or individual approach the grievances redressal officer of social media sites independently in India?**

- According to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, a victim can directly approach the grievances redressal officer of any social media site independently or through an investigation agency.
- All major social sites including Facebook, WhatsApp, Twitter are bound to place their grievances redressal officers in India, as per the notified rules.
- According to the Part 2 of the amended IT Rules, 2021, the content which exposes the private area of an individual or shows them in full or partial nudity or shows/depicts them in any sexual act or conduct, or is in the nature of impersonation in an electronic form, including artificially morphed images, all reasonable and practicable measures are to be taken to remove or disable access to such content which is hosted, stored, published or transmitted.

### **Is it a complicated process to identify the suspect or erase, delete and make the content inaccessible?**

- Removing/deleting and identifying the culprit on WhatsApp is more complicated than Facebook or Twitter.
- In case of Facebook or Twitter, the investigation agency can identify the suspect through their account, be it fake or based on a fictitious identity.
- But in case of WhatsApp, the video, pictures or voice messages spread instantly and are forwarded to many at a time.
- However, once the objectionable content is removed from the original number, the content shall be removed in coming days automatically.

## **Dilution of Lokayukta Powers in Kerala**

### **Context:**

- Recently, the Kerala Legislative Assembly passed the Kerala Lok Ayukta (Amendment) Bill, 2022 .

### **Relevance:**

- GS-II: Polity and Governance (Constitutional and Non-Constitutional Bodies, Policies and Interventions on Transparency and Accountability in governance)

### **Dimensions of the Article:**

- What are the Amendments?
- About Lokayukta
- About Lokpal
- Other Important Points regarding the Lokpal

- Exception for Prime Minister

### What are the Amendments?

- The amending Bill weakens the Lokayukta order's binding nature by permitting the competent authority to now accept or reject the ombudsman's findings.
- The Lokayukta will become a body that only makes recommendations or sends reports to the government as a result of the amendment, allowing the state government the authority to accept or reject the anti-corruption body's decision after being given a chance to be heard.
- It has also made the Legislative Assembly the competent authority to review an
- indicting report against the Chief Minister.
- If a Lokayukta report indicts a cabinet minister, the Bill vests the reviewing authority in the Chief Minister.
- And in the case of legislators, the competent authority will be the House Speaker.
- The Bill exempts political leaders from the purview of the Act.
- The Bill allows for retired High Court judges to be appointed Lokayukta.
- Section 14 of the Act which has now been amended said that if the Lokayukta is satisfied on the complaint against the public servant being substantiated that he should not continue to hold the post held by him, he shall make a declaration to that effect in his report to the competent authority who shall accept it and act upon it.
- In other words, if the public servant is the Chief Minister or a Minister, he shall forthwith resign his office. Such a provision does not exist in any of the State laws or the Lokpal Act of the Centre.

### About Lokayukta

- The Lokayukta (also Lok Ayukta) (lokāyukta, "civil commissioner") is an anti- corruption ombudsman organization in the Indian states.
- Once appointed, Lokayukta cannot be dismissed nor transferred by the government, and can only be removed by passing an impeachment motion by the state assembly.
- The Lokayukta, along with the Income Tax Department and the Anti-Corruption Bureau, mainly helps people publicise corruption among the Politicians and Government Officials.
- Many acts of the Lokayukta have resulted in criminal or other consequences for those charged.
- Maharashtra was the first state to introduce the institution of Lokayukta (considered the weakest Lokayukta due to lack of powers, staff, funds and an independent investigating agency).
- On the other hand, the Karnataka Lokayukta is considered the most powerful Lokayukta in the country.
- Karnataka Lokayukta is considered the most powerful Lokayukta in the country.

### About Lokpal

- The Lokpal and Lokayukta Act, 2013 establishes Lokpal for the Union and Lokayukta for States (Statutory Bodies) to inquire into allegations of corruption against certain public functionaries.
- Composition: Lokpal will consist of a chairperson and a maximum of eight members, of which 50% shall be judicial members and 50% shall be from SC/ST/OBCs, minorities and women.
- Appointment process: It is a two-stage process.
- A search committee which recommends a panel of names to the high-power selection committee.
- The selection committee comprises the Prime Minister, the Speaker of the Lok Sabha, the Leader of the Opposition, the Chief Justice of India (or his nominee) and an eminent jurist (nominated by President based on the recommendation of other members of the panel).

- President will appoint the recommended names.
- The jurisdiction of Lokpal extends to:
  - Anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union government under Groups A, B, C and D.
  - The chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Centre.
  - Any society or trust or body that receives foreign contribution above Rs. 10 lakhs.

#### Other Important Points regarding the Lokpal

- Salaries, allowances and service conditions: Salaries, allowances and other perks of the Lokpal chairperson will be the same as those for the Chief Justice of India; those for other members will be the same as those for a judge of the Supreme Court.
- Inquiry wing and prosecution wing: Inquiry Wing for conducting preliminary inquiry and Prosecution Wing for the purpose of prosecution of public servants in relation to any complaint by the Lokpal under this Act.
- Power with respect to CBI: Power of superintendence and direction over any investigation agency including CBI for cases referred to them by Lokpal. Transfer of officers of CBI investigating cases referred by Lokpal would need approval of Lokpal.
- Timelines for enquiry, investigation: Act specifies a time limit of 60 days for completion of inquiry and 6 months for completion of investigation by the CBI. This period of 6 months can be extended by the Lokpal on a written request from CBI.
- Suspension, removal of Chairperson and member of Lokpal: The Chairperson or any Member shall be removed from his office by order of the President on grounds of misbehaviour after the Supreme Court report. For that a petition has to be signed by at least one hundred Members of Parliament. Special Court shall be setup to hear and decide the cases referred by the Lokpal.

#### Exception for Prime Minister

- The Lokpal and Lokayukta Act, 2013 does not allow a Lokpal inquiry if the allegation against the PM relates to international relations, external and internal security, public order, atomic energy and space.
- Complaints against the PM are not to be probed unless the full Lokpal bench considers the initiation of inquiry and at least 2/3rds of the members approve it.
- Such an inquiry against the PM (if conducted) is to be held in camera and if the Lokpal comes to the conclusion that the complaint deserves to be dismissed, the records of the inquiry are not to be published or made available to anyone.

### Abortion law

#### Context:

- Recently, In a historic judgment, the Supreme Court declared that single women with pregnancies between 20 and 24 weeks are entitled to access the same safe and legal abortion care as married women.
- The Medical Termination of Pregnancy (MTP) Act, 1971 prohibits unmarried women who are between 20 and 24 weeks' pregnant to abort with the help of registered doctors.

**Relevance:** GS II: Polity and Governance

**Dimensions of the Article:**

- What is the court's decision?
- The Medical Termination of Pregnancy Act, 1971
- Medical Termination of Pregnancy Amendment Act, 2021
- Who falls in the category of women allowed to terminate pregnancy between 20-24 weeks?
- What is the court's interpretation?

**What is the court's decision?**

- A three-judge Bench framed the interpretation of Rule 3B of the Medical Termination of Pregnancy Rules, 2003, as per which only some categories of women are allowed to seek termination of pregnancy between 20-24 weeks under certain extraordinary circumstances.
- The challenge to the provision was made in July by a 25-year-old unmarried woman who moved the court seeking an abortion after the Delhi High Court declined her plea.
- The woman's case was that she wished to terminate her pregnancy as "her partner had refused to marry her at the last stage".
- She also argued that the continuation of the pregnancy would involve a risk of grave and immense injury to her mental health.
- However, the law allowed such change in circumstances only for "marital" relationships.
- The Supreme Court, holding that the law had to be given a purposive interpretation, had allowed the petitioner to terminate her pregnancy in an interim order. However, the larger challenge to the law, which would benefit other women as well, was kept pending.

**The Medical Termination of Pregnancy Act, 1971**

- The Medical Termination of Pregnancy (MTP) Act, 1971 provides the legal framework for making CAC services available in India.
- Termination of pregnancy is permitted for a broad range of conditions up to 20 weeks of gestation as detailed below:
- When continuation of pregnancy is a risk to the life of a pregnant woman or could cause grave injury to her physical or mental health;
- When there is substantial risk that the child, if born, would be seriously handicapped due to physical or mental abnormalities;
- When pregnancy is caused due to rape (presumed to cause grave injury to the mental health of the woman);
- When pregnancy is caused due to failure of contraceptives used by a married woman or her husband (presumed to constitute grave injury to mental health of the woman).
- The MTP Act specifies
- who can terminate a pregnancy;
- till when a pregnancy can be terminated; and
- where can a pregnancy be terminated.

**Medical Termination of Pregnancy Amendment Act, 2021**

- The Medical Termination of Pregnancy Act allows termination of pregnancy by a medical practitioner in two stages.
- After a crucial amendment in 2021, for pregnancies up to 20 weeks, termination is allowed under the opinion of one registered medical practitioner.
- For pregnancies between 20-24 weeks, the Rules attached to the law prescribe certain criteria in terms of who can avail termination. It also requires the opinion of two registered medical practitioners in this case.
- For pregnancies within 20 weeks, termination can be allowed if:
- the continuance of the pregnancy would involve a risk to the life of the pregnant woman or of grave injury to her physical or mental health; or
- there is a substantial risk that if the child was born, it would suffer from any serious physical or mental abnormality.
- The explanation to the provision states that termination within 20 weeks is allowed “where any pregnancy occurs as a result of failure of any device or method used by any woman or her partner for the purpose of limiting the number of children or preventing pregnancy, the anguish caused by such pregnancy may be presumed to constitute a grave injury to the mental health of the pregnant woman”.
- The phrase “any woman or her partner” was also introduced in 2021 in place of the earlier “married woman or her husband”. By eliminating the word “married woman or her husband” from the scheme of the MTP Act, the legislature intended to clarify the scope of Section 3 and bring pregnancies which occur outside the institution of marriage within the protective umbrella of the law.
- For both stages — within 20 weeks and between 20-24 weeks — termination is allowed “where any pregnancy is alleged by the pregnant woman to have been caused by rape, the anguish caused by the pregnancy shall be presumed to constitute a grave injury to the mental health of the pregnant woman”.

#### Who falls in the category of women allowed to terminate pregnancy between 20-24 weeks?

- For pregnancies between 20-24 weeks, Section 3B of the Rules under the MTP Act lists seven categories of women:
- Survivors of sexual assault or rape or incest;
- Minors;
- Change of marital status during the ongoing pregnancy (widowhood and divorce);
- Women with physical disabilities (major disability as per criteria laid down under the Rights of Persons with Disabilities Act, 2016);
- Mentally ill women including mental retardation;
- The foetal malformation that has substantial risk of being incompatible with life or if the child is born it may suffer from such physical or mental abnormalities to be seriously handicapped;
- Women with pregnancy in humanitarian settings or disaster or emergency situations as may be declared by the Government.

#### What is the court's interpretation?

- The court stated that the whole Rule 3B(c) cannot be read in isolation but has to be read together with other sub-clauses under 3B.
- When other sub-clauses do not distinguish between married or unmarried women, for example survivors of sexual assault, minors, etc., only 3B(c) cannot exclude unmarried women, the court held.
- “Rule 3B(c) is based on the broad recognition of the fact that a change in the marital status of a woman often leads to a change in her material circumstances.

- A change in material circumstance during the ongoing pregnancy may arise when a married woman divorces her husband or when he dies, as recognized by the examples provided in parenthesis in Rule 3B(c).
- The fact that widowhood and divorce are mentioned in brackets at the tail end of Rule 3B(c) does not hinder our interpretation of the rule because they are illustrative," the court said.
- The court also expanded on Rule 3B(a) — "survivors of sexual assault or rape or incest" — to include married women in its ambit.
- Although it does not have the effect of striking down the marital rape exception under the Indian Penal Code, the ruling said that even women who have suffered "marital assault" can be included under the provision.

## **THE SEEN AND UNSEEN CONSEQUENCES OF INDIA'S GROWING WATER CRISIS**

### **Context**

- The United Nations World Water Development Report 2022 (UN WWDR 2022) of UNESCO has encapsulated global concern about the sharp increase in freshwater withdrawal from streams, lakes, aquifers, and man-made reservoirs, impending water stress, and water scarcity being experienced in various parts of the world.
- The report "Groundwater: Making the Invisible Visible" describes the global challenges and opportunities associated with groundwater development, management, and governance.
- According to the report, groundwater accounts for 99 percent of all liquid freshwater on the planet. However, because this natural resource is poorly understood, it is undervalued, mismanaged, and even abused.

**Relevance:** GS Paper 3: Conservation, environmental pollution and degradation, environmental impact assessment

### **Mains Question**

- India is experiencing a water crisis of such magnitude that it is causing widespread unrest. Discuss the causes of such conditions, as well as what needs to be done to address the situation on the ground. (250 words)

### **Background**

- The theme of World Water Day in 2007 was "coping with water scarcity" (observed on March 22).
- The Food and Agriculture Organization (FAO) of the United Nations issued a new Water Report warning of a global silent crisis, with millions of people deprived of water to live and sustain their livelihood.

### **A decade of activity**

- World Water Week 2022 was recently held in Stockholm, Sweden (23 August to 1 September), with many discussions centred on the theme "Seeing the Unseen: The Value of Water."
- These discussions are expected to help push the water agenda forward in the run-up to the UN-Water Summit on Groundwater in Paris in December 2022.
- The agenda will be expanded at the United Nations Water Conference in New York in March 2023, formally known as the 2023 Conference for the Midterm Comprehensive Review of Implementation of the United Nations Decade for Action on Water and Sanitation (2018-2028).

### **Increasing water scarcity**

- According to the Water Scarcity Clock, an interactive web tool, over two billion people live in countries that are currently experiencing high water stress, and the number will continue to rise.

- According to the Global Drought Risk and Water Stress Map (2019), major parts of India, particularly west, central, and peninsular India, are highly water stressed and face water scarcity.
- A NITI Aayog report, 'Composite Water Management Index' (2018), has issued a warning about the country's worst water crisis, with more than 600 million people facing acute water shortages.

### Water scarcity's impending dangers

- Encourages competition: In areas where water is scarce, water is usually transferred from the hinterlands/upper catchments or drawn from stored surface water bodies or aquifers. This sparks competition at the sectoral and regional levels.
- Demonstration: One such global concern that has been noted in many countries since the early twentieth century is increasing trans-boundary transfer of water between rural and urban areas.
- Statistics: According to a 2019 Review paper, urban water infrastructure imports an estimated 500 billion litres of water per day over a combined distance of 27,000km.
- Inter-basin transfers: At least 12% of the world's large cities rely on inter-basin transfers.
- According to a UN report titled 'Transboundary Waters Systems - Status and Trend' (2016), this issue of water transfer is linked to several Sustainable

### Development Goals (SDGs) that are slated to be achieved between 2015 and 2030.

- The report classified water transfer risks into three categories: biophysical, socioeconomic, and governance.
- South Asia, including India, is classified as having high biophysical and socioeconomic risks.

### India's Urban Water Use Framework

- Growing urban population: According to the 2011 Census, India's urban population accounted for 34% of total population, distributed across 7,935 towns of all classes
- World Urbanization Prospects 2018: According to the report, the urban population component in India will surpass 40% by 2030 and 50% by 2050.
- Future scenario: Although India's urbanisation has been relatively slow, it is now accelerating.
- Water use in the urban sector will increase as more people move to cities, and per capita water use will rise as living standards rise.
- Urban water management trajectory: When a city is small, it is only concerned with water supply. Water is also sourced locally, with groundwater providing the majority of the supply.
- As the city grows and water management infrastructure develops, reliance on surface water shifts.
- As cities expand, water sources shift further up in the hinterlands, or urban water allocation is increased at the expense of irrigation water
- This trend is observed in almost all Indian cities that rely on surface water. City water supply is now a topic of inter-basin and inter-state water transfers.
- Potential for conflict: Regardless of the source, surface or groundwater, cities rely heavily on rural areas for raw water supply, which has the potential to spark a rural-urban conflict.
- Evidence: Available studies covering Nagpur and Chennai point to the impending problem of rural-urban water disputes that the country will face in the not-too-distant future as water scarcity worsens, exacerbated further by climate change.

### Case Study of Ahmedabad

- Previous layout: Until the mid-1980s, more than 80% of Ahmedabad's water supply came from groundwater sources. In confined aquifers, the depth to groundwater level reached 67 metres.
- Today's picture: The city now gets the majority of its water from the Narmada canal. The transition is from local groundwater to canal water receiving supply from inter- state and inter-basin surface water transfers.
- Groundwater dependence persists, particularly in peri-urban areas, in almost all large cities that have switched to surface water sources.
- Assessing water levels: While surface water transfer from rural to urban areas is visible and calculable, groundwater aquifer recharge areas are dispersed far beyond the city boundary or its periphery and difficult to enumerate.

### Reversing the roles

- Water transfer from rural to urban areas is currently a lose-lose situation in India, as water is transported at the expense of rural areas and the agricultural sector.
- In cities, the majority of this water is grey water, with little recovery or reuse, contributing to water pollution.
- However, rural and urban areas draw water from the same source, namely the country's water resources. As a result, it is critical to strive for a win-win situation.
- Such a situation is possible by addressing governance issues in rural and urban areas, fostering rural-urban collaboration, and implementing an integrated approach to water management.

### The way forward

- A system perspective and catchment scale-based approach are required to link water reallocation with broader discussions on development, infrastructure investment, and so on in order to address the world's critical water crises.
- Institutional strengthening can also provide opportunities to build flexibility into regional water resource allocation, allowing for adjustments in rapidly urbanising areas

## APPROACH TO THE DEATH PENALTY: RESOLVING DIFFERENCES BETWEEN JUDGMENTS

### Context

- The Supreme Court recently referred issues concerning procedural norms for imposing the death penalty to a larger Bench.
- The intervention is viewed as a significant step toward closing gaps in the way trial courts award the death penalty.
- This current trajectory of judicial thought will reaffirm the fundamentals of the rarest of rare principles and usher in a new wave of thinking in capital punishment jurisprudence.

### Relevance

- GS Paper 2: Important aspects of governance, transparency and accountability, e- governance- applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

### Mains Question

- According to some, "capital punishment provides neither justice nor deterrence against any crime." Do you concur? Justify your response. (250 Words)

### Background

- The Supreme Court has initiated a suo motu writ petition (criminal) to delve deeply into the issues surrounding key aspects of death penalty sentencing.
- The court is also considering developing a uniform policy in the form of sentencing guidelines.

### SC's most recent observations

- A three-judge Bench comprised of Chief Justice of India (CJI) U U Lalit and two other Justices observed that there are conflicting judgments on when and how the sentencing hearing must take place, and referred the matter to a five-judge Constitution Bench.
- This Supreme Court order, which refers the case to a larger bench, also lists social milieu, age, educational levels, trauma earlier in life, family circumstances, psychological evaluation of a convict, and post-conviction behaviour as relevant circumstances that should be considered at the sentencing hearing.

### Concerning Capital Punishment

- Capital punishment, also known as the death penalty, is the execution of an offender sentenced to death by a court of law after being convicted of a criminal offence.
- It is the most severe penalty that can be imposed on an offender as an effective deterrent for the most heinous crimes.
- In India, capital punishment has been reserved for the most heinous of offences, such as Section 121 (taking up arms against the state) and Section 302 (murder), among others, of the Indian Penal Code (IPC) 1860.

### Decisions Concerning Capital Punishment

- Section 235 of the Code of Criminal Procedure (CrPC): It requires a judge to hear the accused on the question of sentence after conviction, known as a "sentencing hearing," and then pass sentence on him in accordance with the law.
- As stated below, this position was upheld in the Bachan Singh case and restated in the Mithu case.
- Bachan Singh Case v State of Punjab': In 1980, the Supreme Court upheld the constitutionality of the death penalty on the condition that it be applied only in the "rarest of the rare" cases.
- Most importantly, the ruling stated that a separate sentencing hearing would be held in order to persuade a judge that the death penalty was not necessary.
- "Rarest of the Rare Cases": When a murder is committed in such a brutal, ridiculous, diabolical, revolting, or reprehensible manner that it arouses the community's intense and extreme indignation (anger).
- Mithu case: This position was reiterated in several subsequent rulings, including 'Mithu v State of Punjab,' a 1982 ruling that struck down mandatory death sentences as infringing on an accused's right to be heard before sentencing.
- Mofil Khan vs. State of Jharkhand (2021): In this case, the Supreme Court ruled that "the State is under a duty to procure evidence to establish that the accused has no possibility of reformation and rehabilitation."
- Dattaraya case: In the 2020 ruling 'Dattaraya v State of Maharashtra,' a three-judge Bench of the Supreme Court commuted the death sentence to life imprisonment on the grounds that an adequate sentencing hearing was not held.

- The court also stated that for a constructive hearing under Section 235(2) of the CrPC, the accused should be specifically informed that the court intends to impose the death penalty.
- By presenting mitigating circumstances to the Court, the accused will be able to make an effective representation against the death penalty. This, however, has not occurred.
- The bench also noted that the trial court made no attempt to elicit relevant facts and did not provide the petitioner with an opportunity to file an affidavit putting on record mitigating factors, denying the petitioner an effective hearing.
- Different points of view
- Conflicting rulings on separate hearings: At least three smaller Bench decisions have held that, while a separate sentencing hearing is unconstitutional, it can be held on the same day as the conviction.
- On the other hand, recent three-judge decisions have ruled that same-day sentencing in capital cases violates natural justice principles.
- Data from the same-day sentencing hearing: According to a 2020 study by Project 39A, a criminal reforms advocacy group at the National Law University in Delhi, sentencing hearings occurred on the same day as the pronouncement of guilt in 44% of the cases studied in Delhi, Maharashtra, and Madhya Pradesh.

#### What should an adequate sentencing hearing look like?

- The following are noted in the chain of judgments on sentencing hearings:
- Before passing the death penalty, the accused should be given a "meaningful, real, and effective hearing" in which they can "adduce (cite) material relevant to the question of sentencing."
- However, this cannot occur on the same day as the conviction. This is because the judge must consider not only the factors that necessitate the harshest sentence, but also the mitigating circumstances.

#### What are mitigating factors?

- Definition: Mitigating circumstances are arguments that accused people can use to avoid death sentences.
- These circumstances could include mental health issues, childhood trauma, and a lack of a prior criminal record, among other factors that could lead to a reduced sentence.
- These are intended to mitigate the severity or culpability of a criminal act.
- In May 2022, while hearing appeals against the confirmation of the death sentence, the Supreme Court examined sentencing methodology more closely from the standpoint of mitigating circumstances.
- 'Manoj & others v. State of Madhya Pradesh': The Supreme Court recognised the arbitrariness and subjective patterns in death penalty awarding.
- Studies also show that the death penalty is mostly given to the poor, minorities, and scheduled castes and tribes.
- 'Machhi Singh and Others vs. State of Punjab': This 1983 decision introduced the concept of "collective conscience" into the capital sentencing framework and established five categories in which the community would "expect the holders of judicial power to impose death sentence, because collective conscience was sufficiently outraged."
- It was noted in the background that the death penalty sentence is largely determined by the crime in question, rather than the circumstances of the accused.
- Statistics citing collective conscience: According to Project 39A's 2020 study, 72% of all cases in which Delhi trial courts handed down the death penalty between 2000 and 2015 cited "collective conscience of the society" as an influencing factor.

- The study also discovered that in 63 of the 112 cases where collective conscience was a factor influencing court decisions, no other mitigating factor was considered.

#### What comes next?

- A five-judge Constitution Bench will effectively settle the debate over whether trial courts' fast-tracked hearings, which award death sentences in some cases in a matter of days, are legally justifiable.
- The ruling could also be a significant step toward raising the bar for death sentences even higher.

## SOCIAL JUSTICE AND GOVERNANCE

### SEED (Scheme for Economic Empowerment of Denotified, Nomadic and Semi-Nomadic Tribes)

#### Context:

- Recent statistics from the Ministry of Social Justice and Empowerment indicate that only 402 online applications for SEED benefits have been received (Scheme for Economic Empowerment of Denotified, Nomadic and Semi-Nomadic Tribes).
- According to the most recent figures on file with the government, these groups include more than 10 crore Indians from 1,400 communities.

**Relevance:** GS II: Government policies and Intervention

#### Dimensions of the Article:

- About SEED
- Who are de-notified, nomadic and semi-nomadic tribes?
- What is the history of deprivation faced by these communities?
- Policy measures for DNTs

#### About SEED

- The Ministry of Social Justice & Empowerment introduced Scheme for Economic Empowerment of Denotified/Nomadic/SemiNomadic (SEED) communities in February 2022.
- It intends to give these students free competitive exam coaching, give families health insurance, improve clusters of these communities through livelihood activities, and give money for housing.
- It guarantees spending of Rs. 200 crore over a five-year period beginning in 2021– 22.
- Implementing this plan is the responsibility of the DWBDNCs (Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities).
- The agency has created an online site that will guarantee simple registration and serve as a repository for the data on these communities.

#### Components:

- Free coaching to students from these communities for Civil Services, entry to professional courses like medicine, engineering, MBA, etc.
- Health Insurance through PMJAY of National Health Authority.

- Livelihoods to support income generation
- Housing (through PMAY/IAY).

### Who are de-notified, nomadic and semi-nomadic tribes?

- These are communities who are the most vulnerable and deprived.
- Denotified tribes (DNTs): Communities that were 'notified' as being 'born criminal' during the British regime under a series of laws starting with the Criminal Tribes Act of 1871.
- Nomadic and semi-nomadic tribes: Communities are defined as those who move from one place to another rather than living at one place all the time.

### What is the history of deprivation faced by these communities?

- This has a long history, first during colonial rule, and then in independent India.
- The Renke Commission said this is partly because these communities are largely politically 'quiet' — they do not place their demands concretely before the government for they lack vocal leadership and also lack the patronage of a national leader.
- Many commissions and committees constituted since Independence have referred to the problems of these communities. These include
- Criminal Tribes Inquiry Committee, 1947 constituted in the United Provinces (now Uttar Pradesh),
- Ananthasayanam Ayyangar Committee in 1949 (it was based on the report of this committee the Criminal Tribes Act was repealed),
- Kaka Kalelkar Commission (also called first OBC Commission) constituted in 1953.
- In 1965, an Advisory Committee constituted for revision of the SC and ST list under the chairmanship of B N Lokur referred to denotified tribes.
- The B P Mandal Commission constituted in 1980 also made some recommendations on the issue.

### Policy measures for DNTs:

- The Government had constituted National Commission for Denotified, Nomadic and Semi-Nomadic Tribes (NCDNT) to prepare a State-wise list of castes belonging to Denotified and Nomadic Tribes and to suggest appropriate measures in respect of Denotified and Nomadic Tribes that may be undertaken by the Central Government or the State Government.
- The Renke commission estimated their population at around 10.74 crore based on Census 2001.
- The Idate Commission submitted its report in January 2018. It mentioned that a permanent commission for Denotified, Semi Nomadic, and Nomadic Tribes should have a prominent community leader as its chairperson, and a senior Union government bureaucrat, an anthropologist, and a sociologist as members.
- A Development and Welfare Board for De-Notified, Nomadic and Semi- Nomadic Communities (DWBDNCs) has been constituted and a Committee has also been set up by the NITI Aayog to complete the process of identification of the De-Notified, Nomadic and Semi-Nomadic Communities (DNCs).
- The survey work of identification of DNT Communities and placing them in a category of SC/ST/OBC is also under process in NITI Ayog and Anthropological Survey of India (AnSI).

## Indira Gandhi Urban Employment Guarantee Scheme

**Focus:** GS II: Government policies and Interventions

**Why in News?**

- Recently, the Directorate of Revenue Intelligence (DRI) launched operation 'Gear Box' to stop heroin smuggling, seizes 39.5 kg of contraband from Kolkata port.
- The heroin was examined and seized under provisions of the Narcotic Drugs and Psychotropic Substances Act.

**What is Operation Gear Box?**

- Operation Gear Box is conducted to detect the hidden drugs in the gear boxes.
- The gears from old and used gearboxes were removed after opening them and plastic packets containing the narcotic substance were placed in the created cavity and the gearboxes were refitted to avoid detection.
- The drug syndicate has used this unique modus operandi to conceal heroin.
- These packets were shipped concealing inside this metal scrap with other metal scrap so that it would go unnoticed by the authorities.

**Narcotic Drugs and Psychotropic Substances Act, (NDPS)**

- The Narcotic Drugs and Psychotropic Substances Act, 1985, commonly referred to as the NDPS Act prohibits a person the production/manufacturing/cultivation, possession, sale, purchasing, transport, storage, and/or consumption of any narcotic drug or psychotropic substance.
- India had no legislation regarding narcotics until 1985.
- The Act is designed to fulfill India's treaty obligations under the Single Convention on Narcotic Drugs, Convention on Psychotropic Substances, and United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.
- The Narcotics Control Bureau is a statutory body that was set up under the act with effect from 1986.

**Measures taken by the government**

- Narco-Coordination Centre (NCORD): Government had constituted Narco Coordination Centre (NCORD), the mechanism under Director General (DG), Narcotics Control Bureau (NCB), in order to have effective coordination among all the drug law enforcement agencies and other stakeholders, and also to provide a common platform for discussions on drug-trafficking related issues.
- National Fund for Control of Drug Abuse: The government has constituted a fund called "National Fund for Control of Drug Abuse" to meet the expenditure incurred in connection with combating illicit traffic in Narcotic Drugs; rehabilitating addicts, and educating the public against drug abuse, etc.
- Seizure Information Management System (SIMS): SIMS is a step taken towards digitization of pan-India drug seizure data in 2019 for all the drug law enforcement agencies under the mandate of Narcotics Drugs and Psychotropic Substances Act (NDPS). Narcotics Control Bureau (NCB) was provided with the funds for developing SIMS which will create a complete online database of drug offences and offenders.

**Indira Gandhi Urban Employment Guarantee Scheme****Context:**

- The Indira Gandhi Urban Employment Guarantee Scheme has rolled out in Rajasthan with the objective of providing economic support to the poor and needy families living in the cities through work to be provided on demand for 100 days in a year.

**Relevance:**

- GS II: Government policies and Interventions

**Dimensions of the Article:**

- Who are eligible to get jobs?
- What are the categories of tasks?
- Are similar schemes operative in other States?

**Who are eligible to get jobs?**

- Those in the age group of 18 to 60 years residing within the limits of urban local bodies are eligible to demand and get employment in the identified segments.
- There is no income limit, though the poor and destitute people, especially those who lost their livelihood during the pandemic, will be given preference.
- More than 3.5 lakh people across the State have got themselves registered under the scheme so far and job cards have been issued to 2.25 lakh of them.
- A budgetary provision of 800 crore, announced by Chief Minister in the State Assembly earlier this year, has been made for the scheme in 2022-23.
- At least 50 persons in each ward of urban local bodies will be given employment and the work permitted under the scheme will be approved and executed through committees at the State, district and local body levels.
- The State government will also reward the municipal bodies doing good work under the scheme. The cost of material and the payment for the labour for work of general nature will be in the ratio of 25:75 and will vary for special work which needs technical expertise.
- The State government's Department of Local Bodies will be responsible for the scheme's implementation.

**What are the categories of tasks?**

- The tasks to be carried out under the scheme have been clubbed mainly under eight heads.
- Environment protection
- Water conservation
- Heritage conservation
- Removal of encroachments
- Removal of illegal boards
- Removal of hoardings and banners
- Stopping defacement of property
- Service-related works.
- As part of convergence, the people engaged under the employment guarantee scheme can be employed elsewhere in other schemes, already having a material component, which require the labour.
- Eligible people will get work such as tree plantation, cleaning ponds, collecting garbage from door to door and segregating it and catching stray animals.
- Apart from all these categories, the State government can add new tasks or amend the ones already included in the list.

- A Jan Aadhar card, introduced by the State government, or its registration slip will be required for registration, which can be done at e-Mitra centres.

#### **Wages:**

- While more than 31,000 muster rolls have been issued for the work, the wages will be paid at the rate of 259 a day to unskilled labourers and 283 a day to skilled labourers.
- The 'mates' or supervisors on top of the labourers will get 271 a day.
- Livelihood rights activists feel that though the scheme would help reduce distress among the urban population, the ultimate test of its success will be to ensure that it improves the wage rate in the labour market, which was one of the major contributions of MGNREGA.

#### **Are similar schemes operative in other States?**

- The Rajasthan government has prepared the employment guarantee programme after studying similar such schemes operative in other States. Several States are looking favourably towards an urban version of MGNREGA.
- These schemes include the
- Ayyankali Urban Employment Guarantee Scheme in Kerala,
- Urban Wage Employment Initiative under UNNATI in Odisha,
- Mukhya Mantri Shramik Yojana in Jharkhand and Mukhya Mantri Yuva Swabhiman Yojana in Madhya Pradesh.
- The demand for a job guarantee scheme in the cities is increasing because of the growing distress among the urban poor, higher unemployment rates in urban areas in comparison with villages, the persistently high inflation affecting the people and the prevalence of low-wage and poor quality informal work in urban areas.
- Moreover, as against the rural unemployment being mostly seasonal, unemployed people in the cities face problems throughout the year.

### **Adoption procedure in India**

#### **Context:**

- Recently, District Magistrates (DM) have been empowered to give adoption orders instead of courts.

#### **Relevance:**

- GS II: Government Policies and Interventions

#### **Dimensions of the Article:**

- Juvenile Justice (Care and Protection of Children) Act, 2015
- What do the amended rules say?
- Concern over the revised rules
- Adoption procedure in India
- What are the challenges?

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

- The Juvenile Justice (Care and Protection of Children) Act, 2015 replaced the Juvenile Justice (Care and Protection of Children) Act, 2000 to comprehensively address children in conflict with law and children in need of care and protection.
- The Act changes the nomenclature from 'juvenile' to 'child' or 'child in conflict with law'.
- Also, it removes the negative connotation associated with the word "juvenile".
- It also includes several new and clear definitions such as orphaned, abandoned and surrendered children; and petty, serious and heinous offences committed by children.
- The 2015 law also included special provisions to tackle child offenders committing heinous offences in the age group of 16-18 years.
- It mandates setting up Juvenile Justice Boards and Child Welfare Committees in every district. Both must have at least one-woman member each.
- A separate new chapter on Adoption to streamline adoption procedures for an orphan, abandoned and surrendered children,
- Also, the Central Adoption Resource Authority (CARA) was granted the status of a statutory body to enable it to perform its function more effectively.
- All Child Care Institutions, whether run by State Government or by voluntary or non-governmental organisations are to be mandatorily registered under the Act within 6 months from the date of commencement of the Act.

#### What do the amended rules say?

- The Parliament passed the Juvenile Justice (Care and Protection of Children) Amendment Bill, 2021 in order to amend the Juvenile Justice Act (JJ Act), 2015.
- The key changes include authorising District Magistrates and Additional District Magistrates to issue adoption orders under Section 61 of the JJ Act by striking out the word "court".
- This was done "in order to ensure speedy disposal of cases and enhance accountability," according to a government statement.
- The District Magistrates have also been empowered under the Act to inspect child care institutions as well as evaluate the functioning of district child protection units, child welfare committees, juvenile justice boards, specialised juvenile police units, child care institutions etc.
- The Act and the corresponding rules came into effect from September 1.
- The amendments to the Juvenile Justice (Care and Protection of Children) Model Rules, 2016 say, "all the cases pertaining to adoption matters pending before the Court shall stand transferred to the District Magistrate from the date of commencement of these rules."

#### Concern over the revised rules

- The revised rules have parents, activists, lawyers and adoption agencies worried as cases already before courts for the past several months will have to be transferred and the process will have to start afresh.
- A petition for adoption orders is filed after a parent registers for adoption, who is then assessed through a home study report, referred a child and subsequently allowed to take a child in pre-adoption foster care pending an adoption order.
- A delay in such an order can often mean that a child can't get admission into a school because parents don't yet have a birth certificate, or like in one case, parents unable to claim health insurance if a child is admitted to a hospital.

- The Central Adoption Resource Authority (CARA) says there are nearly 1,000 adoption cases pending before various courts in the country.
- Parents and lawyers also state that neither judges, nor DMs are aware about the change in the JJ Act leading to confusion in the system and delays.
- According to CARA, the Ministry of Women and Child Development is drafting a letter to be sent to State governments clarifying that where adoption orders have already been given, or will be given shortly, the DMs should consider them valid. But there are also larger concerns.

### **Adoption procedure in India**

- Adoptions in India are governed by two laws —
- Hindu Adoption and Maintenance Act, 1956 (HAMA)
- Juvenile Justice Act, 2015
- Both laws have their separate eligibility criteria for adoptive parents.
- Juvenile Justice Act, 2015
- Those applying under the JJ Act have to register on CARA's portal after which a specialised adoption agency carries out a home study report.
- After it finds the candidate eligible for adoption, a child declared legally free for adoption is referred to the applicant.

### **Hindu Adoption and Maintenance Act, 1956 (HAMA)**

- Under HAMA, a "dattaka hom" ceremony or an adoption deed or a court order is sufficient to obtain irrevocable adoption rights.
- But there are no rules for monitoring adoptions and verifying sourcing of children and determining whether parents are fit to adopt.

### **What are the challenges?**

- There are many problems with the adoption system under CARA but at the heart of it is the fact that there are very few children in its registry.
- According to the latest figures there are only 2,188 children in the adoption pool, while there are more than 31,000 parents waiting to adopt a child which forces many to wait for upto three years to be able to give a family to a child.
- This allows traffickers to take advantage of loopholes in HAMA.
- These concerns were also highlighted by a Parliamentary panel in August in its report on the "Review of Guardianship and Adoption Law", which recommended a district-level survey of orphaned and abandoned children.
- In 2015, the then Minister for Women and Child Development Maneka Gandhi centralised the entire adoption system by empowering CARA to maintain in various specialised adoption agencies, a registry of children, prospective adoptive parents as well as match them before adoption.
- This was aimed at checking rampant corruption and trafficking as child care institutions and NGOs could directly give children for adoption after obtaining a no-objection certificate from CARA.
- But the new system has failed in ensuring that more children in need of families are brought into its safety net.

### **PM SHRI Schools**

**Focus:** Government policies and Interventions

### Why in News?

- On the occasion of National Teachers' Day, the Prime Minister Shri Narendra Modi announced a new initiative – PM SHRI Schools (PM SchHools for Rising India).

### About PM SHRI Schools:

- This will be a new centrally sponsored scheme for upgradation and
- development of more than 14,500 Schools across the country by strengthening the selected existing schools from amongst schools managed by Central Government/ State/ UT Government/ local bodies.
- PM SHRI Schools will showcase all components of the National Education Policy 2020 and act as exemplar schools and also offer mentorship to other schools in their vicinity.

### Features:

- Pedagogy adopted in these schools will be more experiential, holistic, integrated, play/toy-based (particularly, in the foundational years) inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible and enjoyable.

### Aim:

- Focus will be on achieving proficiency in learning outcomes of every child in every grade.
- Assessment at all levels will be based on conceptual understanding and application of knowledge to real life situations and will be competency-based.
- These schools will be equipped with modern infrastructure including labs, smart classrooms, libraries, sports equipment, art room etc. which is inclusive and accessible.
- These schools shall also be developed as green schools with water conservation, waste recycling, energy-efficient infrastructure and integration of organic lifestyle in curriculum.
- The aim of these schools will not only be qualitative teaching, learning and cognitive development, but also creating holistic and well-rounded individuals equipped with key 21st century skills.
- They will provide leadership in their respective regions in providing high- quality education in an equitable, inclusive and joyful school environment that takes care of the diverse background, multilingual needs, and different academic abilities of children and makes them active participants in their own learning process as per the vision of NEP 2020.

## Preventive detentions

### Context:

- Preventive detentions in 2021 saw a rise by over 23.7% compared with the year before, with over 1.1 lakh people being placed under preventive detention, according to statistics released by the National Crime Records Bureau (NCRB).

**Relevance:** GS-II: Polity and Governance (Constitutional Provisions, Fundamental Rights), GS-II: Governance (Government Policies and Interventions)

### Dimensions of the Article:

- About Preventive Detention in India
- Criticisms of Preventive detention
- The argument in favour of Preventive detention
- Recent SC Judgement on Preventive Detention

### About Preventive Detention in India

- As the term suggests – Preventive detention helps to prevent a person from committing a crime.
- Article 22 deals with 2 kinds of detentions:
  - Preventive
  - Punitive
- Article 22 (3) (b) of the Constitution allows for preventive detention and restriction on personal liberty for reasons of state security and public order.
- According to Article 22 (4)- in case of preventive detention as well, the person being detained should be informed of the grounds of arrest, however, in case the authorities consider that it is against the public interest to disclose certain facts, they need not reveal them.
- The person cannot be detained under preventive detention for more than 3 months unless permission to do so has been granted by an advisory board consisting of 3 judges of the Supreme Court.
- The other way by which the period of detention can be extended beyond 3 months is if the Parliament prescribes a law for it.
- Acts by the Parliament which provide for extension of Preventive detention period beyond 3 months:
  - National Security Act (NSA) 1980;
  - Conservation of Foreign Exchange and Prevention of Smuggling Activities Act (COFEPOSA) 1974;
  - Unlawful Activities Prevention Act (UAPA) 1967, etc.
- Many State legislatures have enacted similar laws that authorize preventive detention.

### Criticisms of Preventive detention

- Preventive detention becomes a human rights concern as there have been various incidents of misuse of such laws in India.
- Preventive detention represents the police power of the State.
- No other democratic country mentions preventive detention in its constitution and such laws come into effect only under emergency conditions in democratic countries.

### The argument in favour of Preventive detention

- Arbitrary action the State is prevented in India as the areas in the context of which Preventive detention laws can be made are laid down in the 7th Schedule of the Constitution itself.
- In the Union list – laws for Preventive detention can be enacted only for reasons connected with Defence, Foreign Affairs, or the Security of India.
- In the Concurrent list - laws for Preventive detention can be enacted only for reasons connected with Security of a State, the Maintenance of Public Order, or the Maintenance of Essential Supplies and Services.

### Recent SC Judgement on Preventive Detention

- The SC said the State should not arbitrarily resort to “preventive detention” to deal with all and sundry “law and order” problems, which could be dealt with by the ordinary laws of the country.

- Preventive detention is a necessary evil only to prevent public disorder. The court must ensure that the facts brought before it directly and inevitably lead to a harm, danger or alarm or feeling of insecurity among the general public or any section thereof at large.
- Whenever an order under a preventive detention law is challenged, one of the questions the court must ask in deciding its legality is: was the ordinary law of the land sufficient to deal with the situation? If the answer is in the affirmative, the detention order will be illegal.
- Preventive detention must fall within the four corners of Article 21 (due process of law) read with Article 22 (safeguards against arbitrary arrest and detention) and the statute in question.
- Mere contravention of law, such as indulging in cheating or criminal breach of trust, certainly affects 'law and order', but before it can be said to affect 'public order', it must affect the community or the public at large

## **Ban on conversion therapy for the LGBTQIA+ community**

### **Context:**

- The National Medical Commission (NMC), the apex regulatory body of medical professionals in India, has written to all State Medical Councils, banning conversion therapy and calling it a "professional misconduct".

### **Relevance:**

- GS II: Government policies and Interventions

### **Dimensions of the Article:**

- What is conversion therapy?
- Role of the Madras High Court in the ban
- Way forward

### **What is conversion therapy?**

- Conversion or reparative therapy is an intervention aimed at changing the sexual orientation or gender identity of an individual with the use of either psychiatric treatment, drugs, exorcism and even violence, with the aim being to make the individual a heterosexual.
- The conversion therapy umbrella also includes efforts to change the core identity of youth whose gender identity is incongruent with their sex anatomy.
- Often, the therapy is offered by quacks with little expertise in dealing with the issue.
- According to the American Academy of Child and Adolescent Psychiatry (AACAP), the interventions under conversion therapy are provided under the false premise that homosexuality and diverse gender identities are pathological.

### **What are the risks involved?**

- According to AACAP and other health experts, conversion therapy poses the risk of causing or exacerbating mental health conditions, like anxiety, stress and drug use which sometimes even lead to suicide.

### **Role of the Madras High Court in the ban:**

- On June 7, 2021, Madras High Court gave a landmark ruling on a case he was hearing about the ordeal of a same-sex couple who sought police protection from their parents.
- Pending adequate legislation more protective of the community, Justice issued a slew of interim guidelines for the police, activists, Union and State Social Welfare Ministries, and the National Medical Commission to “ensure their safety and security to lead a life chosen by them.”
- The ruling prohibited any attempt to medically “cure” or change the sexual orientation of LGBTQIA+ (lesbian, gay, bisexual, transgender, queer, intersex, asexual or of any other orientation) people.
- It urged the authorities to take action against “professionals involving themselves in any form or method of conversion therapy,” which could include the withdrawal of licence to practice medicine.
- Recently, the court gave an order to the National Medical Commission directing it to “issue necessary official notification by enlisting ‘Conversion Therapy’ as a professional misconduct.”

### Some of the other guidelines issued by the court

- In its 2021 verdict, the Madras High Court directed the police, for example, to close complaints of missing persons’ cases, “without subjecting them to harassment”, if it found on investigation that the parties were consenting adults belonging to the LGBTQIA+ community.
- The court asked the Ministry of Social Justice & Empowerment to draw up a list of NGOs and other groups which could handle the issues faced by the community, and gave it a time of eight weeks from the date of the order.
- Recently, the court pulled up the Ministry for failing to compile a comprehensive list. The court said the community should be provided with legal assistance by the District Legal Services Authority in coordination with law enforcement agencies.
- Asking agencies to follow the Transgender Persons (Protection of Rights) Rules, 2020, and the Transgender Persons (Protection of Rights) Act, 2019, in letter and spirit, the court said it was imperative to hold sensitisation programmes for an all-out effort to understand the community and its needs.

### Way forward

- Schools and colleges must effect changes in curricula for a better understanding of the community.
- o As late as 2018, medical books listed homosexuality and lesbianism as a “perversion”.
- People of a different sexual orientation or gender identity often narrate harrowing tales of bullying, discrimination, stigma and ostracisation.
- Gender-neutral restrooms should be compulsory in educational institutes and other places.
- Parents too need to be sensitised, because the first point of misunderstanding and abuse often begins at home, with teenagers being forced to opt for “conversion” therapies.
- Health professionals point out that even adults opting for sex reassignment surgeries need to get proper guidance like therapy pre and post operation; for an ordinary citizen, the cost too can be prohibitive.

### E-Baal Nidan portal

**Focus:** GS II: Government policies and Interventions

### Why in News?

- Online portal “E-Baal Nidan” for redressal of grievances against violation of child rights revamped

**About E-Baal Nidan portal:**

- National Commission for Protection of Child Rights to fulfil its mandate and functions under Section 13 of the CPCR Act, 2005 had developed an online complaint mechanism “E-BaalNidan” in 2015.
- It is an online portal, wherein any person can register a complaint reporting about any violation committed against a child and after such registration, the complainant will get a complaint registration number.
- Through this number, the progress of redressal of the complaint in the Commission can be tracked by the complainant.
- The registration form is prepared in a way that all the aspects of a complaint can be enumerated and details can be provided by the complainant.
- The details that are included in the form are the date of incidence, place of incidence, information about the victim, the authority, the nature and category of complaint, what action was initiated, etc.
- The complaints so registered with the Commission are processed and dealt like any other complaint received by the Commission.
- This online mechanism of reporting ensures that the complainant has the ease of making a complaint to the Commission through online mode without any costs.
- It makes the process of redressal of complaints transparent for the complainant and helps in timely disposal of cases by the Commission.

**Some of the new features include:**

- Bifurcation of complaints based on the nature of the complaint into their subject matters like Juvenile Justice, POCSO, Labour, Education etc,
- Internal monitoring and transfer of complaints in the Commission,
- Tracking of complaints at every stage in a more mechanised and time bound manner.
- About National Commission for Protection of Child Rights (NCPCR)
- It is a statutory body constituted under Section 3 of the Commission for Protection of Child Rights (CPCR) Act, 2005 to protect the child rights and other related matters in the country.
- The Commission is further mandated to monitor the proper and effective implementation of Protection of Children from Sexual Offences (POCSO) Act, 2012; Juvenile Justice (Care and Protection of Children) Act, 2015 and Right to Free and Compulsory Education (RTE) Act, 2009.
- In one of the functions laid down under Section 13 of the CPCR Act, 2005, the Commission has been assigned with the function to examine and review the safeguards provided by or under any law for the time being in force for the protection of child rights and recommend measures for their effective

**Aliva to eradicate child marriage****Context:**

- Recently, Nayagarh, a district in Odisha, has adopted a unique initiative- Aliva to eradicate child marriage.
- As per Odisha’s child marriage prevention strategy, the State aims to eradicate child marriage by 2030.

**Relevance:**

- GS II: Government policies and Interventions

**Dimensions of the Article:**

- About Aliva to eradicate child marriage
- Significance

#### **About Aliva to eradicate child marriage:**

- The programme was launched in January, 2022.
- Workers at anganwadi programmes were instructed to track down and identify every teenage girl in their area.
- Aanganwadi centres in the district include records called Aliva that contain information about adolescent girls, such as the date of their birth registration, their Aadhaar number, their family details, their skill training, etc.
- The local headmaster, the girl's father, the supervisor, and the Child Marriage Prohibition Officer have all approved the girl's age (CMPO).
- Currently, the district has 48,642 adolescent females' information recorded in the Aliva registries.
- District administration and the police consult registers to confirm girls' ages when they are tipped off about child weddings.
- The district has made the decision to keep the record for ten years, from 2020 to 2030.

#### **Significance:**

- The Aliva registers are by far the most comprehensive ones that keep tabs on girls' lives for 10 years.
- The register has been useful for law enforcement agencies, as parents attempt to lie about the age of their girls to escape punishment.
- Though the register was conceptualised to prevent child marriages, it has been very useful for tracking the health of girls especially if they are anaemic.

### **EWS quota**

#### **Context:**

- The 10% quota for economically weaker sections (EWS) of society does not erode the rights of the Scheduled Castes, the Scheduled Tribes or the Other Backward Classes, Attorney- General of India submitted before a Constitution Bench led by Chief Justice of India.

#### **Relevance:**

- GS II: Government policies and Interventions

#### **Dimensions of the Article:**

- EWS quota: What are the issues fixed by the Supreme Court?
- What is the 103rd Amendment?
- How is EWS status determined under the law?
- What is the basis of the challenge to the amendment?
- What has been the government's stand in this matter so far?

#### **What is the 103rd Amendment?**

- The 103rd Amendment inserted Articles 15(6) and 16(6) in the Constitution to provide up to 10 per cent reservation to EWS other than backward classes, SCs, and STs in higher educational institutions and initial recruitment in government jobs.
- The amendment empowered state governments to provide reservation on the
- basis of economic backwardness.
- Article 15 prohibits discrimination on grounds of religion, race, caste, sex, or place of birth.
- Article 16 guarantees equal opportunity in matters of public employment.
- The additional clauses gave Parliament the power to make special laws for EWS like it does for SCs, STs, and OBCs.

#### **Sinho Commission:**

- The EWS reservation was granted based on the recommendations of a commission headed by Major General (ret'd) S R Sinho. The commission, which was constituted by the UPA government in March 2005, submitted its report in July 2010.
- The Sinho Commission recommended that all below-poverty-line (BPL) families within the general category as notified from time to time, and also all families whose annual family income from all sources is below the taxable limit, should be identified as EBCs (economically backward classes).

#### **How is EWS status determined under the law?**

- The EWS criteria for employment and admission was notified on January 31, 2019 by the Department of Personnel and Training (DoPT) based on the 103rd Amendment.
- Under the 2019 notification,
- A person who was not covered under the scheme of reservation for SCs, STs, and OBCs,
- Whose family had a gross annual income below Rs 8 lakh, was to be identified as EWS for the benefit of reservation.
- The notification specified what constituted “income”, and excluded some persons from the EWS category if their families possessed certain specified assets.

#### **Debate:**

- In October 2021, the Supreme Court, while hearing a challenge to reservation for EWS in the All-India quota for PG medical courses, asked the government how the threshold of Rs 8 lakh had been reached.
- The Centre told the court that it would revisit the income criterion, and set up a three-member panel for this purpose.
- In January this year, the government accepted the committee’s report, which said that the threshold of Rs 8 lakh of annual family income, in the current situation, seems reasonable for determining EWS” and “may be retained.
- However, the committee said that the EWS may...exclude, irrespective of income, a person whose family has 5 acres of agricultural land and above.
- Also, the committee recommended that the residential asset criteria may altogether be removed.

#### **What is the basis of the challenge to the amendment? Basic Structure:**

- The primary argument in this case is that the amendment violates the basic structure of the Constitution. Although there is no clear definition of basic structure, any law that violates it is understood to be unconstitutional.
- This argument in the present case stems from the view that the special protections guaranteed to socially disadvantaged groups is part of the basic structure, and that the 103rd Amendment departs from this by promising special protections on the sole basis of economic status.

#### **Indra Sawhney & Ors v Union of India:**

- The petitioners have also challenged the amendment on the ground that it violates the Supreme Court's 1992 ruling in Indra Sawhney & Ors v Union of India, which upheld the Mandal report and capped reservations at 50 per cent.
- The court had held that economic backwardness cannot be the sole criterion for identifying a backward class.

#### **Private, unaided educational institutions:**

- Another challenge is on behalf of private, unaided educational institutions.
- They have argued that their fundamental right to practise a trade/ profession is violated when the state compels them to implement its reservation policy and admit students on any criteria other than merit.

#### **What has been the government's stand in this matter so far?**

- In counter affidavits, the Ministry of Social Justice and Empowerment argued that under Article 46 of the Constitution, part of Directive Principles of State Policy, the state has a duty to protect the interests of economically weaker sections
- Article 46 : The state shall promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.
- Against the argument of violation of the basic structure, the government said that to sustain a challenge against a constitutional amendment, it must be shown that the very identity of the Constitution has been altered.

### **PM PRANAM scheme**

#### **Context:**

- In order to reduce the use of chemical fertilisers by incentivising states, the Union government plans to introduce a new scheme – PM PRANAM, which stands for PM Promotion of Alternate Nutrients for Agriculture Management Yojana.

#### **Relevance:**

- GS II: Government Policies and Intervention

**Dimensions of the Article:**

- What is the PM PRANAM scheme?
- Why is the scheme being introduced?

**What is the PM PRANAM scheme?**

- The proposed scheme intends to reduce the subsidy burden on chemical fertilisers, which is expected to increase to Rs 2.25 lakh crore in 2022-2023, which is 39% higher than the previous year's figure of Rs 1.62 lakh crore.
- The scheme will not have a separate budget and will be financed by the "savings of existing fertiliser subsidy" under schemes run by the Department of fertilisers.

**Subsidies:**

- 50% subsidy savings will be passed on as a grant to the state that saves the money,
- 70% of the grant provided under the scheme can be used for asset creation related to technological adoption of alternate fertilisers and alternate fertiliser production units at village, block and district levels.
- The remaining 30% grant money can be used for incentivising farmers, panchayats, farmer producer organisations and self-help groups that are involved in the reduction of fertiliser use and awareness generation.
- The government will compare a state's increase or reduction in urea in a year, to its average consumption of urea during the last three years.

**Why is the scheme being introduced?**

- Due to increased demand for fertiliser in the country over the past 5 years, the overall expenditure by the government on subsidy has also increased.
- The total requirement of four fertilisers — Urea, DAP (Di-ammonium Phosphate), MOP (Muriate of potash), NPKS (Nitrogen, Phosphorus and Potassium) — increased by 21% between 2017-2018 and 2021-2022, from 528.86 lakh metric tonnes (LMT) to 640.27 LMT
- In light of the increased demand, the government has also been increasing the subsidies it provides for chemical fertilisers.
- However, the final figure of fertiliser subsidy touched Rs 1.62 lakh crore in 2021-22.
- PM PRANAM, which seeks to reduce the use of chemical fertiliser, will likely reduce the burden on the exchequer.
- The proposed scheme is also in line with the government's focus on promoting the balanced use of fertilisers or alternative fertilisers in the last few years.

**Addition of Tribes to ST List****Context:**

- Recently, government has approved the inclusion of certain communities in the lists of Scheduled Tribes in Chhattisgarh, Tamil Nadu, Karnataka, Himachal Pradesh and Uttar Pradesh, fulfilling long-pending demands from these states.

**Relevance:**

- GS II: Government policies and Interventions

### Dimensions of the Article:

- About Newly Added Tribes
- Who are the Scheduled Tribes?
- Constitutional Provisions regarding STs
- The ST List's inclusion procedure
- Status of STs in India

### About Newly Added Tribes

- **Hatti Tribe (Himachal Pradesh):**
- The Hattis are a close-knit group of people who acquired their name from the custom of selling homegrown produce, livestock, meat, and other goods in town's "haat" marketplaces.
- The group has been requesting this since 1967, when residents of the Sirmaur district's bordering Jaunsar Bawar region of Uttarakhand were granted tribal identity.
- Resolutions adopted at various maha Khumblis over the years strengthened their claim for tribal status.
- **Narikoravan and Kurivikkaran (Tamil Nadu):**
- Nomadic tribes like the Narikuravas and Kuruvikaras (jackal catchers and bird eaters) pride themselves on their traditional occupations of hunting and gathering.
- **Binjhia (Chhattisgarh):**
- In Jharkhand and Odisha, the Binjhia were categorised as STs, but not in Chhattisgarh.
- The Binjhia are meat eaters, and agriculture is the foundation of their society and economy. They don't eat beef or pork, although they do drink alcohol, including handia (rice beer).
- **Gond Community (Uttar Pradesh):**
- The Cabinet approved a proposal to bring the Gond community residing in 13 districts of Uttar Pradesh, under the ST list from the Scheduled Caste list.
- This includes the five subcategories of the Gond community (Dhuria, Nayak, Ojha, Pathari, and Rajgond).
- **'Betta-Kuruba' (Karnataka):**
- The ST status granted to the Betta-Kuruba community as a synonym of Kadu Kuruba of Karnataka.
- Betta-Kuruba community has been demanding to include in the ST category for the last 30 years.

### Who are the Scheduled Tribes?

- The Constitution does not define the criteria for recognition of Scheduled Tribes.
- However, Article 366(25) of the Constitution only provides process to define Scheduled Tribes: "Scheduled Tribes means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purposes of this Constitution."
- Article 342(1): The President may with respect to any State or Union Territory, and where it is a State, after consultation with the Governor, by a public notification, specify the tribes or tribal communities or part of or groups within tribes or tribal communities as Scheduled Tribe in relation to that State or Union Territory.
- The Dhebar Commission (1973) created a separate category "Primitive Tribal Groups (PTGs)" which was renamed in 2006 as "Particularly Vulnerable Tribal Groups (PVTGs)".

### Constitutional Provisions regarding STs

- Art. 15(4): Special provisions for advancement of other backward classes (which includes STs);
- Art. 23: Prohibition of traffic in human beings and beggar and other similar form of forced labour;
- Art. 24: Forbidding Child Labour.
- Art. 29: Protection of Interests of Minorities (which includes STs);
- Art. 46: The State shall promote, with special care, the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Castes, and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.
- Art.164(1): Provides for Tribal Affairs Ministers in Bihar, MP and Orissa;
- Art. 243: Reservation of seats in Panchayats.
- Art.244: Clause (1) Provisions of Fifth Schedule shall apply to the administration & control of the Scheduled Areas and Scheduled Tribes in any State other than the states of Assam, Meghalaya, Mizoram and Tripura which are covered under Sixth Schedule, under Clause (2) of this Article.
- Art. 275: Grants in-Aid to specified States (STs&SAs) covered under Fifth and Sixth Schedules of the Constitution.
- Art. 330: Reservation of seats for STs in Lok Sabha;
- Art. 337- Reservation of seats for STs in State Legislatures;
- Art. 334: 10 years period for reservation (Amended several times to extend the period);
- Art. 350: Right to conserve distinct Language, Script or Culture;
- Art. 350: Instruction in Mother Tongue.
- Art. 371: Special provisions in respect of NE States and Sikkim.

### **The ST List's inclusion procedure**

- Tribal Affairs Ministry analyses and forwards the recommendations for inclusion in the ST list to the Registrar General of India for approval after receiving them from the corresponding State governments.
- Before the list is forwarded to the Cabinet for a final decision, the National Commission for Scheduled Tribes must first approve it.

### **Status of STs in India**

- The Census 2011 has revealed that there are said to be 705 ethnic groups notified as Scheduled Tribes (STs).
- Over 10 crore Indians are notified as STs, of which 1.04 crore live in urban areas.
- The STs constitute 8.6% of the population and 11.3% of the rural population.

### **Tamil Nadu's new breakfast scheme in schools**

#### **Context:**

- Recently, Tamil Nadu Chief Minister, at the Madurai Corporation Primary School Aathimoolam II in Simmakal, Madurai, launched the Chief Minister's Breakfast Scheme for students of Class I to V in government schools.

#### **Relevance:**

- GS II: Government policies and Interventions

#### **Dimensions of the Article:**

- About Chief Minister's Breakfast Program
- Mid-Day-Meal (MDM) Scheme
- Where should the programme focus more?

### About Chief Minister's Breakfast Program

- This scheme helps to promote the education of poor students studying in Tamil Nadu government schools.
- It helps poor school students as well as to overcome malnutrition issues and to avoid dropping out of school students.
- Initially, the scheme is going to be implemented in some Municipalities, Corporations, and remote villages.
- The students studying from Class I to V in government schools will be provided
- with nutritious snacks in the morning on all school working days.
- In order to effectively implement the Chief Minister's Breakfast Scheme, the project implementation guidelines and survey forms for inspection of integrated kitchens preparing food in urban areas, schools attached to them and schools/kitchens operating in rural and hilly areas under the scheme have been published in the interview letter.

### Number of beneficiaries of the programme:

- As of now, there are nearly 46.7 lakh beneficiaries spread over 43,190 nutritious meal centres.
- This includes around 3,500 students of National Child Labour Project (NCLP) special schools.
- The State budget for 2022-23 has provided around ₹2,077 crore for the nutritious meal programme.
- Besides, as a consequence of the collaborative implementation of the Integrated Child Development Scheme (ICDS) and the nutritious meal programme, around
- 15.8 lakh children in the age group of 2+ to 5+ years receive nutritious meals.

### Mid-Day-Meal (MDM) Scheme

- The Mid-day Meal Scheme is a school meal programme of the Government of India designed to better the nutritional standing of school-age children nationwide.
- Under the Convention on the Rights of the Child, to which India is a party, India has committed to yielding "adequate nutritious food" for children.
- The Midday Meal Scheme is covered by the National Food Security Act, 2013.
- The programme supplies free lunches on working days for children in primary and upper primary classes.
- The students of:
  - Government schools,
  - Government aided schools,
  - Local body Education Centres,
  - Education Guarantee Scheme, and alternate innovative education centres,
  - Madarsa and Maqtabs supported under Sarva Shiksha Abhiyan,
  - National Child Labour Project schools run by the Ministry of labour.

### How the Mid-Day-Meal Scheme came to be-

- Post-Independence, Tamil Nadu was the first state to introduce the MDM scheme in the 1960s.
- The Central scheme to provide meals to school children began in 1995, however, most states just limited themselves to providing dry rations.

### Impact of the mid-day meal scheme on school education

- After the improved version of the mid-day meal scheme in 1982, the Gross Enrollment Ratio (GER) at primary level (standards I to V) went up by 10% during July-September, 1982 as compared to the corresponding period in 1981.
- The rise in boys' enrollment was 12% and in the case of girls, 7%, according to a publication brought out by the Tamil Nadu government on the occasion of the launch of the Chief Minister's Breakfast Scheme.
- Likewise, attendance during July-September 1982 rose by 33% over the previous year's figure.

### Where should the programme focus more?

- Anaemia is a major health problem in Tamil Nadu, especially among women and children, says the 2019-21 National Family Health Survey (NFHS)-5's report.
- From 50% during the period of the 2015-16 NFHS-4, the prevalence of anaemia in children now went up to 57%.
- This and many other health issues can be addressed through the combined efforts of the departments of School Education, Public Health and Social Welfare and Women Empowerment.
- Based on expert advice, those in charge of the implementation of the ICDS and the nutritious meal programme can enhance the component of nutrition to those children having specific problems. The latest Breakfast Scheme is a step in this direction.

## A REVERT TO THE MEAN: ON VIOLENT CRIMES AND THE PANDEMIC

### Context

- According to the NCRB's annual report, "Crime in India," released earlier this week, registration in violent crimes such as rape, kidnapping, atrocities against children, robberies, and murders increased in 2021 to levels before the pandemic, compared to a drop in 2020.

**Relevance:** GS Paper 2: Governance/Social Justice

### Mains Question

- Examine the possible causes of the various crimes cited in the report and shed light on the nature of crimes based on a recent report published by the National Crime Records Bureau (NCRB). (250 words)

### The Earlier Drop and the Later Scary Data

- The drop in 2020 appeared to be an outlier, either due to lower registration or a partial decrease in occurrence due to extensive lockdowns and office shutdowns.
- While violent crimes increased in 2021, the overall crime rate (per one lakh people) fell from 487.8 in 2020 to 445.9 in 2021, owing largely to a decrease in cases registered under disobedience to a public servant's order relating to lockdowns.
- If 2020 was the year when India faced the first COVID-19 wave, 2021 was equally tense due to the effect of the novel coronavirus's Delta variant; the frequency and intensity of lockdowns were relatively lower in comparison to 2020.
- "Cruelty by husband or his relatives" accounted for 31.8% of crimes against women, up from 30.2% in 2020 and 30.9% in 2019, indicating that domestic violence remained a major problem.

- Despite an increase in violent crimes, the chargesheeting rate fell from 75.8% in 2020 to 72.3% in 2021, as did the conviction rate (57% from 59.2% in 2020). As a result, in a year with more violent crimes, law enforcement was less responsive.
- These trends must be read once more. State-wise — Assam had the highest number of violent crimes per 100,000 people (76.6), followed by Delhi (57), and West Bengal (48.7), while Gujarat, Andhra Pradesh, and Tamil Nadu had the lowest.

### Cases of Suicide

- The report also revealed that the population suicide rate in 2021 — 12 per one lakh people — was the highest in the previous five years.
- Domestic issues (33.2%) and illnesses (18.6%) were cited as the primary causes, with the majority of victims being daily wage earners (25.6%) and housewives (14.1%), highlighting the severity of the pandemic and its indirect effects on people.

### Other Considerations

- With India registering the highest excess deaths during the pandemic, particularly during the Delta wave, these figures are not surprising.
- The 5.9% increase in cybercrime cases registered between now and 2020 reflects the growing use of digital devices and the associated challenges.
- This increase was more pronounced in rural areas, as cyber crime in metropolitan cities (with populations greater than two million people) decreased by 8.3% from 2010 to 2020.
- With more people in rural areas using digital devices, including for financial purposes, the rise in cybercrime should prompt the government to make an effort to educate people about the risks associated with cyber activities and to improve law enforcement.

### Who is responsible for the publication of the NCRB report?

- The NCRB was established in January 1986 with the goal of creating a body to compile and keep records of crime data.
- It reports to the Union Home Ministry.
- Its functions, in addition to publishing annual reports, include "collection, coordination, and exchange of information on inter-state and international criminals to the respective states."
- The NCRB also serves as a "national warehouse" for fingerprint records of Indian and foreign criminals, assisting in the identification of interstate criminals through fingerprint searches.

### How does the NCRB gather data for its report?

- The NCRB report includes information gathered from the country's 36 states and union territories.
- State-level crime records bureaus provide comparable data for 53 metropolitan cities, or those with a population of more than 10 lakh as of the 2011 census.
- State/UT police enter this information at the police station/district level, which is then validated further at the district level, then the state level, and finally by the NCRB.

### Problems with NCRB data

- The NCRB admits that its data has limitations, which it acknowledges.

- Because the publication adheres to the 'Principal Offence Rule' for crime classification, the actual count of each crime head may be under-reported.
- The Principal Offence Rule states that when multiple offences are registered, only the "most heinous crime" carrying the most severe punishment is counted.
- For example, 'Murder with Rape' is treated as 'Murder,' undercounting the crime of rape.
- Vacancies or a lack of police officers at the local level may impede data collection.
- The data also record the occurrence of registered crime rather than actual crime.

#### **In contrast to NCRB data**

- Following the 2012 Nirbhaya Gangrape case, reported crimes against women in Delhi increased significantly.
- This is not due to the heinous crimes being trivialised.
- It could be due to increased awareness of the importance of reporting crimes, both among those affected and the police, rather than an increase in the incidence of crime against women.

### **MAKE IN INDIA: BACKSIDE LOOP HOLE**

#### **Context**

- The scope and viability of the Production Linked Incentive scheme are discussed in this article (PLI).
- The government has set aside Rs 1.97 lakh crore for PLI schemes in various sectors in Budget 2022-23, with an additional allocation of Rs 19,500 crore for PLI for solar PV modules.

**Relevance** GS Paper 2: Growth & Development, Government Policies & Interventions

#### **Mains Question**

- Make in India, which aimed to establish India as a global manufacturing hub, has failed. Analyse. (150 Words)

#### **Production-Linked Incentive Plan (PLI)**

- Goal: Its goal is to establish a sustainable manufacturing base in India.
- Reasons for launching the PLI scheme: It is based on the premise that India produces insufficiently. According to the GoI, for example, the electronics sector has a competitive disadvantage of around 8.5-11% as a result of the following factors:
  - Inadequate infrastructure in India and high financing costs
  - Inadequate supply of high-quality power
  - Industry's limited design capabilities and neglect of R&D
  - Skill deficiencies among Indian workers.
- So far, the government has announced PLI schemes for 14 industries, including automobiles and auto components, electronics and IT hardware, telecommunications, solar modules, pharmaceuticals, metals and mining, textiles and clothing, white goods, drones, and advanced chemical cell batteries.

#### **PLI scheme incentive measurement**

- The incentives range from as little as 1% for electronics and technology products to as much as 20% for the production of critical key starting drugs and certain drug intermediaries.

- In some industries, such as advanced chemistry cell batteries, textile products, and the drone industry, the incentive will be calculated over a five-year period based on sales, performance, and local value addition.

### Understanding PLI through the cellphone industry

- Raised customs duties: In April 2018, customs duties on mobile imports were raised to 20%.
- Impact: This immediately increased domestic mobile phone prices, allowing manufacturers to charge Indian customers more.
- PLIs were then introduced, which offered manufacturers a government payment of 6% in the first year for every cellphone produced in India, decreasing to 4% in the fifth year if they met incremental investment and sales targets.
- Caveat: Even if a manufacturer imports all of the parts from outside the country and simply assembles them in India, he still receives the 6% subsidy on the invoice.
- State waivers: States also provide state-GST waivers (about 9% of the price), as well as power, land, and capital expenditure subsidies. As a result, the combination of protection and subsidies makes it very profitable to manufacture and even export in India. As a result, manufacturers are competing to be chosen for the scheme.
- Who pays: Because of tariffs, the Indian customer pays a higher price. Subsidies are paid for by the Indian taxpayer, not only to Indian firms chosen for PLI, but also to international manufacturers such as Foxconn and Wistron.

### Telephone, cellular phone, and related equipment EXIM data

- Prior to the implementation of PLI: Prior to the implementation of PLI and Covid in 2019, exports were \$1.6 billion, with imports totaling \$4 billion. 4 billion, resulting in a net deficit of \$2 billion. 8 trillion
- After the implementation of the PLI, exports were \$2 in 2021. 7 billion, with imports of \$5 billion. 2 billion, resulting in a net deficit of \$2 billion. 4 billion dollars
- Trend: Exports have increased significantly, but they were already trending upward prior to the PLI. Imports, on the other hand, were declining and are now increasing, which is consistent with PLI encouraging manufacturers to import parts as long as the final assembly is done in India.

### The primary concern of the PLI scheme

- Uncertainty about continuation: It is unclear whether manufacturers will continue to produce after the scheme expires.
- Better climates: When the PLI expires, producers may shift production to better climates, such as Vietnam, and achieve scale economies without incurring disadvantages.
- Given the low investment required to qualify for PLI (approximately \$125 million over four years), they will have little ties to India.
- Intensify demand: Manufacturers may continue to produce, but they will need tariff and subsidy protection to do so. Firms are already lobbying for the extension of PLI to compensate for the pandemic period. They can also threaten to close down and fire employees if the scheme fails. In order to avoid civil unrest, the government may agree to their demand.
- Risks associated with PLI-induced domestic production: If PLI-induced domestic production does not become globally cost-competitive, it will reduce exports in other sectors.
- High-cost domestically produced PLI-favored semiconductors, for example, will reduce the competitiveness of two-wheeler exports that rely on chips.

### Progressive measures

- **Monitoring:** The NITI Aayog has recently begun work on developing a set of objective criteria to track the value added by companies that receive financial incentives through Production-Linked Incentive (PLI) schemes.
- A dashboard will also be created to identify roadblocks at the state level.
- **Agency:** The NITI Aayog intends to enlist the assistance of an external agency - the state-owned Industrial Finance Corporation of India (IFCI) Ltd or SIDBI - in designing and preparing a centralised database to track progress in PLI schemes across sectors.
- **Importance:** This database will track value addition, actual exports versus committed exports, and job creation.
- **Background:** Currently, different ministries track the value addition of their respective PLI schemes, and there is no way to compare them. There was no standardised set of parameters for determining the value added by companies that have received or are likely to receive PLI scheme incentives.

### The way forward

- Longer-term tasks such as increasing human capital investment, developing a simple but fair land acquisition process, ending the constant rejigging of tariffs and taxes that make it difficult for producers to invest, and strengthening infrastructure require new substitutes.

## ALL BOARDS MUST IMPLEMENT PARAKH FOR EXAM SCORING.

### Context

- The Union government intends to develop a benchmark framework for assessing students at the secondary and higher secondary levels, with the goal of achieving uniformity among state and central boards, which currently use disparate evaluation criteria, resulting in large disparities in scores.
- PARAKH - Performance Assessment, Review, and Analysis of Knowledge for Holistic Development - the proposed regulator, will work to eliminate the NEP's emphasis on rote learning.

### Relevance

- GS Paper 2: Government Policies

### Mains Question

- Examine the key features and gaps in the recently approved National Education Policy for 2020. (250 words)

### Background to the National Education Policy (NEP) 2020:

- An NEP is a comprehensive framework for guiding the country's educational development.
- The Education Commission, led by D S Kothari, recommended the first education policy in 1968.
- The second education policy was implemented in 1986, and it was succeeded by the third education policy, NEP 2020.

### NEP 2020

- The NEP 2020 was drafted in response to the recommendations of a panel led by former ISRO chief Kasturirangan.

- The policy is a comprehensive framework for elementary, secondary, and postsecondary education, as well as vocational training in both rural and urban India.
- By 2040, the policy aims to transform India's education system.

### How will the NEP 2020 be put into action?

- The NEP only provides broad guidance and is not required to be followed.
- Because education is a concurrent subject, the proposed reforms can only be carried out collaboratively by the Centre and the states.
- The current administration has set a goal of completing the policy by 2040.

### PARAKH Background

- The NCERT recently convened a series of meetings with representatives from state boards and SCERTs to reach an agreement on how to implement the plan, which includes the creation of a new assessment regulator.
- During the discussions, the majority of states supported the NEP proposals: o Holding board exams twice a year, including one to help students improve their scores.
- To provide two types of mathematics papers - a standard exam and another to test higher level competency - in order to reduce students' fear of math and encourage learning.
- Having two sets of question papers for most subjects, one with multiple choice questions (MCQs) and one with descriptive questions.
- As a result, the Union Ministry of Education recently invited bids to establish a regulator - PARAKH.

### About

- The National Education Policy (NEP) 2020 proposed the PARAKH benchmark assessment framework to reduce the emphasis on rote learning.
- PARAKH will function as an NCERT constituent unit, tasked with establishing norms, standards, and guidelines for student assessment and evaluation for all recognised school boards in India.
- Conducting regular learning outcome tests, such as the National Achievement Survey (NAS) and State Achievement Surveys.
- If everything goes as planned, PARAKH will run the NAS in 2024.
- The PARAKH team will be comprised of leading assessment experts with in-depth knowledge of the Indian and global education systems.
- PARAKH will eventually become the national one-stop shop for all assessment- related information and expertise, with a mandate to support all forms of learning assessment, both nationally and globally, where applicable.

### Importance

- Uniformity: PARAKH will help to address the issue of students from some state boards being at a disadvantage during college admissions when compared to their CBSE peers.
- Standardization: At all levels of education, it will establish and implement technical standards for test design, administration, analysis, and reporting.
- Skill development: It will encourage and assist school districts in shifting their assessment patterns to meet the skill requirements of the twenty-first century.

## Shiv Bhojan Thali scheme

### Context:

- One of the most popular initiatives of the previous Maha Vikas Aghadi (MVA) government in Maharashtra was the Shiv Bhojan Thali, a form of subsidised meal scheme. With the new Eknath Shinde-led dispensation coming to power in the state, the scheme is under the scanner.

### Relevance:

- GS II: Government policies and Interventions

### Dimensions of the Article:

- What is Shiv Bhojan Thali scheme?
- What is the controversy over the scheme?
- What is the present status of the scheme?

### What is Shiv Bhojan Thali scheme?

- The scheme offered a full meal thali (plate) to people for Rs 10.
- The thali included two chapatis, vegetables, rice, and dal.
- In urban areas, the cost of the thali came to Rs 50, and in rural areas, the amount was Rs 35.
- It was sold by canteens for Rs 10, with the government compensating the rest of the amount.
- Seen as the Uddav Thackeray government's flagship scheme, the Shiv Bhojan Thali was launched on January 26, 2020, and on average, 1.4 lakh meals were served under it daily.
- During the Covid-19 pandemic, the government had initially slashed the prices of the thali to Rs 5.
- Then from April 2021, the meal was given free of cost, with parcel services allowed too.
- As the pandemic was brought under control and the lockdown was lifted in phases, the price was brought back to Rs 10 in October 2021.

### What is the controversy over the scheme?

- Among the last few decisions of the MVA government was to increase the number of plates being served under this scheme across the state to 2 lakh, from the existing 1,88,463.
- However, after the new government of Chief Minister Eknath Shinde and deputy Chief Minister Devendra Fadnavis was sworn in on June 30, all decisions taken by the previous dispensation were stayed and underwent scrutiny.
- The decision to increase the number of thalis was also kept in abeyance.

### What is the present status of the scheme?

- As per the data, Maharashtra has a total of 1,699 eateries serving Shiv Bhojan thalis, out of which 1,549 are active.
- The present number of approved thalis in the state is 1,88,463.
- The number of actual plates distributed is 1,45,627.

## HDI AND INDIA'S FALL

### Context

- India ranks 132 out of 191 countries in the Human Development Index (HDI) 2021, following a drop in its score.
- The decline is consistent with the global trend since the COVID-19 outbreak.
- The Index is part of the recently released Human Development Report (HDR) 2021- 2022 by the United Nations Development Programme (UNDP).

### Relevance

- GS Paper 2: Poverty and developmental issues

### Mains Question

- "Advancing human development is impossible if we continue to impose planetary pressures on others." In the context of the Planetary Pressures-adjusted Human Development Index (PHDI), Analyze the statement. (250 Words)

### Human Development Index (HDI)

- It is a statistical composite index (first published by the UNDP in 1990) that
- measures a country's average achievement in three basic dimensions -
- Life expectancy at birth as a measure of health
- Education measured in terms of expected and mean years of education, and
- Living standard as measured by per capita gross national income (GNI).

### Background:

- It was created by Pakistani economist Mahbub ul Haq and is now used by the United Nations Development Programme's Human Development Report to assess a country's development.
- In addition to HDI, HDR provides:
- the Index of Multidimensional Poverty (MPI),
- the Human Development Index with Inequality (IHDI),
- since 2010, the Gender Inequality Index (GII), and
- Since 2014, the Gender Development Index (GDI) has been used.
- These were established in order to track poverty, inequality, and gender empowerment across various dimensions of human development.
- In addition, the HDI embodies Amartya Sen's "capabilities" approach to understanding human well-being, which emphasises the importance of ends (such as a decent standard of living) over means (like income per capita).

### 2021-2022 Human Development Report:

#### Trends in general:

- According to a recent report, global progress is reversing, with the 'Human Development Index' falling for the second year in a row (2020 and 2021).

- Globally, nine out of ten countries' human development performance has deteriorated as a result of multiple crises such as COVID-19, Ukraine's war, and environmental challenges.
- This means that global human development has come to a halt for the first time in 32 years.
- A global decline in life expectancy, which has fallen from 72.8 years in 2019 to 71.4 years in 2021, has contributed significantly to the HDI's recent decline.
- According to the most recent HDR, stress, sadness, anger, and worry have been rising over the last decade and are now at record highs as the new normal takes shape.
- The world is still not transitioning to a post-Covid-19 build-back-better scenario, according to the report.
- On the contrary, developing countries worldwide are entering a period of sharp social, political, and economic divergence, harming the most vulnerable and increasing gender inequality (which increased 6.7% globally).

### **The performance of India:**

- India is ranked 132 out of 191 countries in the HDI for 2021, up from 130th out of 189 countries in the HDI for 2020.
- Due to a drop in life expectancy from 69.7 to 67.2 years, India's HDI value in the "medium human development" category fell from 0.645 in 2020 to 0.633 in 2021.
- In India, the expected years of schooling are 11.9 years, while the average years of schooling are 6.7 years. The Gross National Income (GNI) per capita is \$6,590.
- India ranks 122 out of 170 countries, with a value of 0.490, according to the GII.
- This means that, despite gender inequality worsening between 2019 and 2020, India's GII value improved slightly in the latest report compared to the 2020 index (0.490 vs 0.493).
- The GII assesses gender achievement disparities in three areas: reproductive health, empowerment, and labour market participation.

### **Inference**

- Comparing rankings across countries is inaccurate, according to UNDP, because the HDI was calculated for 189 countries in 2020 and 191 countries this year.
- Despite the decline in India's HDI value, it continues to outperform South Asia's average human development.
- India's HDI value has steadily surpassed the global average since 1990, indicating a faster rate of progress in human development than the global average.

## **THE WAGE GAP, HARD TRUTHS, AND NECESSARY ACTIONS**

### **Context**

- India plays an important role in the global economic growth and structural transformation story. However, asymmetries continue to abound (exist in large numbers) in the country's labour market.
- A commensurate improvement in its labour market outcomes, as well as a more equitable distribution of the fruits of economic progress, will spur further economic growth and the benefits that it brings.

### **Relevance**

- GS Paper 1: Role of women and women's organization, population and associated issues, poverty and developmental issues.

- GS Paper 2: Welfare schemes for vulnerable sections of the society, institutions and laws for the protection and betterment of vulnerable sections etc

### Mains Question

- Closing the gender pay gap is critical to achieving social justice as well as national economic growth. Discuss. (250 Words)

### Background

- On September 18, the Third International Equal Pay Day 2022 was observed.
- The symbolic day aims to highlight issues and raise global awareness in order to put an end to the history of gender discrimination that women are generally subjected to by being paid less than their male counterparts.

### The pandemic's impact

- While the full extent of the pandemic's impact is unknown, it is clear that it has been uneven, with women suffering the most in terms of income security.
- This is due in part to their representation in COVID-19-affected sectors, as well as the gendered division of family responsibilities.
- During the pandemic, many women reverted to full-time care of children and the elderly, foregoing their livelihoods in the process.

### Statistics

- A wider pay gap: According to the International Labour Organization's (ILO) "Global Wage Report 2020-21," the Covid-19 crisis put massive downward pressure on wages.
- The COVID-19 pandemic had a disproportionate impact on female workers in terms of job and income losses, implying that the already-existing gender pay gap has widened.
- Back pedalling progress: According to preliminary estimates from the Periodic Labour Force Survey (PLFS) 2020-21, the gap increased by 7% between 2018-19 and 2020-21 due to the pandemic.
- The data also suggests that a faster decline in female wages during the pandemic contributed to this gap, while male wages grew faster.
- Lagging behind global standards: Despite significant progress in closing the gender pay gap in India over time, the gap remains large by international standards.
- Compared to their male counterparts, Indian women earned 48% less in 1993-94.
- According to National Sample Survey Office labour force survey data from 2018-19, the gap shrank to 28%. (NSSO).
- As a factor, discrimination
- Globally, women are paid approximately 20% less than men. Though the gender pay gap is widely blamed on discrimination based on gender or sex, individual characteristics such as education, skills, or experience also play a role.

### The following are examples of gender-based discriminatory practises:

- Women are paid less for work of equal value.
- Undervaluation of women's work in highly feminised occupations and businesses; o Motherhood pay gap, i.e. lower wages for mothers when compared to non-mothers.

- Actions to Combat Gender Inequality
- At the international level, the United Nations has prioritised addressing various forms of gender inequality.
- The International Labour Organization's Constitution includes the phrase "equal pay for equal work." o The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) provides an international legal framework for achieving gender equality and addressing intersecting forms of discrimination and vulnerabilities among women and girls.
- Goals for Sustainable Development: By 2030, one of the UN SDG 8 targets is to "achieve full and productive employment and decent work for all women and men, including young people and people with disabilities, and equal pay for work of equal value."
- In support of this Goal, the Equal Pay International Coalition (EPIC) was established in 2017 as a multi-stakeholder initiative led by the ILO, UN Women, and the Organization for Economic Cooperation and Development (OECD) to achieve equal pay for men and women everywhere.

### The Indian strategy

- Legislative initiatives: India was a pioneering country in enacting the Minimum Wages Act in 1948, followed by the Equal Remuneration Act in 1976, to close the gender pay gap, particularly at the low end of the wage distribution.
- In 2019, India implemented comprehensive reforms to both of the aforementioned laws and enacted the Wage Code.
- Policy initiatives: According to evidence, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) of 2005 benefited rural women workers and indirectly helped reduce the gender pay gap.
- Directly by increasing the pay levels of women workers who took part in the programme
- Indirect benefits accrued to women in agricultural occupations through higher earnings, as MGNREGA contributed to the country's rapid rise in rural and agricultural wages.
- Maternity Benefit (Amendment) Act: In 2017, the government amended the Maternity Benefit Act of 1961, increasing the 'maternity leave with pay protection' for the first two children for all women working in establishments employing 10 or more workers from 12 weeks to 26 weeks.
- Government schemes: The Skill India Mission is attempting to equip women with market-relevant skills in order to bridge the learning-to-livelihood and gender pay gaps.

### The way forward

- A human-centered recovery from the pandemic is required for full and productive economic growth, which will be made possible by improving women's employment outcomes and closing the gender pay gap.
- While the gender pay gap is gradually closing, it will take more than 70 years to close completely at the current rate of progress.
- Accelerated and bold action is required to prevent the gender pay gap from widening and to close the existing gap. Equal pay for equal work is critical to achieving social justice for working women as well as economic growth for the country as a whole

## National List of Essential Medicines (NLEM)

Context:

- Recently, The Union Health Ministry launched the new National List of Essential Medicines (NLEM), where 384 drugs have been included in this list with addition of 34 drugs, while 26 from the previous list have been dropped.

**Relevance:** GS II: Health

**Dimensions of the Article:**

- What is NLEM?
- How are drugs eliminated and added to the list?
- What is the purpose of having a list?

**What is NLEM?**

- As per the World Health Organisation (WHO), Essential Medicines are those that satisfy the priority health care needs of the population.
- Ministry of Health and Family Welfare hence prepared and released the first National List of Essential Medicines of India in 1996 consisting of 279 medicines and was revised thrice in 2003, 2011 and 2015, before 2022.
- The NLEM independent Standing National Committee on Medicines (SNCM) was constituted by the Union Health Ministry in 2018.
- After detailed consultation with experts and stakeholders, the committee revised the NLEM, 2015 and submitted its report on NLEM, 2022 to the Health Ministry.
- The list is made with consideration to disease prevalence, efficacy, safety and comparative cost-effectiveness of the medicines.
- Such medicines are intended to be available in adequate amounts, in appropriate dosage forms and strengths with assured quality.
- They should be available in such a way that an individual or community can afford.
- The medicines listed in the NLEM are sold below a price ceiling fixed by the National Pharmaceutical Pricing Authority (NPPA).

**How are drugs eliminated and added to the list?**

- **Medicine is added to NLEM:**
- The drugs have to be useful in treating diseases which are a public health problem in India.
- They have to be licensed/approved by the Drugs Controller General (DCGI), have proven efficacy, a safety profile based on scientific evidence, comparatively cost effective, and aligned with the current treatment guidelines.
- They have to be recommended under the National Health Programs of India (for instance, ivermectin is part of the Accelerated Plan for Elimination of Lymphatic Filariasis, 2018).
- When more than one medicine is available from the same therapeutic class, a prototype that is the best suited medicine of that class is included.
- Besides this, the price of the total treatment is considered and not the unit price of a medicine. Fixed dose combinations are usually not included.
- **Medicine is deleted from NLEM:**
- If it is banned in India;
- If there are reports of concerns on the safety profile

- If a medicine with better efficacy and is cheaper is available.
- If the disease, for which a particular medicine is recommended, is no longer a national health concern, the drug is taken off the list.
- Additionally, in case of antimicrobials — if the resistance pattern has rendered an antimicrobial ineffective, it is removed from the NLEM.

### What is the purpose of having a list?

- The primary purpose of the NLEM is to promote rational use of medicines considering three important aspects which are cost, safety and efficacy.
- It also helps in optimum utilisation of healthcare resources and budget, drug procurement policies, health insurance, improving prescribing habits, medical education and training and drafting pharmaceutical policies.
- In NLEM, the medicines are categorised based on the level of the healthcare system as primary, secondary and tertiary.
- The NLEM is a dynamic document and is revised on a regular basis considering the changing public health priorities as well as advancement in pharmaceutical knowledge.

## Ebola Virus Disease

### Context:

- An outbreak of Ebola has been declared in Uganda following the confirmation of a relatively rare Sudan strain case.

Relevance: GS II: Health

### Dimensions of the Article:

- About Ebola Virus Disease
- How does it spread?
- What are the symptoms?
- How can it be diagnosed?
- Treatment

### About Ebola Virus Disease

- The first instances of the disease, formerly known as Ebola Hemorrhagic Fever, were discovered in Guinea in December 2013.
- Later, the illness spread to the nearby countries of Sierra Leone and Liberia.
- Bundibugyo, Sudan, and Zaire are three of the six strains that have historically caused significant outbreaks.

### How does it spread?

- The Pteropodidae family of fruit bats is regarded to be a natural host for the Ebola virus.
- The virus travels from human to human and is acquired by people from wild animals (through broken skin or mucous membranes).

### What are the symptoms?

- Fever
- Fatigue
- Muscle pain
- Headache
- Sore throat
- This is followed by: Vomiting, Diarrhoea , Rash

### How can it be diagnosed?

- Clinically separating EVD from other infectious disorders such malaria, typhoid fever, and meningitis can be challenging.
- Numerous pregnancy symptoms and Ebola disease symptoms are remarkably similar.
- The following diagnostic techniques are used to confirm that symptoms are brought on by Ebola virus infection:
  - Enzyme-linked immunosorbent assay for antibody capture (ELISA)
  - RT-PCR assay (reverse transcriptase polymerase chain reaction)

### Treatment:

- The Ervebo vaccine has been shown to be effective in protecting people from the species Zaire ebolavirus
- Two monoclonal antibodies (Inmazeb and Ebanga) were approved for the treatment of Zaire ebolavirus (Ebolavirus) infection in adults
- Remdesivir was also tested as an Ebola treatment.

## A MUST-HAVE GLOBAL PANDEMIC TREATY

### Context

- A draught international pandemic treaty governing pandemic prevention, preparedness, and response will be ready for negotiation by 2024, according to Soumya Swaminathan, WHO chief scientist.
- The document will aid in addressing global public health challenges highlighted by the ongoing COVID-19 pandemic. The draft's vision is to protect against pandemic consequences through "equity, human rights, and solidarity."

**Relevance:** GS Paper 2: Issues related to Health.

### Mains Question

- Examine WHO's role in providing global health security during the COVID-19 Pandemic. (250 Words)

### Background

- Once-in-a-century crises: COVID-19 is among the most severe pandemics the world has seen in the last 100 years.
- Deaths: An estimated 18 million people may have died as a result of COVID-19.

- Global calamity: With over 120 million people pushed into extreme poverty and a massive global recession, no single government or institution has been able to address this emergency on its own. It provided a broader perspective on how no one is safe until everyone is safe.
- New pandemic crises: The World Health Organization (WHO) has declared the monkey pox outbreak a Public Health Emergency of International Concern (PHEIC) with over 32,000 cases from over 80 countries (August 2022), putting the world at risk of another health crisis.

### Treaty on Pandemic Influenza

- Persistent inequality: When world leaders pledged €7.4 billion (\$8.07 billion) in a digital fundraiser for the development of a coronavirus vaccine and treatments, the US did not send a representative. As a result, inequality has also contributed to the pandemic's extension.
- Delayed response: Even six to eight weeks after the declaration of a Public Health Emergency of International Concern (PHEIC), countries, with the exception of Asia, did not take the necessary precautions.
- Global Pandemic Treaty: With global governance failing during the pandemic and International Health Regulations failing to prevent large-scale pandemics and mount effective preparedness and response, political commitment was required to mitigate future challenges. As a result, the Global Pandemic Treaty was proposed at the World Health Assembly Special Session (WHASS) in December 2021.

### Concerning International Health Regulations (IHR)

- The IHR are an international legal instrument that is legally binding on 196 countries. They provide an overarching legal framework that defines countries' rights and obligations in dealing with public health events and emergencies that have the potential to cross borders.

### Health inequity is widespread

- Scope: Health-care systems have been stretched beyond their capacity, resulting in gross health inequity in the distribution of vaccines, diagnostics, and therapeutics around the world.
- As of March 2022, only 3% of people in low-income countries had received at least one dose of vaccination, compared to 60.18% in high-income countries.
- The international target of vaccinating 70% of the world's population against COVID-19 by mid-2022 was missed because poorer countries were "last in line" when vaccines were distributed.
- Socioeconomic effects: While high-income economies are still recovering from the aftereffects of the novel coronavirus pandemic, the socioeconomic consequences of the novel coronavirus pandemic are irreversible in low and low-middle-income countries.
- Pharma monopolies have created at least nine new billionaires since the beginning of the COVID-19 pandemic, with profits exceeding \$1,000 per second, despite the fact that fewer of their vaccines have reached people in low-income countries.

### India's leadership role

- Setting an example: India's response to the COVID-19 pandemic and restoration of global equity by leveraging its own potential has set an example for legislators all over the world.
- India was unwavering in its determination to continue shipments of vaccines and other diagnostics even as it faced a vaccine shortage for domestic use.

- Vaccine diplomacy: India produces nearly 60% of the world's vaccines and is said to account for 60%-80% of the United Nations' annual vaccine procurement, i.e. "vaccine diplomacy" or "vaccine maitri" with a commitment to health equity.
- Global cooperation: As of 2021, India had shipped 594.35 lakh doses of 'Made in India' COVID-19 vaccine to 72 countries, exemplifying global cooperation.
- Of these, 81.25 lakh doses were given as gifts, 339.67 lakh doses were distributed commercially, and 173.43 lakh doses were delivered through the Covax programme run by the Global Alliance for Vaccines and Immunization (Gavi).
- Global leadership: The protracted battle with pharmaceutical companies over vaccine patents, particularly in African countries, slowed the global vaccination drive.
- However, India stood out as a global leader, proposing to the World Trade Organization in October 2020 to allow all countries to choose not to grant or enforce patents and other intellectual property related to COVID-19 drugs, vaccines, diagnostics, and other technologies for the duration of the pandemic, until global herd immunity is achieved.
- Despite opposition from some of the world's leading countries, the World Trade Organization (WTO) finally decided in June 2022 to water down (weaken) intellectual property restrictions in the manufacture of COVID-19 vaccines.
- Lessons learned, road ahead
- Umbrella treaty: During the COVID-19 pandemic, there were numerous initiatives, such as the Vaccine Alliance, to address the pandemic and do better in the future. A treaty under the auspices of WHO, on the other hand, would promote coherence and avoid fragmentation.
- Characteristics: A treaty of this type should address critical issues such as data sharing and genome sequencing of emerging viruses. It should formally commit governments and legislatures to putting in place an early warning system and a properly funded rapid response system.
- Closing gaps: A treaty of this type should mobilise nation states to agree on a set of common metrics related to health investments and the return on those investments. These investments should aim to close the gap between the public and private sectors.
- Addressing inequalities: Finally, a global pandemic treaty will not only reduce socioeconomic disparities between nations, but will also improve global pandemic preparedness for future health emergencies. In this regard, India must take the lead.

## SUPERBUG INFECTION

### Context

- A year-long study of hospital-acquired infections (HAIs) across the country paints a bleak picture of superbugs (or drug-resistant microorganisms) triumphing over medications.
- Healthcare Associated Infection Surveillance-India, a newly formed organisation, conducted the survey.

**Relevance:** GS Paper 2: Health

### Mains Question

- The superbug crisis in India is a global public health issue. Discuss the factors that are causing the problem. (250 words)

**AMR (antimicrobial resistance):**

- Antimicrobials are medications used to prevent and treat infections in humans, animals, and plants. They include antibiotics, antivirals, antifungals, and antiparasitics.
- AMR occurs when bacteria, viruses, fungi, and parasites evolve over time and cease to respond to medications (drug resistance), making infections more difficult or impossible to treat and increasing the risk of disease spread, severe illness, and death.
- As a result, the World Health Organization recently designated AMR as a major public health threat.
- AMR organisms have been discovered in humans, animals, food, plants, and the environment (in water, soil and air).
- They can spread from person to person or between people and animals, including through animal-derived food.

#### The primary causes of AMR are:

- Antimicrobial misuse and overuse;
- Inadequate access to safe drinking water, sanitation, and hygiene (WASH) for both humans and animals;
- Inadequate infection and disease prevention and control in hospitals and farms;
- Limited access to high-quality, low-cost medicines, vaccines, and diagnostics;
- A lack of awareness and understanding; and
- A lack of legislative enforcement.

#### Why is AMR a worldwide concern?

- The emergence and spread of drug-resistant pathogens with new resistance mechanisms threatens the ability to treat common infections.
- The rapid global spread of multi- and pan-drug resistant bacteria, dubbed "superbugs," is especially concerning.
- Superbugs cause infections that are resistant to antimicrobial medications such as antibiotics.

#### Project for Healthcare-Associated Infection Surveillance in India

- The Government of India launched the HAI Surveillance-India project, a cooperative agreement.
- The All-India Institute of Medical Sciences (AIIMS) in New Delhi worked with the US Centers for Disease Control and Prevention (CDC) and the Indian Council of Medical Research (ICMR) on this project.
- Increase national capacity for HAI surveillance in order to meet the demand for reliable AMR data.
- Leverage the ICMR-AMR network's existing microbiology capacities and robust academic capabilities.
- Promote effective patient care by measuring, tracking, and reporting the magnitude and types of AMR and HAI threats affecting India.

#### Healthcare-Associated Infection Surveillance-India Results:

- Superbugs were prevalent in Indian hospitals, according to the findings of the first- ever year-long surveillance.
- The presence of superbugs indicates antibiotic resistance and the need for costly last-resort antibiotics (such as carbapenem and colistin).
- Intensive Care Units (ICUs) are breeding grounds for HAIs.
- Most doctors are aware that long-term ICU patients in India become infected with gram-negative microorganisms, which are more difficult to treat than gram-positive organisms found in western ICUs.

- The findings confirm the severity of these gram-negative infections, which were discovered to be common in Indian ICUs.
- Due to antibiotic resistance, Gram-negative bacteria are one of the world's most serious public health issues.
- Additionally, 38.1% of patients with bloodstream infections and another 27.9% with UTIs died within 14 days, and the HAIs in these cases were possibly only associated complications that did not directly contribute to death.

### Significance

- Most importantly, HAI monitoring serves as a standard for hospitals. If a hospital has a HAI rate of 4 per 1,000, it can be compared to other hospitals.
- The findings emphasise the significance of improving hospital infection control practises and instituting practises to reduce irrational antibiotic use.
- To prevent the emergence of newer superbugs, a hospital antibiotic use audit could be performed, revealing how many hospitals follow the rules.

## INTERNATIONAL RELATIONS

### Azerbaijan-Armenia border clashes

#### Context:

- Dozens of Armenian and Azerbaijani soldiers have reportedly been killed in renewed border clashes between Armenia and Azerbaijan, in the worst round of hostilities since 2020. After several hours of fighting, the Armenian government appealed to world leaders for help, saying that Azerbaijani forces were trying to advance into its territory. The conflict is decades old with its repercussions potentially engulfing all of the Caucasus.

#### Relevance:

- GS II: International Relations

#### Dimensions of the Article:

- About Centuries-old conflict
- The current flare-up
- Involvement of foreign players

#### About Centuries-old conflict

- Christian majority Armenia and Muslim majority Azerbaijan have been in a state of near conflict for centuries, initially over religion but more recently concerning territorial disputes.
- The current crisis draws its roots from the early 1920s when Russia under Joseph Stalin conquered large parts of the Caucasus.
- At the time, Stalin placed the Armenian dominated region of Nagorno-Karabakh into Azerbaijan.
- As the erstwhile USSR started to collapse in the late 1980s, nationalist forces on both sides started a battle for control over the disputed region.
- In 1991, ethnic Armenians in the region declared independence culminating in an all-out war three years later.

- By 1994, Armenia managed to drive large swaths of the Azerbaijani military out of Nagorno-Karabakh.
- The violence left tens and thousands dead and displaced hundreds of thousands.
- Later that year, a Russian imposed ceasefire took effect but failed to resolve the underlying dispute.
- Clashes have broken out sporadically since then, most notably in 2020.
- Although the enclave is still recognised internationally as Azerbaijani territory, it is dominated by ethnic Armenians and controlled by Armenian separatists who have declared it as the “Nagorno-Karabakh Autonomous Oblast”.
- While the Armenian government does not recognise the region as independent, it does support the region politically and militarily.

### Velvet Revolution:

- In 2018, Armenia went through a so-called Velvet Revolution in which its president at the time was peacefully deposed, leading to hopes that the conflict could be peacefully resolved.
- Although Armenia’s new president Nikol Pashinyan, indicated that he was willing to settle the issue diplomatically, he later backtracked on his statements, arguing that Nagorno-Karabakh belonged to Armenia.
- The current flare-up
- Although the current crisis has been simmering since 2020 after a six week long war left 6,500 people dead, relations were relatively subdued until early this year.
- In March, Azerbaijani forces seized territory in Farukh, an ethnic Armenian populated village.
- Because of its strategic location, the events in Farukh triggered concerns that Baku would make a play for the region, especially given that Russian forces were preoccupied with Ukraine.
- In April, an EU-backed mediation process established a brief period of peace, but by August, the situation escalated once again. On the third of that month, Baku launched an offensive in Nagorno-Karabakh, alleging that an Armenian soldier was killed in the Lachin region.
- Recently, Armenia claimed that Azerbaijani forces “launched intensive shelling, with artillery and large-calibre firearms, against Armenian military positions in the direction of the cities of Goris, Sotk, and Jermuk”.

### Involvement of foreign players

- The recent conflict has sparked international attention because of the involvement of regional rivals Turkey and Russia.
- **Turkey:**
- Turkey, a NATO member state, was the first country to recognise Azerbaijan’s independence in 1991 and continues to support the country unconditionally.
- **Russia:**
- Turkey has no official relationship with Armenia, having shut its borders with the country in 1993 in support of Azerbaijan.
- Ankara and Baku share close cultural ties over their shared cultural heritage. Meanwhile, Turkey and Armenia have a long history of conflict stemming from Turkey’s refusal to acknowledge the 1915 Armenia genocide.
- This threat is exacerbated by the fact that Russia and Turkey are on opposite sides in the ongoing civil wars in Syria and Turkey.
- For its part, Russia maintains good relations with both Azerbaijan and Armenia. That being said, it has a much deeper relationship with Yerevan as it hosts a Russian military base and is part of the Moscow-led Eurasian Economic Union.
- **Nagorno-Karabakh:**

- Nagorno-Karabakh also plays a key role in the global energy trade, with pipelines connecting Azerbaijan and Turkey passing by the region.
- Hostilities would compromise the pipeline, leading to more uncertainties in global energy prices.
- Although the conflict is seen as a regional one, bolstered by Russia and Turkey, the international community has at times attempted to broker a cessation in tensions.
- **Organization for Security and Co-operation in Europe**
- Chaired by France, Russia and the United States, under the auspices of the Organization for Security and Co-operation in Europe, the Minsk Group has sought to prevent military clashes and to implement a peace settlement.
- However, despite these efforts, the prospect of peace seems distant, especially given the outbreak of fighting over the last week.

## India to host G20 Summit in 2023

### Context:

- Recently, the Ministry of External Affairs (MEA) announced that India is hosting the G-20 (Group of 20) leaders' summit in New Delhi next year 2023.
- The 17th G20 Heads of State and Government Summit will happen in November 2022 in Indonesia, after which India will assume the presidency of G20 from December 2022.

### Relevance:

- GS II: International Relations

### Dimensions of the Article:

- Key points
- About G20

### Key points:

- Top priorities
- Inclusion, equity, and sustainable growth.
- LiFE (Lifestyle For Environment),
- Empowering women,
- The development of tech-enabled public infrastructure and industries ranging from health, agriculture, and education to commerce,
- Skills mapping, culture and tourism, funding for the environment, the circular economy, global food security, energy security, green hydrogen, disaster risk reduction and resilience;
- Multilateral reforms, the battle against economic crime, and cooperative development.

### Guest Countries:

- India, as G20 Presidency, will be inviting Bangladesh, Egypt, Mauritius,
- Netherlands, Nigeria, Oman, Singapore, Spain and UAE as Guest countries.
- Troika:
- The troika would consist of Brazil, Indonesia, and India during the Presidency.

- The troika would include three developing nations and rising economies for the first time, giving them a stronger voice.
- The term "troika" refers to the G20's top hierarchy, which comprises of the present, past, and future presidencies (Indonesia, India and Brazil).

### About 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, over 75% of global trade and roughly half the world's land area.
- 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.
- Spain as a permanent, non-member invitee, also attends leader summits.

### Structure and functioning of G20

- The G20 Presidency rotates annually according to a system that ensures a regional balance over time.
- For the selection of presidency, the 19 countries are divided into 5 groups, each having no more than 4 countries. The presidency rotates between each group.
- Every year the G20 selects a country from another group to be president.
- India is in Group 2 which also has Russia, South Africa and Turkey.
- The G20 does not have a permanent secretariat or Headquarters.
- The work of G20 is divided into two tracks:
- The Finance track comprises all meetings with G20 finance ministers and central bank governors and their deputies. Meeting several times throughout the year they focus on monetary and fiscal issues, financial regulations, etc.
- The Sherpa track focuses on broader issues such as political engagement, anti-corruption, development, energy, etc.
- Since 2008, the group convenes at least once a year, with the summits involving each member's head of government.

### IMF Bailout to Sri Lanka

#### Context:

- The International Monetary Fund (IMF) announced a staff-level agreement with Sri Lanka, months after the island nation's economic crisis intensified this year, following a serious Balance of Payments problem.

#### Relevance:

- GS II: International Relations

#### Dimensions of the Article:

- What is the staff-level agreement?

- Is the \$2.9-billion a bailout package?
- About International Monetary Fund (IMF)

### What is the staff-level agreement?

- It is a formal arrangement by which IMF staff and Sri Lankan authorities agree on a
- \$2.9-billion package that will support Sri Lanka's economic policies with a 48-month arrangement under the Extended Fund Facility (EFF).
- However, even though the IMF has agreed to support Sri Lanka, the EFF is conditional on many factors.
- Sri Lanka must take a series of immediate measures that the Fund has deemed necessary to fix fiscal lapses and structural weaknesses — such as raising fiscal revenue, safeguarding financial stability and reducing corruption vulnerabilities.
- Apart from making domestic policy changes to strengthen the economy, Sri Lanka must also restructure its debt with its multiple lenders.
- The IMF has said that it will provide financial support to Sri Lanka only after the country's official creditors give financing assurances on debt sustainability, and when the government reaches a collaborative agreement with its private creditors.

### Extended Fund Facility:

- The EFF was established to provide assistance to countries experiencing serious payment imbalances because of structural impediments or slow growth and an inherently weak balance-of-payments position.
- An EFF provides support for comprehensive programs including the policies needed to correct structural imbalances over an extended period.

### Is the \$2.9-billion a bailout package?

- The \$2.9 billion agreed upon by both sides, is short of Sri Lanka's expectations of
- support totalling \$3 to \$4 billion.
- In any case, even if the IMF package arrives swiftly, subject to Sri Lanka's success with the "prior actions" spelt out by the Fund, it cannot "bailout" Sri Lanka.
- After a pre-emptive sovereign default in April — the island's foreign debt totals
- \$51 billion — Sri Lanka is still grappling with its Balance of Payments crisis.
- The government has resorted to wide import restrictions, while exports remain limited to the country's traditional basket of tea, garments, and spices.
- From the ordinary citizen's point of view, cost of living is soaring.
- Headline inflation went up to 64.3% in August 2022, and food inflation increased to 93.7%.
- The World Food Programme estimated that about 30% of Sri Lanka's population, became food insecure, since the crisis worsened this year.

### About International Monetary Fund (IMF)

- The International Monetary Fund (IMF) is an international organization headquartered in Washington, D.C.

- It consists of 189 countries working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world. It periodically depends on the World Bank for its resources.
- Through the fund and other activities such as the gathering of statistics and analysis, surveillance of its members' economies, and the demand for particular policies, the IMF works to improve the economies of its member countries.

### Functions of the IMF

- To provide financial assistance to member countries with balance of payments problems, the IMF lends money to replenish international reserves, stabilize currencies and strengthen conditions for economic growth.
- Countries must embark on structural adjustment policies monitored by the IMF.
- It oversees the international monetary system and monitors the economic and financial policies of its 189 member countries.
- As part of this process, which takes place both at the global level and in individual countries, the IMF highlights possible risks to stability and advises on needed policy adjustments.
- It provides technical assistance and training to central banks, finance ministries, tax authorities, and other economic institutions.
- This helps countries raise public revenues, modernize banking systems, develop strong legal frameworks, improve governance, and enhance the reporting of macroeconomic and financial data.
- It also helps countries to make progress towards the Sustainable Development Goals (SDGs).

### UN accuses China of Uighur rights abuses

#### Context:

- The UN accused China of serious human rights violations that may amount to “crimes against humanity” in a report examining a crackdown on Uighurs and other ethnic groups.

#### Relevance: GS II: International Relations

#### Dimensions of the Article:

- What is the leak about?
- Who are Uyghurs?
- About China's Treatment of Uyghurs
- What was the build-up to the Uighur crackdown?

#### What is the leak about?

- After initially denying their existence, Beijing has claimed the facilities are vocational training schools, attended voluntarily and aimed at stamping out religious extremism.
- But the leaked documents give an insight into how leaders saw the minority population as a security threat.

- Photos appear to show officers restraining hooded and shackled inmates with batons, while other guards wearing camouflage stand by with firearms.

### Who are Uyghurs?

- Uyghurs are predominately Turkic-speaking Sunni Muslims who live primarily in the autonomous region of Xinjiang. Islam came to the region in the 10th century. Prior to Islam, the Uyghurs embraced Buddhism, Shamanism, and Manicheism.
- Uyghurs embraced Islam in 934 during the Karahanid Kingdom. Kashgar, the capital of the Kingdom, quickly became one of the major learning centers of Islam.
- Art, the sciences, music and literature flourished as Islamic religious institutions nurtured the pursuit of an advanced culture. In this period, hundreds of world- renowned Uyghur scholars emerged.
- Uyghurs played an important role in cultural exchanges between the East and West and developed a unique culture and civilization of their own based on Islam.

### About China's Treatment of Uyghurs

- The Hui Muslim 36th Division (National Revolutionary Army) governed the southern region of East Turkestan (named Xinjiang by the Chinese government) in 1934–1937. The administration that was set up was colonial in nature, importing Han cooks and baths, changing the Uyghur language-only street names and signs to Chinese, as well as switching carpet patterns in state-owned carpet factories from Uyghur to Han.
- Strict surveillance and mass detentions of Uyghurs in the Xinjiang re-education camps is a part of the ongoing sinicization policy by the Chinese Communist Party (CCP). Since 2015, it has been estimated that over a million Uyghurs have been detained in these camps. The camps were established under CCP General Secretary Xi Jinping's administration with the main goal of ensuring adherence to national ideology.
- Critics of China's treatment of Uyghurs have accused the Chinese government of propagating a policy of sinicization in Xinjiang in the 21st century, calling this policy a cultural genocide, or ethnocide, of Uyghurs.

### Where is Xinjiang?

- China's largest region, Xinjiang, is located in its northwest.
- It is autonomous, just as Tibet, which theoretically gives it some self-governing abilities. But in reality, the central government imposes significant limitations on both.
- About a fifth of the cotton produced worldwide is produced in this primarily desert area.
- It is also abundant in oil and natural gas, and Beijing views it as a key trading route due to its proximity to Central Asia and Europe.

### What was the build-up to the Uighur crackdown?

- Beginning in the 1990s, anti-Han and separatist sentiment increased in Xinjiang, occasionally erupting in violence.
- Around 200 people lost their lives in fighting in Xinjiang in 2009, which the Chinese blamed on Uighurs seeking their own state.
- A vast network of monitoring has been installed throughout Xinjiang, including police, checkpoints, and cameras that can scan anything from licence plates to specific faces.
- Police are reportedly also using a mobile app to track citizen behaviour, including how much power people are consuming and how frequently they use their front door, according to Human Rights Watch.

- There have been more crackdowns after President Xi Jinping's directive in 2017 requiring that all religions in China have a Chinese focus.

### Chinese narrative

- According to China, the crackdown is required to stop terrorism and eradicate Islamist extremism, and the prisoner re-education camps are a useful instrument in the country's war on terrorism.
- It believes that Uighur extremists are planning bombings, sabotage, and civil disturbances as part of a violent drive for an independent state.
- China denies reports that it is using mass sterilisations to lower the Uighur population and calls claims of forced labour "totally false."

## Asian Palm Oil Alliance (APOA)

### Context:

- Edible oil trade associations from five palm oil importing countries in South Asia – India, Pakistan, Sri Lanka, Bangladesh and Nepal – announced the setting up of Asian Palm Oil Alliance (APOA).

### Relevance:

- GS II: International Relations

### Dimensions of the Article:

- What is Palm oil?
- How important is palm oil to global supply chains?
- What is APOA?
- Why such move?

### What is Palm oil?

- Palm oil is an edible vegetable oil derived from the mesocarp of the fruit of the oil palms.
- The oil is used in food manufacturing, in beauty products, and as biofuel.

### How important is palm oil to global supply chains?

- Palm oil is the world's most widely used vegetable oil with its global production in crop year 2020 exceeding 73 million tonnes (MT), according to the United States Department of Agriculture (USDA).
- o Output is estimated to be 77 MT for the current year.
- Made from the African oil palm, it is used as cooking oil, and in everything from cosmetics to processed food to cleaning products.
- Indonesia and Malaysia together account for almost 90% of the global palm oil production, with Indonesia producing the largest quantity at over 43 MT in the 2021 crop year.
- According to Reuters, palm oil makes up 40% of the global supply of the four most widely used edible oils: palm, soybean, rapeseed (canola), and sunflower oil.
- Indonesia is responsible for 60% of the global supply of palm oil.

### Criticism of Oil palm industry:

- Unsustainable production practices leading to deforestation,
- Exploitative labour practices carried forward from the colonial era.

#### Advantages:

- Palm oil is preferred by many as it is inexpensive
- Oil palms produce more oil per hectare than other vegetable oil plants.

#### What is APOA?

- Through APOA, the nations seek to protect the economic and commercial interests of palm oil-consuming nations and will fight to boost member nations' use of palm oil.
- The idea is to gain collecting bargaining power and make imports sustainable.
- On the sidelines of the Globoil Summit, APOA had its inaugural general body meeting.
- Contrary to their counterparts in Europe, the industry groups of the nations that buy palm oil from Asia are not actively pushing the global conversation about sustainable palm oil.
- The coalition would aim to change the stigma associated with palm oil and promote it as a premium, affordable, and healthful vegetable oil.

#### Why such move?

- India's annual imports of edible oil is around 13-14 million tonne (MT).
- Around 8 MT of palm oil is imported from Indonesia and Malaysia, while other oils, such as soya and sunflower, come from Argentina, Brazil, Ukraine and Russia.
- Asia accounts for around 40% of the global palm oil consumption while Europe accounts for 12% of palm oil trade.
- Indonesia and Malaysia are the biggest palm oil exporters in the world.
- India is the largest importer of palm oil in Asia, accounting for 15% of global imports, followed by China (9%), Pakistan (4%) and Bangladesh (2%).

### Kyrgyzstan-Tajikistan conflict

#### Context:

- Nearly 100 people have been killed and scores injured in violent border clashes between Kyrgyzstan and Tajikistan over the last week. A ceasefire was brokered by Russia.

**Relevance:** GS II: International Relations

#### Dimensions of the Article:

- About Kyrgyzstan-Tajikistan conflict
- What is happening now at the border?
- What led to the current flare-up?
- Significance of this region for India
- What is the road ahead?

#### About Kyrgyzstan-Tajikistan conflict:

- The conflicts replay previous pre- and post-Soviet legacies.
- Under the direction of Joseph Stalin, the boundaries of the two republics were established.
- In the past, the populations of Kyrgyzstan and Tajikistan shared rights to natural resources.
- The border delineation debate is a holdover from the Soviet era.
- The map that should be used for demarcation purposes remains one of the key sources of contention, despite attempts to resolve the matter through regular negotiations.
- Nearly half of its roughly 1000 kilometre border is up for debate.

### **The origins of the conflict**

- Large-scale livestock transfers to collective and state farms occurred during the Soviet Union's establishment, upsetting the status quo.
- There was, regrettably, only so much acreage to go around.
- As the number of animals in the Tajik territory of Batken increased and grazing area became more scarce, agreements were made between the two populations on the use of Kyrgyz territory by the Tajiks' livestock.

### **What is happening now at the border?**

- The last few weeks have seen constant shelling, violent confrontations by local communities, and active engagement by security forces on either side.
- The Batken region of Kyrgyzstan is seeing families being moved out and getting relocated.
- Close to 1,50,000 people out of the 5,50,000 odd population of the Batken region have either fled the area or have been relocated by the state. The situation in Osh, Kyrgyzstan, is no different.
- The highly militarised borders also add to tensions.

### **What led to the current flare-up?**

- The ideological basis of the current set of clashes is reinforced by developmental issues, thus providing a fertile ground for the entire geopolitical space to become a hotbed of multiple minor conflicts and clashes.
- The environmental trajectory of the conflict can be further highlighted by incidents which saw groups from either side planting trees in disputed areas and engaging in a physical confrontation using agricultural equipment as weapons.
- Ferghana valley continues to be a site of struggle and frequent violent outbursts, with the location consisting primarily of Tajiks, Kyrgyz, and Uzbeks, who have historically shared common sociological specificities, economic activities, and religious practices.

### **Why are the clashes occurring now?**

- The collapse of the Soviet Union and the subsequent dissolution of the then- existing water and land agreements saw the creation of multiple smaller independent farms, which led to a marked increase in water consumption patterns among the farmers.
- Both countries share multiple water channels with undulating trajectories and flow, which upset equitable access to water on both sides.
- As a result, small-scale conflicts occur practically every year during the crucial irrigation period.

### **Significance of this region for India**

- Central Asia serves as a land bridge between Asia and Europe, making it geopolitically axial for India.

- The region is rich in natural resources such as petroleum, natural gas, antimony, aluminum, gold, silver, coal and uranium which can be best utilized by Indian energy requirements.
- Central Asia has huge cultivable areas lying barren and without being put to any productive use, offering enormous opportunity for cultivation of pulses.
- India intends expansion of International North South Transport Corridor (INSTC) to Afghanistan and Uzbekistan. This will act as a vital gateway to access Eurasian markets and optimally operationalize its use, requiring a Central Asian state joining the project as a direct stakeholder.
- India has proposed setting up of 'India-Central Asia Development Group' to take forward development partnership between India & Central Asian countries. This group will help India to expand its footprints in the resource-rich region amid China's massive inroads and to fight terror effectively, including in Afghanistan.
- India has a very wide array of interests in Central Asia covering security, energy, economic opportunities etc., therefore Security, stability and prosperity of Central Asia is imperative for peace and economic development of India.
- Both India and Central Asian Republics (CARs) share many commonalities and perceptions on various regional and world issues and can play a crucial role in providing regional stability.

### **What is the road ahead?**

- The path to resolution of the conflict will require groups to agree upon a common map.
- The international community will have to make efforts to solve the dispute by involving elders in the communities, as historically, elders have been used to resolve conflicts.
- The informal small-scale governance mechanisms would also have to be further strengthened through a concerted effort by the respective countries to stabilise the geopolitical dynamics.

## **Eastern Economic Forum**

### **Context:**

- Recently, Russia hosted the seventh Eastern Economic Forum (EEF) Vladivostok. The four- day forum is a platform for entrepreneurs to expand their businesses into Russia's Far East (RFE).

### **Relevance:**

- GS II: International Relations

### **Dimensions of the Article:**

- What is the Eastern Economic Forum?
- Who are the major actors in the Forum?
- What does the EEF aim for?
- Will India be able to strike a balance between the EEF and IPEF?

### **What is the Eastern Economic Forum?**

- The EEF was established in 2015 to encourage foreign investments in the RFE.

- The EEF displays the economic potential, suitable business conditions and investment opportunities in the region.
- Agreements signed at the EEF increased from 217 in 2017 to 380 agreements in 2021, worth 3.6 trillion roubles.
- As of 2022, almost 2,729 investment projects are being planned in the region.
- The agreements focus on
  - Infrastructure,
  - Transportation projects,
  - Mineral excavations,
  - Construction,
  - Industry
  - Agriculture.

### Who are the major actors in the Forum?

#### China

- China is the biggest investor in the region as it sees potential in promoting the Chinese Belt and Road Initiative and the Polar Sea Route in the RFE.
- China's investments in the region account for 90% of the total investments.
- Russia has been welcoming Chinese investments since 2015; more now than ever due to the economic pressures caused by the war in Ukraine.
- The Trans-Siberian Railway has further helped Russia and China in advancing trade ties.
- The countries share a 4000-kilometer-long border, which enables them to tap into each other's resources with some infrastructural assistance.
- China is also looking to develop its Heilongjiang province which connects with the RFE.
- China and Russia have invested in a fund to develop northeastern China and the RFE, through collaborations on connecting the cities of Blagoveshchensk and Heihe via a 1,080 metre bridge, supplying natural gas, and a rail bridge connecting the cities of Nizhneleninskoye and Tongjiang.

#### South Korea

- South Korea has also been gradually increasing its investments in the region.
- It has invested in shipbuilding projects, manufacturing of electrical equipment, gas-liquefying plants, agricultural production and fisheries.
- In 2017, the Export-Import Bank of Korea and the Far East Development Fund announced their intention to inject \$2 billion in the RFE in a span of three years.

#### Japan

- Japan is another key trading partner in the Far East.
- In 2017, Japanese investments through 21 projects amounted to \$16 billion.
- Under Shinzo Abe's leadership, Japan identified eight areas of economic cooperation and pushed private businesses to invest in the development of the RFE.
- Japan seeks to depend on Russian oil and gas resources after the 2011 meltdown in Fukushima which led the government to pull out of nuclear energy.

- Japan also sees a market for its agro-technologies which have the potential to flourish in the RFE, given similar climatic conditions.
- However, the momentum of trade that existed with Shinzo Abe was lost with the leadership of Yoshihide Suga and Fumio Kishida.
- The trade ties between Japan and Russia are hindered by the Kuril Islands dispute as they are claimed by both countries.
- **India**
- India seeks to expand its influence in the RFE. During the forum, Prime Minister Narendra Modi expressed the country's readiness in expanding trade, connectivity and investments in Russia. India is keen to deepen its cooperation in energy, pharmaceuticals, maritime connectivity, healthcare, tourism, the diamond industry and the Arctic.
- In 2019, India also offered a \$1 billion line of credit to develop infrastructure in the region.
- Through the EEF, India aims to establish a strong inter-state interaction with Russia.
- Business representatives of Gujarat and the Republic of Sakha have launched agreements in the diamond and pharmaceuticals industry.

#### **What does the EEF aim for?**

- The primary objective of the EEF is to increase the Foreign Direct Investments in the RFE.
- The region encompasses one-third of Russia's territory and is rich with natural resources such as fish, oil, natural gas, wood, diamonds and other minerals.
- The sparse population living in the region is another factor for encouraging people to move and work in the Far East.
- The region's riches and resources contribute to five per cent of Russia's GDP.
- But despite the abundance and availability of materials, procuring and supplying them is an issue due to the unavailability of personnel.

#### **Strategic significance of EEF for Russia**

- The RFE is geographically placed at a strategic location; acting as a gateway into Asia.
- The Russian government has strategically developed the region with the aim of connecting Russia to the Asian trading routes.
- With the fast modernisation of cities like Vladivostok, Khabarovsk, Ulan-Ude, Chita and more, the government aims to attract more investments in the region.
- Russia is trying to attract the Asian economies in investing and developing the far east.
- The Ukraine war is a worrying issue as it affects the economic growth of the country.
- However, Russia believes that it can survive the economic crisis and the sanctions with the help of China and other Asian powers.
- Although, the EEF is an annual gathering, the forum comes at an opportune time for Russia who is dealing with the impact of the sanctions.
- Moreover, the coming together of countries like Myanmar, Armenia, Russia, and China seems like the forming of an anti-sanctions group in the international order.

#### **Will India be able to strike a balance between the EEF and IPEF?**

- The US-led Indo-Pacific Economic Framework for Prosperity (IPEF) and the EEF are incomparable based on its geographic coverage and the partnership with the host-countries.
- India has not shied away from investing in the Russia-initiated EEF despite the current international conditions.
- At the same time, India has given its confirmation and acceptance to three of the four pillars in the IPEF.

## **EMPOWERING INDIA-NEPAL TIES THROUGH HYDROPOWER**

### **Context**

- The National Hydro Electric Power Corporation of India (NHPC) recently signed a Memorandum of Understanding (MOU) with the Investment Board Nepal (IBN) to develop 750 MW West Seti and 450 MW Seti River (SR6) hydroelectric projects in western Nepal (a total of 1,200 MW).
- The projects were awarded to India nearly four years after China backed out.
- The article discusses India's offerings in terms of India-Nepal cooperation, shared concerns, common interests, and options and alternatives for collaboration.

### **Relevance**

- GS Paper2: India and its neighbourhood- relations.
- Mains Question
- With its immense strategic importance as an Indian security concern, India cannot afford to overlook a stable, secure, and friendly Nepal." Discuss. (150 words)

### **Background**

- **Announcement:** The announcement comes after Nepal and India issued a Joint Vision Statement on Energy in early 2022, which calls for expanding mutually beneficial bilateral cooperation in the power sector, including joint development of power generation projects in Nepal.
- It also entails the construction of cross-border transmission infrastructure.
- Bidirectional power trade with access to both countries' electricity market
- Coordination of national grid operations
- Institutional collaboration in the exchange of cutting-edge operational information, technology, and know-how.
- The total cost of these projects is expected to be around \$2.4 billion, according to the most recent MoU. The NHPC has begun preliminary engagement of the site with an investment of over 18,000 crore and has also signed an MoU with the Power Trading Corporation Limited, India for power sale.
- **Importance:** The signing of the MoU will allow the NHPC to conduct a project study, hydrological study in two rivers, geo-technical survey, and drilling work before beginning construction work.
- **Previous projects:** In western and eastern Nepal, India is already involved in the Mahakali Treaty (6,480 MW), the Upper Karnali Project (900 MW), and the Arun Three projects (900 MW).
- **Concerns:** When the government awarded the West Seti and SR-2 projects to NHPC Limited, some Nepalese leaders expressed concern that the government did not use a competitive bidding process.
- However, the government stated that because West Seti is a national priority project, it must be expedited and that the contract can be awarded through negotiations.
- There are numerous obstacles.

- **Conception:** Historically, the 750MW West Seti Hydroelectric Project was conceived as a 37 MW run-of-the-river project in the early 1980s.
- **Early License:** Nepal granted a developing licence to a French company in 1987, which prepared a pre-feasibility study proposing the scheme without the construction of a dam.
- **Project transfer:** With the project failing to see the light of day, an Australian Corporation acquired a majority stake in the early 1990s, but progress was hampered by investment and environmental concerns.
- **In Chinese hands:** As a result, China intervened in 2009, with Australian Corporation holding the majority stake. However, Chinese Corporation backed out, citing a poor investment climate.
- **In 2011,** Nepal revoked the licence of the West Seti Hydropower Company Limited, in which Australian Corporation owned a majority stake, and handed it over to China, but the Chinese corporation withdrew again in 2018, citing resettlement and rehabilitation issues.
- Nepal was thus left in a bind after two Chinese companies withdrew from the projects after signing memorandums of understanding with the government.
- **Gathering domestic supplies:** Following that, Nepal attempted to develop the project by mobilising internal resources. However, increased costs caused additional delays.
- In the meantime, the project was renamed the West Seti and Seti River (SR6) joint storage project (1,200 MW).

### **Irritants in India-Nepal Ties**

- **Issues with the Peace and Friendship Treaty:** The Nepali authorities sought the 1950 Treaty of Peace and Friendship in 1949 in order to maintain the special links they had with British India and to provide them with an open border and the right to work in India.
- However, it is now regarded as a sign of an unequal relationship and an Indian imposition.
- **Irritated by Demonetisation:** In November 2016, India withdrawn \$15.44 trillion in high-value currency notes (1,000 and 500). Over \$15.3 trillion has now been returned in the form of new currency.
- Nonetheless, many Nepali nationals who were legally entitled to hold 25,000 in Indian currency (due to the Nepali rupee's peg to the Indian rupee) were let down.
- **Territorial Disputes:** In 2019, Nepal released a new political map claiming the Uttarakhand districts of Kalapani, Limpiyadhura, and Lipulekh, as well as the Susta area (West Champaran district, Bihar) as part of Nepal's territory.

### **Rejuvenating bonds**

- **Rekindled optimism:** The decision to involve India demonstrates Nepal's confidence in India's ability to complete the project. If completed, it will give India much-needed leverage in future hydropower cooperation.
- **Critical relevance:** Given that the West Seti Hydroelectric Project was a major Chinese venture under the Belt and Road Initiative, these hydropower projects will help India reduce China's geopolitical influence and strengthen its presence in Nepal.
- The project has the potential to improve the two countries' cross-border power exchanges.
- **Address Nepal crises:** Despite its enormous hydropower potential, Nepal experiences power shortages during peak hours, increasing its reliance on India to make up the difference.
- With an estimated capacity of 83,000 MW, Nepal's electricity exports to India are expected to boost foreign exchange while alleviating power shortages.
- It is estimated that if Nepal's hydropower potential is fully realised, it will generate 310 billion in 2030 and 1,069 billion per year in 2045 by exporting electricity to India.

- Meet India's increasing energy demand: Similarly, India's severe deficit in coal-based thermal power plants in recent years, which meet 70% of India's electricity demand, has compelled the government to arrange supplies through coal imports, hastened the search for better alternatives.
- With rising energy demand, the West Seti Hydroelectric Project could provide an additional viable alternative to addressing power deficits.

### The way forward

- In order for the project to be completed successfully, the following options and alternatives must be investigated:
- Accelerate the project: Because investment-related constraints have already delayed the project, a preliminary study of investment scenarios, particularly a favourable investment environment, distribution and transmission network, and cost of resettlement and rehabilitation, is required
- Revamped distribution share: To address Nepal's concerns that India's electricity rates and supply may be insufficient to meet rising demand, the new MoU has already revised the percentage share of energy that Nepal will receive free of charge from the generation projects from 10% to 21.9%.
- Address domestic demand: The MoU allows Nepal to request that the NHPC sell the power generated by the projects to the domestic market before selling it to the export market in whole or in part.
- Strengthening ties: Under the Bangladesh-Bhutan-India-Nepal (BBIN) framework
- for cross-border energy cooperation, the project could be expanded to include other regional partners.
- For example, a cross-border energy market can be created and optimally operationalized if the combined estimated hydropower potential of Nepal and Bhutan, as well as the potential of Northeast India, is effectively harnessed. It will be a win-win situation on both the bilateral and regional levels.

## ECONOMIC AND ENERGY TIES WITH RUSSIA

### Context

- Recently, Prime Minister Modi virtually attended the 7th Eastern Economic Forum plenary session (EEF).
- The EEF promotes development in Russia's far east.

### Relevance

- GS Paper – 2: India and its Neighbourhood, Bilateral Groupings & Agreements, Groupings & Agreements Involving India and/or Affecting India's Interests, Effect of Policies & Politics of Countries on India's Interests

### Mains Question

- Discuss the key factors responsible for the deterioration of India-Russia relations, as well as the approach that the two countries can take to rekindle their long-standing bilateral ties. (150 Words)

### Eastern Economic Forum (EEF):

- The EEF was founded in 2015 by Russian President Vladimir Putin.
- It is held each year in the Russian city of Vladivostok.
- The forum's goal is to support Russia's Far East's economic development and to expand international cooperation in the Asia-Pacific region.
- More than 17 different countries have invested in the Far East since the EEF's inception.

- China, Japan, South Korea, Australia, New Zealand, and Vietnam are among them.
- In 2019, India extended a \$1 billion line of credit to this region for development.

### India's Engagement with Russia's Far East

- India is the world's first country to open a consulate in Vladivostok (Sangam' of Eurasia and the Pacific).
- The Indian Prime Minister was the first Indian Prime Minister to be the chief guest at the 5th EEF (2019).
- In 2019, India announced a commitment to a "Act Far-East" policy, with the goal of expanding cooperation in this region.
- International Trade and Commerce: o India and Russia agreed to establish a maritime route between Chennai and Vladivostok to boost cooperation between India and the Russian Far East.
- This connectivity project, along with the International North-South Corridor, will physically bring India and Russia closer together.
- Energy: o Indian workers are involved in major gas projects in the Amur region, from Yamal to Vladivostok and on to Chennai.
- PM Modi recently virtually addressed an online plenary session at the 7th Eastern Economic Forum, which is being held in the Russian city of Vladivostok.

### Historical Background

- India and Russia have had a long-standing relationship. Since the signing of the "Declaration on the India-Russia Strategic Partnership" in October 2000, India- Russia relations have taken on a qualitatively new character, with increased cooperation in almost every aspect of the bilateral relationship, including politics, security, defence, trade and economy, science and technology, and culture.
- India and the Soviet Union had a strong strategic, military, economic, and diplomatic relationship during the Cold War. Following the dissolution of the Soviet Union, Russia inherited its close relationship with India, resulting in the two countries sharing a Special Strategic Relationship.
- However, relations have deteriorated dramatically in recent years, particularly in the post-Covid era. One of the main reasons for this is Russia's close ties with China and Pakistan, which have caused many geopolitical issues for India in recent years.

### Key Points of the Speech

- Economic cooperation with Russia o India is eager to strengthen its Arctic partnership with Russia.
- He also emphasised the enormous potential for collaboration in the energy sector.
- He went on to say that Russia, with its supply of coking coal, could become an important partner for the Indian steel industry.
- There is also room for collaboration in talent mobility.
- On the Ukraine conflict o Without mentioning the Russian invasion, PM Modi stated that India has emphasised the importance of diplomacy and dialogue since the conflict began in Ukraine.
- Major global events have caused supply chain disruptions.
- The Ukraine conflict and the Covid pandemic have had a significant impact on global supply chains, resulting in foodgrain, fertiliser, and fuel shortages.

### Significance

- PM Modi's remarks came amid Western concerns, including the United States and Europe, about countries purchasing Russian oil.
- Ukraine has chastised India for purchasing Russian oil.
- In defence of the decision, India has stated that it is purchasing oil to meet energy needs while minimising the inflationary impact.
- As a result, India's willingness to increase economic cooperation with Russia demonstrates that India's foreign policy is driven by national interests.
- It will not be dictated by the Western blocs.

## **INDIA CONFRONTS SRI LANKA OVER TAMILS AT UNHRC**

### **Context**

- India chastised Sri Lanka at the United Nations Human Rights Council (UNHRC) for failing to meet its commitments to find a political solution to the ethnic Tamil minority issue.

### **Relevance**

- GS Paper – 2: Effect of Policies & Politics of Countries on India's Interests, India and its Neighbourhood

### **Mains Question**

- "Despite deep ties, India and Sri Lanka have experienced some unpleasantness in bilateral relations in recent years." Discuss. (150 Words)

### **Human Rights Council of the United Nations (UNHRC)**

- The Human Rights Council is a United Nations system inter-governmental body.
- The UN General Assembly established the council in 2006, with headquarters in Geneva.
- It is composed of 47 states that are responsible for the promotion and protection of all human rights worldwide.
- The majority of General Assembly members directly and individually elect 47 Member States by secret ballot.
- Candidates for the Human Rights Council are chosen in geographical groups to ensure equal representation.
- Members of the Council serve for three years and are not eligible for immediate re- election after serving two consecutive terms.
- The UN High Commissioner for Human Rights is the organization's top human rights official.
- The council meets three times a year to investigate human rights violations around the world.

### **The Tamil Problem**

- Since the early 1940s, tensions between the Sinhalese and Tamil communities had been building.
- In May 2009, the nearly three-decade-long armed conflict between Sri Lankan forces and the LTTE came to an end.
- Since then, the Indian government has been lobbying the Sri Lankan government for greater devolution of power to Tamils.
- India has emphasised the importance of national reconciliation through political resolution of the ethnic issue at the highest levels.
- The 13th amendment to Sri Lanka's Constitution

- In November 1987, the Sri Lankan Parliament passed the Thirteenth Amendment to the Constitution, with the goal of establishing provincial councils based on the provisions of the July 1987 Indo-Sri Lanka Accord.
- The Thirteenth Amendment to the United States Constitution provides for:
  - The formation of Provincial Councils
  - The Governor of Provinces' appointment and powers
  - Provincial Council membership and tenure
  - The Provincial Councils' legislative powers
  - Tamil as the official language, with English as a liaison language
- Elections were held in three provinces: Northern, Central, and North Western. The terms of Sri Lanka's nine provincial councils, on the other hand, expired about three years ago and have remained dormant since.
- India has expressed concern about Sri Lanka's lack of measurable progress toward a political solution to the ethnic issue through full implementation of the 13th Amendment to the Constitution.
- India made this statement at the United Nations Human Rights Council's 51st session in Geneva.
- India emphasised that its two fundamental concerns remain:
  - Support for Lankan Tamils seeking justice, dignity, and peace;
  - Sri Lanka's unity, stability, and territorial integrity.

### **The importance of this statement**

- India's statement comes ahead of a possible Council vote on a resolution on Sri Lanka.
- Since 2009, India has voted three times in favour of the United Nations. two critical resolutions on Sri Lanka, and abstained twice, in 2014 and 2021.
- Regardless of its vote, India has consistently emphasised the importance of a political settlement within the framework of a united Sri Lanka, ensuring justice, peace, equality, and dignity for Sri Lanka's Tamils.

### **Why is Sri Lanka in the crosshairs of the UN Human Rights Council**

- Survivors of Sri Lanka's civil war continue to demand justice and accountability for war crimes 13 years after the conflict ended.
- It is claimed that tens of thousands of civilians were killed and disappeared during Sri Lanka's civil war.
- Concerns were raised in the post-war years about continued militarization, particularly in the Tamil-majority north and east; repression; and the shrinking space for dissent.
- In its most recent report on Sri Lanka, the U.N. According to the UN High Commissioner for Human Rights, "embedded impunity for past and present human rights abuses, economic crimes, and corruption was one of the underlying factors that led to the country's devastating economic crisis."

## **THE G7 HAS AGREED TO IMPOSE A PRICE CAP ON RUSSIAN OIL.**

### **Context**

- Finance Ministers from all G7 countries and the European Union announced a plan to impose a price cap on Russian oil exports.

**Relevance:** GS Paper 2: Bilateral, regional and global grouping.

### **Mains Question**

- India can no longer avoid the conclusion that China is the greatest impediment to India's global ambitions. Discuss the possibility of India joining the G-7 in light of this statement. (150 Questions)

### Origin : G7

- The G7 was formed in response to the 1973 oil shocks and ensuing financial crisis.
- To address the situation following the oil shock, the heads of the world's six leading industrial nations decided to meet in 1975.
- The six countries were the United States, the United Kingdom, France, Germany (West), Japan, and Italy.
- When Canada joined these countries in 1976, the G7 was formed.

### Members in Good Standing

- The current members are the United States, the United Kingdom, Canada, France, Germany, Italy, and Japan.
- Russia was formally admitted to the G7 in 1998, transforming it into the G8. Russia, on the other hand, annexed Crimea in 2014. As a result, it was removed from the group.
- As a result, the group was renamed the G7 in 2014.
- Members of this group are said to have the most developed and advanced economies in the world.
- The European Union is also a member of the G7.

### The Goal of the G7

- determining the direction of multilateral discourse
- Developing policy responses to global challenges.
- Essentially, the G7 serves as a forum for discussing and coordinating solutions to major global issues, particularly those relating to trade, security, economics, and climate change.
- G7 members have agreed to impose a price cap on Russian oil in order to limit Moscow's ability to fund the Ukrainian war.
- The plan, however, excludes Russian gas, on which Europe remains heavily reliant.

### Price cap strategy

- The imposition of a price cap on Russian oil means that countries that sign up to the policy will only be able to buy Russian oil and petroleum products at or below the price cap.
- The price cap is intended to prevent Russia from profiting from its aggressive war while limiting the impact on global energy prices.
- US and EU officials have been attempting to persuade countries such as India, China, and Turkey to join the coalition or, at the very least, to support the price cap.
- According to them, a price cap is in the best interests of all Russian oil buyers because it gives them leverage to negotiate lower purchase prices.

### How will it be implemented?

- For countries that join the coalition, it would simply mean not buying Russian oil until the price is reduced to the cap.
- Countries that do not join the coalition or purchase oil at a price higher than the cap would lose access to all coalition-provided services.

- The coalition countries offer insurance, currency payment, facilitation, and vessel clearances for their shipments.
- As an example, London is a major global centre for maritime insurance.
- The G7 countries say they want to lower oil prices but not the amount of oil Russia sells in order to control global inflation while harming the Russian economy.
- Of course, this could only work if all countries joined the coalition.

### **Russian retaliation**

- Russia has threatened to withhold all supplies if they contradict Russian interests.
- Speaking at the recently concluded Eastern Economic Forum (EEF) summit, Russian President Vladimir Putin threatened to cut off supplies of gas, oil, and other commodities, causing European countries to freeze.
- Russia recently announced a halt to all supplies to Europe via the Nord Stream 1 pipeline due to maintenance issues.
- Experts believe that this action is the result of existing EU sanctions. It has raised concerns about a harsh winter for European countries.

### **India's reaction:**

- Western countries have attempted to put pressure on India by asking it:
  - to reconsider its uncritical attitude toward Russia at the United Nations,
  - to reduce oil imports,
  - to halt Russian defence and other purchases, and
  - to avoid the rupee-rouble payment mechanism that allows them to avoid sanctions
- However, India has yet to comply, and there is little reason to believe that it will soon.
- At the recently concluded EEF summit, Indian Prime Minister Narendra Modi expressed his desire to strengthen energy ties with Russia and increase India's \$16 billion investment in Russian oilfields.
- India's oil imports from Russia, which were negligible prior to the war, have more than doubled.
- The Indian government's stance is thought to be motivated by its national interest, which is currently to provide affordable oil to Indian consumers.
- It is also unclear whether India will bargain with the US to lift sanctions against Iran and Venezuela in exchange for joining the price-control coalition.
- Under US pressure, India cancelled oil imports from Iran and Venezuela in 2017-18.

### **India-Bangla trade, now set for CEPA boost**

#### **Context:**

- Following a meeting with the visiting Prime Minister of Bangladesh, Prime Minister Narendra Modi said India and Bangladesh will soon commence negotiations on a
- Bilateral Comprehensive Economic Partnership Agreement (CEPA).

#### **Relevance**

- GS Paper 2: India and its neighborhood- relations.

#### **Dimensions of the Article:**

- About India's CEPA agreements
- Existing frameworks
- Bangladesh-India Bilateral Relationship

### About India's CEPA agreements

- India has signed CEPAs with South Korea and Japan and the one with UAE is expected to increase bilateral trade in goods to USD 100 billion within five years of the signed agreement and increase trade in services to USD 15 billion, leading to wider social and economic opportunities in both nations.
- CEPAs are a kind of free trade pacts but these agreements or cooperation agreements are more comprehensive than Free Trade Agreements.
- CEPA usually covers negotiation on the trade in services and investment, and other areas of economic partnership.
- It may even consider negotiation on areas such as trade facilitation and customs cooperation, competition, and Intellectual Property Rights.
- It also looks into the regulatory aspect of trade and encompasses an
- agreement covering the regulatory issues.

### CEPA objectives

- The CEPA is likely to focus on trade in goods, services, and investment, with a key objective being the reduction of the trade gap between the two countries.
- As Bangladesh prepares to graduate into a developing nation by 2026 — after which it may no longer qualify for trade benefits that it currently enjoys as a least-developed country — it is keen to clinch the CEPA in a year.

### Existing frameworks

- During the visit of Prime Minister Modi to Bangladesh in June 2015, the bilateral trade agreement between the two countries was renewed for a period of five years with a provision for auto renewal.
- Under the provisions of the South Asian Free Trade Area (SAFTA), Bangladesh extends preferential tariffs to Indian exports of products outside the 'sensitive list' of 993 items. In 2011, India announced duty-free, quota-free access to Bangladesh for all tariff lines except tobacco and alcohol.
- An Agreement on Promotion and Protection of Investments has been in force since 2011. Joint Interpretative Notes to the agreement were signed during the visit of the Indian Finance Minister to Bangladesh in October 2017.
- To facilitate trade and transit through inland waterways, a Protocol on Inland Waterways Trade and Transit (PIWTT) has been in place since 1972.
- The PIWTT too was renewed for a period of five years with a provision for auto renewal during Modi's visit to Bangladesh in 2015.
- The protocol allows the movement of goods by barges/ vessels on eight routes between points in India and Bangladesh, as well as between points in India through Bangladesh.

- Direct sea movement of containerized/ bulk/ dry cargo began after the signing of a Memorandum of Understanding (MoU) on Coastal Shipping in June 2015. This has reduced the shipping time between India and Bangladesh from 30-40 days to 7-10 days, and has the potential to emerge as an economical mode of transportation for business communities on both sides.
- MoUs were signed in 2015 on the use of the Chittagong and Mongla Ports for Movement of Goods to and from India.
- The MoU on Border Haats on the India-Bangladesh border was renewed in April 2017 during the visit of Prime Minister Hasina to India.
- Currently, four Border Haats — two each in Meghalaya (Kalaichar and Balat) and Tripura (Srinagar and Kamalasagar) — are functional.
- Work on setting up two more haats on the Tripura-Bangladesh border and four on the Meghalaya-Bangladesh border is under way.
- The two sides have also decided to identify locations for another six Border Haats.

### **Bangladesh-India Bilateral Relationship**

- The India-Bangladesh relationship is founded on two pillars of Indian diplomacy:
- the Neighbourhood First Policy
- the Act East Policy.
- The spirit of friendship, understanding, and mutual respect that arose during Bangladesh's liberation continues to pervade various aspects of this relationship.

### **Trade**

- Bangladesh is India's largest South Asian trade partner, and India is Bangladesh's second largest trade partner.
- Bilateral trade between India and Bangladesh has steadily increased over the last decade, reaching \$10.17 billion in fiscal year 2020-21.
- During this time period, Bangladesh exported \$1.28 billion to India and imported \$8.6 billion from India.
- Ready-made garments account for the majority of Bangladesh's exports to India.
- In 2011, India offered duty-free and quota-free entry to Bangladeshi goods under the South Asian Free Trade Agreement (SAFTA).
- However, once Bangladesh is no longer classified as a Least Developed Country (LDC), it will no longer be eligible for this benefit. Bangladesh has been approved by the UN to graduate from LDC status by 2026.
- As a result, India and Bangladesh are thinking about signing a Comprehensive Economic Partnership Agreement (CEPA).

### **Connectivity**

- The India-Bangladesh Friendship Bridge 1 (also known as the Feni Bridge) has been built, connecting Tripura to Bangladesh's Chittagong port.

- In July 2019, a ship carrying cargo from Bhutan to Bangladesh was flagged off from Assam. It sailed along the Brahmaputra River and the Indo-Bangladesh Protocol Route.
- This was the first time an Indian waterway was used as a cargo transit channel between two countries.
- The Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement (MVA) was signed in June 2015 to improve sub-regional connectivity.
- In March 2022, India, Bangladesh, and Nepal signed an enabling Memorandum of Understanding for BBIN implementation

### Cooperation in Energy

- The two sides' energy cooperation has also been very positive.
- Tripura, an Indian state, has supplied a total of 160 MW of power to Bangladesh, in addition to the 500 MW received from West Bengal since 2013.
- In September 2018, the Indian Prime Minister and his Bangladeshi counterpart used video conferencing to jointly inaugurate the construction of a friendship pipeline project.
- The 130-kilometer India-Bangladesh Friendship Pipeline Project will connect Siliguri in West Bengal, India, and Parbatipur in Bangladesh's Dinajpur district.

### Indian Aid During the COVID-19 Pandemic

- India gave Bangladesh 100,000 hydroxychloroquine anti-malarial tablets and 50,000 surgical gloves. It also gave Bangladesh 30,000 COVID-19 test kits.
- India provided assistance to neighbouring countries, including Bangladesh, through the SAARC framework. It trained member countries' medical staffs and was instrumental in establishing the SAARC COVID-19 emergency fund.
- As part of the Vaccine Maitri initiative, India provided 2 million doses of Made-in-India Covid-19 vaccines to Bangladesh in January 2021.
- Ahead of her four-day visit, Bangladesh Prime Minister Sheikh Hasina urged India to be more generous in sharing river waters.

### Kushiyara river treaty

#### Context:

- For the first time in 26 years, India and Bangladesh agreed to share the waters of a significant transboundary river, the Kushiyara, while negotiations over a long-delayed agreement to share the Teesta River's waters, which are politically sensitive are still ongoing.

**Relevance:** GS II: India & Its Neighborhood - Relations

#### Dimensions of the Article:

- What is the Kushiyara agreement?
- How will Bangladesh use the water?

- Why is the water from the Kushiara so important for Rahimpur Canal?
- Teesta River water sharing issue

### What is the Kushiara agreement?

- Over the last century, the flow of the Barak river has changed in such a way that the bulk of the river's water flows into Kushiara while the rest goes into Surma.
- The agreement is aimed at addressing part of the problem that the changing nature of the river has posed before Bangladesh as it unleashes floods during the monsoon and goes dry during the winter when demand of water goes up because of a crop cycle in Sylhet.

### Details of the agreement:

- Under this MoU, Bangladesh will be able to withdraw 153 cusecs (cubic feet per second) of water from the Kushiara out of the approximately 2,500 cusecs of water that is there in the river during the winter season.

### Benefits to Bangladesh from the supply:

- Approximately 10,000 hectares of land and millions of people will benefit from the water that will flow through a network of canals in Sylhet benefiting the farmers involved in Boro rice, which is basically the rice cultivated during the dry season of December to February and harvested in early summer.
- Bangladesh has been complaining that the Boro rice cultivation in the region had been suffering as India did not allow it to withdraw the required water from the Kushiara.
- The agreement addresses Bangladesh's concern over water supply along the river, during the winter months but flood control in the basin of Kushiara is expected to require much more work.

### How will Bangladesh use the water?

- The water of Kushiara will be channelled through the Rahimpur Canal project in Sylhet.
- The Rahimpur Canal project in Zakiganj upazila or subdivision of Sylhet was built to help the farmers access Kushiara's water but the facility used to remain dry during the lean season without serving the purpose for which it was built.
- The eight km long canal is the only supplier of water from the Kushiara to the region and Bangladesh has built a pump house and other facilities for withdrawal of water that can now be utilised.

### Why is the water from the Kushiara so important for Rahimpur Canal?

- The water of the Kushiara has been used for centuries in Sylhet's subdivisions like the Zakiganj, Kanaighat and Beanibazar areas.
- But Bangladesh has witnessed that the flow and volume of water in the canal has reduced during the lean season.

- The utility of the river and the canal during the lean/winter season had gone down, affecting cultivation of rice as well as a wide variety of vegetables for which Sylhet is famous.
- The additional water of Kushiya through the Rahimpur Canal therefore is the only way to ensure steady supply of water for irrigation of agriculture fields and orchards of the subdivisions of Sylhet.

### India's objection to the Rahimpur Canal

- India objected to the clearing and dredging of canal.
- It claimed that the dyke and other infrastructure interfered in border security as
- Kushiya itself forms part of the border between the two sides.
- However, the agreement indicates that the economic benefits possible from the
- river outweighed the security

### Teesta River water sharing issue:

- Teesta River originates from the Pahunri (or Teesta Kangse) glacier in Sikkim, flows through the northern parts of West Bengal before entering Bangladesh. It merges with the Brahmaputra River (or Jamuna in Bangladesh). The river is a major source of irrigation to the paddy growing greater Rangpur region of Bangladesh.
- In 1983, an ad hoc arrangement on sharing water was made, according to which Bangladesh got 36% and India 39% of the waters, while the remaining 25% remained unallocated. The transient agreement could not be implemented.
- Bangladesh has sought an equitable distribution of Teesta waters, on the lines of Ganga Water Treaty of 1996.
- In 2011 India and Bangladesh finalized an arrangement, by which India would get 42.5% and Bangladesh 37.5% while remaining 20% would flow unhindered in order to maintain a minimum water flow of the river. This agreement was not signed due to opposition from chief minister of West Bengal.

### What are the hurdles to the Teesta agreement?

- The Kushiya agreement is relatively smaller in scale in comparison to Teesta that involves West Bengal, which has problems with the proposal.
- The Kushiya agreement did not require a nod from any of the States like
- Assam from which the Barak emerges and branches into Kushiya and Surma.

## INDIAN ECONOMY

### Ban on the export of broken rice

Context:

- Recently, the Centre instituted a ban on the export of broken rice. Additionally, it mandated an export duty of 20% on rice in husk (paddy or rough), husked (brown rice) and semi-milled or wholly-milled rice.

**Relevance:**

- GS III: Indian Economy

**Dimensions of the Article:**

- Details
- What does it have to do with inflation?
- What happened to rice production?
- What are the concerns on ethanol blending?
- What are the likely after-effects of the ban?

**Details:**

- The measures do not affect export of basmati or parboiled rice.
- The Secretary at the Department of Food and Public Distribution stated that the measures would ensure adequate availability of broken rice for consumption by the domestic poultry industry and for other animal feedstock.
- Additionally, it would sustain production of ethanol that would further assist the successful implementation of the Union government's Ethanol Blending Programme (EBP).
- However, the measures may affect countries dependent on Indian food exports in the face of a lost 'breadbasket' in Ukraine owing to the Russian conflict.

**What does it have to do with inflation?**

- The lower the supply of a commodity, the higher would be the price of a product, which results in inflationary pressures.
- The adequacy of rice stocks in the country would ensure that markets do not experience excess demand and thus, trigger an abrupt price rise.
- For seven consecutive months, inflation has been above the Reserve Bank of India's 6% tolerability threshold.
- The Consumer Price Index (CPI), or retail-based inflation, stood at 7% in August this year with rural and urban inflation scaling 7.15% and 6.72% respectively. This was furthered by an uptick of 7.62% in food prices during the same period.

**COVID-19 pandemic also had an impact:**

- As a reaction to the distresses caused by the pandemic to the vulnerable sections the Union Cabinet had introduced a food security program, called the Pradhan Mantri Garib Kalyan Anna Yojana (PM-GKAY) in March 2020.
- The scheme provisions an additional 5kg ration per person each month in addition to their normal quota of foodgrains under the National Food Security Act.
- Recently, the scheme was extended for another six months until September 2022.

### What happened to rice production?

- The major rice cultivation season in India is the Kharif season, that entails sowing the crop during June-July and harvesting them in November-December.
- It is imperative to note that rice is a water-intensive crop which also requires a hot and humid climate.
- Thus, it is best suited to regions which have high humidity, prolonged sunshine and an assured supply of water.
- It is for this reason that the eastern and southern regions of the country, with sustainable humidity and suitable mean temperatures are deemed favourable for the crop.
- While the two regions are able to grow paddy crops throughout the year, higher rainfall and temperature prompt the northern regions to grow only one crop of rice from May to November.
- Andhra Pradesh, Telangana, Punjab, Haryana, Chhattisgarh, Odisha, Madhya Pradesh, Tamil Nadu, Maharashtra, Uttar Pradesh and Bihar are among the rice producing States in India.

### Reasons for low production:

- A perusal of Indian Meteorological Dept's data, between June 1 and September 14 illustrate that Uttar Pradesh, Jharkhand, Punjab and Bihar have experienced deficient rainfall.
- The latter refers to rainfall being 20-59% below normal in a particular region.
- Although West Bengal, the country's largest producer, has overall experienced a normal rainfall, its major productivity areas such as Nadia, Burdwan and Birbhum have had deficient rainfall.
- This indicates a potentially lower produce this year.

### What are the concerns on ethanol blending?

- Ethanol is an agro-based product, mainly produced from molasses, which is a by-product of the sugar industry.
- The EBP endeavours to blend ethanol with vehicular fuels as a means to combat the use of fossil fuels and in turn, rising pollution.
- As per the government, sugar-based feed stocks alone would not be able to meet its stipulated target of 20% ethanol blending by 2025.
- In the 2018-19 Ethanol Supply Year (ESY), the government had allowed the FCI to sell surplus rice to ethanol plants for fuel production. The idea was to have in place an insurance scheme and an emergency provision for distillers.

- However, in the ongoing ESY, because of supply constraints there has been an uptick in the procurement of rice from the FCI.
- The total ethanol produced from rice lifted from the FCI stood at 26.64 crore litres whereas that from damaged food grains outside the FCI purview stood at 16.36 crore litres.
- This means that the production accruing from FCI rice has increased 10-fold from the 2.2 crore litres used in a full ESY. At the same time, production from damaged foodgrains stands at half.
- Thus, the export ban would endeavour to catch-up with this supply and additionally, unburden the FCI from provisioning to distillers.

### What are the likely after-effects of the ban?

- Geopolitical tensions between Russia and Ukraine have unsettled global food supply chains.
- With trade disrupted in the Black Sea region, prices of rice are surging because traders are betting it will be an alternative for wheat which is becoming prohibitively expensive.
- India accounted for 41% of the total rice exports in the world in 2021, larger than the next four exporters (Thailand, Vietnam, Pakistan and United States) combined.
- As for broken rice, the United States Department of Agriculture (USDA) states that India accounted for more than half of the commodity's global exports in the first half of 2022.
- As per government figures, between April and August this year, broken rice's share in the overall rice export mix (of India) was 22.78% compared to 18.89% in FY 2021.
- In descending order, China, Senegal, Vietnam, Djibouti and Indonesia are the biggest importers of India's broken rice.

### Windfall tax

#### Context:

- Recently, Finance Minister defended the windfall tax imposed by the Centre on domestic crude oil producers, saying that it was not an ad hoc move but was done after full consultation with the industry.

#### Relevance:

- GS III: Indian Economy

#### Dimensions of the Article:

- What is a windfall tax?
- Why are countries levying windfall taxes now?
- What are the issues with imposing such taxes?

#### What is a windfall tax?

- Windfall taxes are designed to tax the profits a company derives from an external, sometimes unprecedented event — for instance, the energy price-rise as a result of the Russia-Ukraine conflict.
- These are profits that cannot be attributed to something the firm actively did, like an investment strategy or an expansion of business.
- o The U.S. Congressional Research Service (CRS) defines a windfall as an “unearned, unanticipated gain in income through no additional effort or expense”.
- Governments typically levy this as a one-off tax retrospectively over and above the normal rates of tax.
- One area where such taxes have routinely been discussed is oil markets, where price fluctuation leads to volatile or erratic profits for the industry.
- There have been varying rationales for governments worldwide to introduce windfall taxes, from redistribution of unexpected gains when high prices benefit producers at the expense of consumers, to funding social welfare schemes, and as a supplementary revenue stream for the government.

### Why are countries levying windfall taxes now?

- Prices of oil, gas, and coal have seen sharp increases since last year and in the first two quarters of the current year, although they have reduced recently.
- Pandemic recovery and supply issues resulting from the Russia-Ukraine conflict shored up energy demands, which in turn have driven up global prices.
- The rising prices meant huge and record profits for energy companies while resulting in hefty gas and electricity bills for households in major and smaller economies. Since the gains stemmed partly from external change, multiple analysts have called them windfall profits.

### What are the issues with imposing such taxes?

- Brew uncertainty in the market about future taxes:
- Analysts say that companies are confident in investing in a sector if there is certainty and stability in a tax regime. Since windfall taxes are imposed retrospectively and are often influenced by unexpected events, they can brew uncertainty in the market about future taxes.

### IMF's Advice Note:

- The International Monetary Fund (IMF), which released an advice note on how windfall taxes need to be levied also said that taxes in response to price surges may suffer from design problems—given their expedient and political nature.
- It added that “introducing a temporary windfall profit tax reduces future investment because prospective investors will internalise the likelihood of potential taxes when making investment decisions”.

### CRS report:

- There is another argument about what exactly constitutes true windfall profits; how can it be determined and what level of profit is normal or excessive.

- A CRS report, for instance, argues that if rapid increases in prices lead to higher profits, in one sense it can be called true windfalls as they are unforeseeable but on the other hand, companies may argue that it is the profit they earned as a reward for the industry's risk-taking to provide the end user with the petroleum product.

**Another issue is who should be taxed:**

- Only the big companies responsible for the bulk of high-priced sales or smaller companies as well—raising the question of whether producers with revenues or profits below a certain threshold should be exempt.

**Vande Bharat train**

**Context:**

- Prime Minister will inaugurate the new Vande Bharat trainset and will travel in it for about half an hour from Gandhinagar to Kalupur in Gujarat.

**Relevance:**

- GS III: Indian Economy

**Dimensions of the Article:**

- About Vande Bharat 2.0
- What are the major upgrades?
- Safety features
- What passengers will experience?
- Way forward

**About Vande Bharat 2.0**

- The name may be the same, but this train, the third in the Vande Bharat series, is being dubbed 'Vande Bharat 2.0', because of certain upgrades it has received over its predecessors, the two existing trains running from Delhi to Varanasi and Katra.
- Vande Bharat will come with upgrades and a new "version" with each series
- production, even though the name will remain the same.
- The new trainset costs around Rs 115 crore — Rs 15 crore more than the last version.
- The specifications underwent an overhaul taking into account feedback on the trains running for the past three years.

**What are the major upgrades?**

- For starters, this train reaches a top speed of 160 km per hour in 129 seconds, around 16 seconds faster than its predecessor.

- This is because this train weighs around 392 tonnes, 38 tonnes lighter than the last one, and needs to run almost a km less to attain its top speed.
- It also has a better riding index (lower the better) of 3.26 at 180 km per hour, from the earlier 3.87.
- At a standard speed of 115 km per, its riding index is 3.26, better than 3.62 attained at the same speed by the earlier version.
- Riding index is a global benchmark for rolling stock calculated during trials by measuring vertical/lateral acceleration.
- In layman's terms, how comfortable and steady the passenger is while the train is in motion is roughly the idea behind a riding index.

### Safety features

- In terms of safety features, the new train comes fitted with the automatic anti-collision system Kavach, which the previous trains did not have.
- Coaches have disaster lights and their battery backup is for three hours, increased from the last one's one-hour battery backup.
- The exterior has eight platform-side cameras, up from four. There is also passenger-guard communication facility in coaches, which comes with automatic voice recording feature.
- The new trainset is higher, making it safe from floods up to 650 mm, up from 400 mm.

### What passengers will experience?

- For one, all the seats are recliner seats, as opposed to the previous versions which had fixed backseats in lower class.
- Executive Coaches have the added feature of 180-degree rotating seats.
- The internal air is filtered through photo catalytic ultra violet air purification system with UV lamp which deactivates 99 per cent of germs, the Railways claims—something the earlier trainsets did not have.
- The coaches also have a centralised coach monitoring system, another new addition, through CCTV cameras, and the internal network supports data at 1 gigabyte per second, a far cry from the earlier 100 megabytes per second. This means better quality streaming of audio-visual information.
- It also has a wifi-enabled onboard infotainment system and the LCD display in each coach is now 32 inches, up from the 24-inch screen.

### Way forward

- India has embarked on a mission to roll out 400 Vande Bharats. By August 2023, the country is to introduce 72 more such trains, taking the total to 75.
- The idea is that this third trainset will carry on with its commercial run and at the same time the Railway production units will keep producing more every month to reach the target.
- In the works is the plan to introduce Vande Bharat with sleeper berths for overnight journeys. Options to make these trainsets with an aluminium body is also being explored, for a lighter product.

## Global Innovation Index 2022

### Context:

- The Prime Minister has expressed pride for Indian Innovators as India climbs to the 40<sup>th</sup> rank in the Global Innovation Index of World Intellectual Property Organization (WIPO).

### Relevance:

- GS-III: Indian Economy (Growth and Development of Indian Economy, Issues related to Development, Important International Organizations and their reports)

### Dimensions of the Article:

- What is Global Innovation Index (GII)?
- About World Intellectual Property Organization (WIPO)
- Highlights of the Global Innovation Index 2022

### What is Global Innovation Index (GII)?

- The Global Innovation Index (GII) is an annual ranking of countries by their capacity for, and success in, innovation. It is published by Cornell University, INSEAD, and the World Intellectual Property Organization, in partnership with other organisations and institutions, and is based on both subjective and objective data derived from several sources, including the International Telecommunication Union, the World Bank and the World Economic Forum.
- The GII aims to capture the multi-dimensional facets of innovation ranking and rich analysis referencing around 132 economies.
- The GII is commonly used by corporate and government officials to compare countries by their level of innovation.
- The GII is computed by taking a simple average of the scores in two sub-indices, the Innovation Input Index and Innovation Output Index, which are composed of five and two pillars respectively.
- Innovation inputs: Institutions; Human capital and research; Infrastructure; Market sophistication; Business sophistication.
- Innovation outputs: Knowledge and technology outputs; Creative outputs
- Each of these pillars describe an attribute of innovation, and comprise up to five indicators, and their score is calculated by the weighted average method.

### About World Intellectual Property Organization (WIPO)

- The World Intellectual Property Organization (WIPO) is one of the 15 specialized agencies of the United Nations (UN) – headquartered in Geneva, Switzerland.

- WIPO was created to promote and protect intellectual property (IP) across the world by cooperating with countries as well as international organizations.
- WIPO's activities including hosting forums to discuss and shape international IP rules and policies, providing global services that register and protect IP in different countries, resolving transboundary IP disputes, helping connect IP systems through uniform standards and infrastructure, and serving as a general reference database on all IP matters.
- WIPO also works with governments, nongovernmental organizations (NGOs), and individuals to utilize IP for socioeconomic development.

### **Highlights of the Global Innovation Index 2022**

- India has leapfrogged to 40th position on the Global Innovation Index (GII) 2022 from the 81st spot in 2015. The country was ranked 46th on the index last year.
- Switzerland is the most innovative economy in the world in 2022 - for the 12 th year in a row - followed by the United States, Sweden, the United Kingdom and the Netherlands.
- China is nearing the top 10 while Türkiye and India enter the top 40 for the first time, according to the GII 2022.
- According to the report, India continues to lead the world in ICT services exports, ranking first, while also ranking first in other indicators such as Venture capital recipients' value (6th), Domestic industry diversification (14th).
- Graduates in science and engineering (11th), Labor productivity growth (12th), and Finance for startups and scaleups (8th)
- The GII report also said research and development (R&D) and other investments that drive worldwide innovative activity continued to boom in 2021 despite the Covid-19 pandemic, but challenges are emerging in translating innovation investments into impact.

### **National Logistics Policy**

#### **Context:**

- Prime Minister announced the National Logistics Policy, aimed at easing the movement of goods and boosting the trade sector in the Indian economy.

#### **Relevance:**

- GS III: Indian Economy

#### **Dimensions of the Article:**

- What was the need for a logistics policy?
- Features of the National Logistics Policy
- How is the government focusing on improving logistics?

#### **What was the need for a logistics policy?**

- Logistics broadly includes facilities crucial to trade: transport services for the movement of goods, storage facilities that are particularly essential for trade in perishable goods such as food items, fruits, and vegetables, and smooth functioning of government services that facilitate trade such as licensing and customs.
- The logistical cost in India is about 13% of GDP.
- Such a situation does not exist in developed countries. Due to high logistical cost, the competitiveness of India's exports is greatly reduced.
- In a Ministry of Commerce and Industry survey last year, titled 'Logistics Ease Across Different States', Gujarat, Punjab, and Haryana were ranked the top three states.
- The parameters included were the quality of road and railways infrastructure, road freight rates, quality of warehousing infrastructure, etc.
- The survey suggested that states should focus on areas such as developing sector-specific skilling infrastructure and streamlining logistics-related approval and clearance processes.

### Features of the National Logistics Policy

- The new logistics policy has four features:
- Integration of Digital System (IDS);
- Unified Logistics Interface Platform (ULIP);
- Ease of Logistics (ELOG);
- System Improvement Group (SIG).
- Under the IDS, 30 different systems of seven departments are integrated – including data from the road transport, railways, customs, aviation and commerce departments.
- A Unified Logistics Interface Platform ULIP will "bring all the digital services related to the transportation sector into a single portal".
- Similarly, a new digital platform Ease of Logistics Services (E-Logs) has also been started for industry associations to resolve issues by reaching out to the government.

### How is the government focusing on improving logistics?

- The Prime Minister mentioned previous programmes and schemes aimed at improving logistics aspects, such as

#### FASTag:

- FASTag is an electronic toll collection system in India, operated by the National Highway Authority of India (NHAI).
- It employs Radio Frequency Identification (RFID) technology for making toll payments directly from the prepaid or savings account linked to it or directly toll owner.
- As per NHAI, FASTag has unlimited validity. 7.5% cashback offers were also provided to promote the use of FASTag.
- Dedicated Lanes at some Toll plazas have been built for FASTag.

**PM Gati Shakti:**

- It will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc.
- Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity & make Indian businesses more competitive.
- It will also leverage technology extensively including spatial planning tools with ISRO imagery
- The multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another.
- It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

**AS THE FIFTH-LARGEST ECONOMY, INDIA SURPASSES THE UK****Context**

- According to Bloomberg's most recent calculations, India has surpassed the United Kingdom to become the world's fifth-largest economy in late March 2022. This news came at a time when Prime Minister Modi urged the countrymen to resolve to become a developed country by 2047 during his 2022 Independence Day speech.

**Relevance:** GS Paper 3: Indian Economy

**Mains Question**

- Analyze the Indian economy's performance over the past 75 years of independence. Has it managed to meet the initial anticipations? (250 Words)

**BLOOMBERG INFORMATION**

- Bloomberg is the global business and financial information and news leader. \ gives influential decision makers a critical edge by connecting them to a dynamic network of information, people and ideas.
- Bloomberg is at the heart of the Bloomberg Terminal, delivering data, news, and analytics quickly and accurately through innovative technology.
- It has been leveraging technology to enable customers to more efficiently and effectively access, integrate, distribute, and manage data and information across organisations.
- **The Bloomberg report's main points**
- According to a Bloomberg report, 75 years after achieving independence at midnight, India now has a larger economy than its former colonial master.
- India is now the world's fifth-largest economy o India has surpassed the United Kingdom to become the world's fifth-largest economy. It is expected to be the third largest by 2029.

## Indian economy size

- Using the dollar exchange rate on the last day of the relevant quarter, the Indian economy in nominal cash terms was \$854.7 billion in the quarter through March.
- The UK was \$816 billion on the same basis.
- India vs. the United Kingdom
- Population o This is one of the most significant distinctions between the two countries.
- India has a population of 1.41 billion as of 2022, while the UK has a population of 68.5 million. In other words, India has 20 times the population of the United Kingdom.

## Per capita GDP

- Because of the stark difference in population between the two countries, India's GDP per capita is much lower.
- Poverty levels o At the beginning of the nineteenth century, the UK's share of extreme poverty was significantly higher than India's.
- However, even though India has made great strides in alleviating poverty, the relative positions have shifted.

## Index of Human Development

- On this front, experts believe India will still take a decade to catch up to the United Kingdom in 1980.
- UK HDI 2019 performance - 0.932 (score), very high category (HDI tier) India's HDI 2019 performance - 0.645 (score), medium category (HDI tier).
- Universal Healthcare Coverage While faster economic growth and the government's policy focus on healthcare schemes have markedly improved India since 2005, there is still a long way to go.
- According to an earlier State Bank of India report, India will overtake the United
- Kingdom as the fifth-largest economy as early as December 2021.
- According to the report, India's GDP share of global GDP is now at 3.5%, up from 2.6% in 2014, and is expected to cross 4% in 2027.

## This report's main points

- According to the report, India's trajectory since 2014 indicates that it will be the world's third-largest economy by 2029.
- At the current rate of growth, India will surpass Germany in 2027 and, most likely, Japan by 2029.
- The Indian economy is expected to grow by 7-7.5% this fiscal year, whereas the UK economy has seen a sharp decline in growth and record high inflation.
- According to the most recent data, the Indian economy grew by 13.5% in the June quarter.
- The IMF has forecast India to grow by 7.4%. According to the IMF, India will continue to be the world's fastest growing major economy.

## THE IMPROVEMENT IN GDP GROWTH

**Context**

- According to NSO data, India's GDP increased 13.5% in the April-June quarter of the current fiscal year (FY 2022-23), up from 4.1% in the previous quarter but less than the 20.1% reported in the first quarter of 2021-22.
- This means that the Indian economy grew at its fastest rate in a year (though at a slower rate than the RBI's estimate of 16.2%), aided by a favourable base effect and robust growth in agriculture, services, construction, and private consumption.

**Relevance**

- GS Paper 3: Define potential GDP and explain the factors that influence it. What are the factors preventing India from reaching its full GDP potential?

**Mains Question**

- Define potential GDP and explain the factors that influence it. What are the factors preventing India from reaching its full GDP potential? (250 Words)

**Growth is slower than expected:**

- In the face of persistent global challenges caused by the Russia-Ukraine conflict, the Indian economy is seen as resilient.
- The Reserve Bank of India (RBI) predicts that the Indian economy will grow at a 16.2% annual rate in the first quarter of fiscal year 2022-23.
- As a result, recent GDP figures disappointed many.

**GDP rises above pre-Covid levels, but challenges persist:**

- GDP has surpassed pre-pandemic levels, indicating that the economy is no longer subject to Covid shocks, but recovery in some sectors remains elusive.
- GDP tracks total demand to calculate the value of total output in the economy.
- The Russian invasion of Ukraine has created new challenges for the global economy.
- For example, the United States is already experiencing 40-year high inflation rates and two consecutive quarters of GDP decline, whereas China is experiencing a significant economic downturn as a result of its zero-Covid policy to combat viral spread.
- When two of the world's largest economies are experiencing such economic downturns, fears of spillover effects are bound to affect India as well.
- Manufacturing and mining are underperforming:
- Manufacturing GVA growth slowed sharply to 4.8% in the third quarter, down from 49% the previous year.
- The amount of value added (in monetary terms) in various productive areas of the economy is examined by GVA.

- GVA growth in the mining and construction sectors has also slowed.
- This demonstrates how rising global input prices have impacted key import products, reducing a company's profit margins.

### **Demand for services is shifting:**

- The services sector accounted for more than two-thirds of the growth. GVA growth in the services sector - trade, hotel, transportation, communication, and broadcasting-related services - was 25.7% in the first quarter.
- Data show that there is strong demand for services, as well as a shift in demand from goods to services as the pandemic fades.
- Despite the fact that the global recession will have an impact on exports, this is to be expected.
- Consumer demand is low:
- Consumer spending growth slowed to 2.6% year on year in the April-June quarter, down from 12.3% the previous quarter.
- Rising food and fuel prices have had a significant impact on consumer spending, though monthly inflation has slowed in the last three months.
- Higher energy and commodity prices are expected to have an impact on consumer demand as well as business investment plans in the coming months.
- In April-June, the unemployment rate falls to 7.6%:
- The urban unemployment rate for people aged 15 and up fell to 7.6% in the April- June quarter of 2022, as economic activity increased following the removal of the Covid-19 limits.
- According to the PLFS for the April-June quarter, the labour force participation rate (LFPR) increased slightly from 47.3% in the January-March quarter to 47.5%.
- Finally, consider the following:
- The first quarter saw exceptionally strong gross fixed capital formation and private consumption, indicating that the economy is doing well.
- India's first-quarter GDP growth rate is currently significantly higher than that of other major economies. China's first-quarter GDP growth rate, for example, was 4.8%.
- Despite the global slowdown, India is expected to remain the world's fastest growing major economy.
- NSO (National Statistical Office):
- NSO is the Statistics Wing of the Ministry of Statistics and Programme Implementation of the Government of India.
- The NSO is the nodal agency for the planned expansion of the country's statistical system, establishing and upholding statistical rules and standards.
- Every month, it compiles and publishes the Index of Industrial Production (IIP), conducts the Annual Survey of Industries (ASI), and provides statistical data to assess and evaluate changes in the growth, composition, and structure of the organised manufacturing sector.
- The NSO launched the Periodic Labour Force Survey (PLFS) in 2017, recognising the importance of having labour force data at more frequent time intervals.

- Each year, the NSO publishes four quarterly GDP data updates to assist observers in assessing the current state of the Indian economy.
- Each such release includes data for two variables in the economy: total demand and total supply.

### What RBI Should be concerned about

- Given that this year's monsoon has distributed rains in an erratic scattershot pattern that has caused disruptive flooding in some parts while leaving key paddy and pulses growing areas in northern and eastern India moisture deficient, both farm output and consumer spending in the rural hinterland are likely to take a hit.
- And with global trade also becalmed amid the sharp slowdown in advanced economies, India's merchandise exports are sure to weaken in momentum, any benefits from the rupee's depreciation against the dollar notwithstanding.
- With the RBI needing to stay laser focused on taming inflation, the onus is on fiscal authorities to spur consumption and investment

## THE BANKING SYSTEM'S LIQUIDITY HAS ENTERED "DEFICIT MODE"

### Context

- Liquidity in India's banking system has fallen into deficit for the first time in nearly 40 months. The Reserve Bank of India (RBI) recently made the largest financial infusion into the banking system in response to the development.

### Relevance

- GS Paper 3: Government Budgeting.

### Mains Question

- What effect does the fiscal deficit have on the Indian economy? Propose solutions to the fiscal deficit caused by the pandemic's impact. (250 words)

### Liquidity in the banking system:

- Liquidity refers to readily available cash that banks require to meet short-term business and financial needs in the banking system.
- The banking system's liquidity is said to be in deficit on any given day if it is a net borrower from the RBI under the Liquidity Adjustment Facility (LAF), and it is said
- to be in surplus if it is a net lender to the RBI.
- The RBI operations that inject or absorb liquidity into or out of the banking system are referred to as the LAF.

### Current liquidity deficit in India's banking system:

- The banking system's liquidity situation entered a deficit mode on September 20, 2022, for the first time since May 2019.
- By contrast, the liquidity surplus in November 2021 was Rs 8 lakh crore, as the RBI provided liquidity support to the economy dealing with the aftermath of the Covid pandemic.
- What has caused this shortfall?
- A variety of factors are at work here, including an increase in bank credit, advance tax payments by corporations, and incremental deposit growth that is outpacing credit demand.
- Furthermore, the RBI is constantly intervening to keep the rupee from falling in value against the US dollar.
- According to recent RBI data, outstanding bank credit on August 26, 2022 was Rs 124.58 lakh crore, up 4.77% (Rs 5.7 lakh crore) from Rs 118.9 lakh crore on March 25, 2022.
- However, deposit growth was only 3.21% (Rs 5.3 lakh crore) between March 25, 2022 and August 26, 2022, from Rs 164.65 lakh crore to Rs 169.94 lakh crore.

#### **The effect on consumers:**

- A banking system liquidity deficit means that banks do not have enough funds to meet customer credit demands.
- A lack of liquidity could lead to a rise in the yields on government securities, which would then lead to an increase in consumer interest rates.
- For example, the 10-year government bond yield increased to 7.23% on September 21, 2022, from 7.18% on August 20, 2022.
- Because the RBI is expected to raise interest rates by another 50 basis points (bps) this cycle, an increase in the repo rate will increase the cost of funds.
- Banks will raise repo-linked lending rates as well as the MCLR, which is linked to all loans.
- As a result of this increase, consumers will face higher interest rates.

#### **RBI's future prospects:**

- Experts believe that the nature of the liquidity situation will determine the RBI's actions.
- If the current liquidity deficit is short-term and primarily due to advance tax payments, the RBI may not need to intervene because the funds will eventually return to the system.
- If the problem is long-term, the RBI may be forced to take measures to improve the system's liquidity situation.
- For example, the central bank has injected Rs 21,800 crore into the Indian banking system to ensure that it can continue to meet customers' credit demands.

## **AGRICULTURE**

### **Integration of ODOP with ONDC**

**Focus:** GS III- Agriculture

## Why in News?

- Union Minister for Commerce and Industry, Consumer Affairs, Food and Public Distribution and Textiles called for the integration of One District One Product (ODOP) initiative with Open Network for Digital Commerce (ONDC).
- The Minister said that ONDC would help in further expanding the frontiers of ODOP by bringing buyers and sellers together on a democratic platform.

## About One District, One Product

- Nodal: Ministry of Food Processing Industries(MOFPI).
- The ODOP initiative is aimed at manifesting the vision of the Hon'ble Prime Minister of India to foster balanced regional development across all districts of the country.
- The idea is to select, brand, and promote One Product from each District of the country
- For enabling holistic socioeconomic growth across all regions
- To attract investment in the District to boost manufacturing and exports
- To generate employment in the District
- To provide ecosystem for Innovation/ use of Technology at District level to make them competitive with domestic as well as International market

## Objectives of the scheme:

- Preservation and development of local crafts / skills and promotion of the art.
- Increase in the incomes and local employment (resulting in decline in migration for employment).
- Improvement in product quality and skill development.
- Transforming the products in an artistic way (through packaging, branding)
- To connect the production with tourism (Live demo and sales outlet – gifts and souvenir)
- To resolve the issues of economic difference and regional imbalance
- To take the concept of ODOP to national and international level after successful implementation at State level.

## What is ONDC?

- It is a not-for-profit organisation that will offer a network to enable local digital commerce stores across industries to be discovered and engaged by any network-enabled applications.
- It is neither an aggregator application nor a hosting platform, and all existing digital commerce applications and platforms can voluntarily choose to adopt and be a part of the ONDC network.
- The ONDC model is trying to replicate the success of the Unified Payments Interface (UPI) in the field of digital payments.
- UPI allows people to send or receive money irrespective of the payment platforms they are registered on.
- The open network concept also extends beyond the retail sector, to any digital commerce domains including wholesale, mobility, food delivery, logistics, travel, urban services, etc.

The main aims of ONDC are to:

- Promote open-source methodology, using open specifications and
- Promote open network protocols independent of any specific platform
- Digitise value chains,
- Promote inclusion of suppliers,
- Standardize operations,
- Derive efficiencies in logistics
- Enhance value for consumers.

## White Fly

**Context:**

- Recently, there has been a rise in the number of white fly attacks on cotton in various states like Punjab and Rajasthan.

**Relevance:**GS III: Agriculture

**Dimensions of the Article:**

- About White Fly
- How does it spread?
- What are the challenges?

**About White Fly**

- By eating on the underside of the leaf and dispersing diseases like Cotton Leaf Curl Virus, whiteflies are a significant pest of cotton that reduce output.
- They consume the leaf sap and exude fluid onto the leaves, where a black fungus develops. This weakens the plant by interfering with photosynthesis, the process by which it produces food.

**How does it spread?**

- The first reported invasive spiralling whitefly (*Aleurodicus dispersus*) is now distributed throughout India.
- Similarly, the rugose spiralling whitefly (*Aleurodicus rugioperculatus*) which was reported in Pollachi, Tamil Nadu in 2016 has now spread throughout the country.
- *Aleurodicus dispersus* and *Aleurodicus rugioperculatus* have been reported on over 320 and 40 plant species, respectively.
- Most of the whitefly species are native to the Caribbean islands or Central America.

**Reasons for spread:**

- The ability of all invasive whiteflies to consume a variety of foods and their prolific mating habits have led to an expansion in their host range (produces a large number offsprings).
- The spread of many kinds and their subsequent development into invasive species have been facilitated by the expansion in plant importation, globalisation, and human movement.

**What are the challenges?**

- Whiteflies harm crops and lower production yields. The rugose spiralling whitefly affects about 1.35 lakh hectares of coconut and oil palm in India.
- Other invasive whiteflies were also discovered to be expanding their host range on valuable plant species, particularly oil palm, coconut, banana, mango, guava, sapota, false bird of paradise, and butterfly palms, as well as significant medicinal plants.
- Using commercially available synthetic pesticides to control whiteflies has proven to be challenging.

**Control:**

- Currently, they are managed by naturally existing insect predators, parasitoids (which act as pests' natural enemies and provide biological management of pests in greenhouses and agriculture fields), and entomopathogenic fungi (fungi that can kill insects).

**Coarse cereals****Context:**

- Government push to coarse cereals as climate change affects wheat, paddy cultivation.

**Relevance:**

- GS III: Agriculture

**Dimensions of the Article:**

- What are Coarse Cereals?
- Significance
- Why has the Government changed its attention to Coarse Cereals?

**What are Coarse Cereals?**

- The country's agroclimatic zones with limited resources have traditionally grown coarse cereals.
- Agroclimatic zones are geographic areas with predominant climates that are ideal for a particular range of crops and cultivars.
- Sorghum, pearl millet, maize, barley, finger millet and other small millets such as kodo millet, little millet, foxtail millet, proso millet and barnyard millet together called coarse cereals.

- Coarse Cereals Producing States: Karnataka, Rajasthan, Puducherry, Maharashtra, Madhya Pradesh, Uttar Pradesh etc.

### Uses of Coarse Cereals:

- The cultivation of Millets like sorghum and pearl millet in some Northern States like Haryana, Punjab and Western UP is primarily done for fodder purposes.
- The demand for coarse cereals for animals and poultry feed is on the rise.
- In India, feed requirements are met from waste food grains in general and made especially from coarse cereals.
- Maize is the preferred carbohydrate source in poultry feed.

### Significance:

- Coarse cereals are renowned for their high nutrient content and for having traits such as resistance to drought, climate change and photosensitivity.
- These crops also have a bright future as a prospective exportable product and in the food processing sector.
- Their cultivation for human consumption, feed & fodder for livestock & poultry, use as fuel, and industrial uses is prevalent in drought-prone locations.
- They are a great weapon against malnutrition because of their high nutritional value.
- It aids in creating jobs in low-rainfall locations when there are few other alternative crops that can be utilised as a backup crop.

### Why has the Government changed its attention to Coarse Cereals?

- The country's output of wheat and paddy has been impacted by climate change, signalling a need to shift the emphasis to coarse cereals.
- Due to unpredictable weather patterns, the cultivation of wheat and paddy will not be sufficient to meet the country's food needs.
- The government's fear about the Kharif season production has grown due to the unpredictable monsoon of 2022.
- In the majority of areas in 2022, paddy and pulse sowing was severely impacted.
- The traits of coarse cereals include resistance to drought, climate change and photosensitivity.
- Compared to summer paddy farming, it is less expensive to cultivate, and it uses less water for irrigation.
- In 2022, 17.63 million hectares of coarse cereals were sown, compared to 16.93 million hectares in 2021.
- The nation currently produces 50 million tonnes of coarse cereals.
- The most common crops are millets and maize.

### National Technical Textiles Mission

Focus: GS III- Agriculture

## Why in News?

- The Ministry of Textiles recently cleared 23 strategic research projects worth around Rs 60 crores in Specialty fibres, Sustainable Textiles, Geotextiles, Mobiltech and Sports textiles under the National Technical Textiles Mission.

## About Technical Textiles

- The Technical Textiles are defined as Textile material and products manufactured primarily for their Technical performance and functional properties rather than aesthetic and decorative characteristics.
- The Technical textiles include textiles for automotive applications, medical textiles (e.g., implants), geotextiles (reinforcement of embankments), agrotextiles (textiles for crop protection), and protective clothing (e.g., heat and radiation protection for fire fighter clothing, molten metal protection for welders, stab protection and bulletproof vests, and spacesuits).

## Significance and Potential Applications of Technical Textiles

- The Technical Textiles are being used globally for last several decades. These materials have provided innovative projects.
- Even while Technical Textiles have been extensively used in developed as well as many developing countries, India has yet to capitalize the technical, economical and environmental benefits on large scale.
- The Various parts of India are subjected to floods and environmental degradation. In some of the terrains, the flood management and control can rely on Technical Textiles tubes, containers and bags.
- The Technical Textiles have been found to perform better than concrete as water protection component because of permeability, flexibility and ease of underwater placement.

## About National Technical Textiles Mission

- The Cabinet Committee on Economic Affairs (CCEA) approved the establishment of a National Technical Textiles Mission to help India position itself as a “global leader“ in technical textiles.
- The Cabinet has approved a total outlay of Rs 1,480 crore for the project, which will be implemented over four years (2020-2024) and aims to promote research, export and skill development in this sector.
- An Export Promotion Council for Technical Textiles will be set up for export promotion of technical textiles and ensuring 10% average growth in exports per year upto 2023-24.

## Objectives:

- The main aim is to get India the highest position in Technical Textiles at a global level

- This mission also aims at improving the penetration level of the technical textiles in the country. It must also be noted that the penetration level of technical textiles is low in India at 5-10%, against 30-70% in advanced countries.
- The authorities aim at increasing the global market for Indian technical textiles
- To simplify the objectives of the mission, it has been divided into four component as well
- The Mission will focus on the usage of technical textiles in various flagship missions, programmes of the country including strategic sectors

## INDUSTRY AND INFRASTRUCTURE

### WHY DO FISHERMEN OPPOSE VIZHINJAM PORT?

#### Context

- Vizhinjam, near Thiruvananthapuram, is on fire from both sea and land due to the under-construction Vizhinjam Port Project.
- The Vizhinjam International Transshipment Deep-water Multipurpose Seaport is an ambitious project undertaken by the Government of Kerala.
- It is primarily intended for container transshipment, as well as multi-purpose and break bulk cargo.
- The port is currently being built using the landlord model, with a Public Private Partnership component on a design, build, finance, operate, and transfer ("DBFOT") basis.

#### Relevance

- GS Paper 3: Infrastructure: Energy, Ports, Roads, Airports, Railways Etc.

#### Mains Question

- What exactly is the Blue Revolution? How can it overcome the sustainability challenge that India's fisheries sector is currently facing? (250 words)

#### Why are protests erupting?

- Protesters have been opposing the Adani Vizhinjam Port Private Limited's construction work.
- The Adani Group is building the port on a DBFOT basis.

#### What is the crux of the protest?

- According to fishermen, the port work has exacerbated coastal erosion along Thiruvananthapuram's coast.
- An urgent scientific study to assess the impact of port work on the shoreline must be conducted by halting construction.
- Additionally, approximately 300 families along the coastline were relocated to relief camps after their homes were destroyed by high-intensity coastal erosion.

- Protesters demand a comprehensive rehabilitation package, a guaranteed minimum wage when the sea becomes rough due to bad weather, and subsidised kerosene for boats.

### Why is the Vizhinjam project so important?

- The port is located on the Indian Peninsula's southern tip, just 10 nautical miles from the major international sea route and east-west shipping axis.
- Within a nautical mile of the coast, it has a natural water depth of more than 20 metres.
- The Vizhinjam port is expected to play an important role in the country's and Kerala's maritime development.
- The port's opening is expected to boost the growth of 17 minor ports in the state, as well as create thousands of new jobs.

## SCIENCE AND TECHNOLOGY

### NASA's DART mission

#### Context:

- In the first-of-its kind NASA's DART Mission is about to hit a small, harmless asteroid millions of miles away.

#### Relevance: GS II: Science and Technology

#### Dimensions of the Article:

- About NASA's DART Mission
- Why Dimorphos?
- Why such mission?

#### About NASA's DART Mission

- The mission's primary objective is to evaluate recently created technology that would enable a spacecraft to collide with an asteroid and alter its course.
- Since the spacecraft will be entirely destroyed, it is a suicide mission.
- The spacecraft is aiming for a tiny moonlet dubbed Dimorphos, which is Greek for "two forms."
- The 160-meter-diameter spaceship is anticipated to collide with Earth when it is 11 million kilometres away.
- The asteroid Dimorphos circles Didymos, which is Greek for "twin," and has a diameter of 780 metres.

#### Why Dimorphos?

- Since Didymos is an eclipsing binary with a moonlet that orbits the asteroid on a regular basis, it is the ideal system for the test mission.
- When it moves in front of the primary asteroid, it can be seen.

- This brightness variation can be investigated by telescopes on Earth to determine how long it takes Dimorphos to orbit Didymos.

### Why such mission?

- Dimorphos was chosen for this mission because its size is relative to asteroids that could pose a threat to Earth.
- The spacecraft is about 100 times smaller than Dimorphos, so it won't obliterate the asteroid.
- The fast impact will only change Dimorphos' speed as it orbits Didymos by 1%,
- which doesn't sound like a lot — but it will change the moon's orbital period.

### Ethereum's Merge event

#### Context:

- Recently, the Ethereum blockchain fully transitioned to a new way of processing transactions. This is an important day for crypto trackers as the Ethereum's Merge event, as it is known, could change the nature of crypto and Web3 itself.

#### Relevance:

- GS II: Science and Technology

#### Dimensions of the Article:

- What is Ethereum?
- Why is there a need for a new mechanism?
- Significance of the merge
- Which other cryptocurrencies are changing to proof-of-stake now?

#### What is Ethereum?

- Ethereum is one of the most used platforms by developers to build decentralised apps (dApps), smart contracts, and even crypto tokens.
- The platform's currency, Ether is only second to Bitcoin (BTC) in terms of market capitalisation.
- The change in the way Ethereum builds the blockchain comes with not just environmental consequences, but also major cyber and financial security implications.

#### Ethereum's former method, 'proof-of-work':

- Decentralised transactions are processed on blockchains using consensus mechanisms. Ethereum's former method, 'proof-of-work', which is also used by Bitcoin, needs powerful mining hardware that consumes a lot of electricity and generates enormous amounts of heat.
- This energy is then used to process extremely difficult mathematical puzzles, the solution of which would let new transactions be added to the blockchain so as to reward the miners with crypto.

- Many environmentalists, policy makers, and regulators have strongly criticised the impact of Bitcoin mining on local communities.
- Common centres for mining included China (before a near total crypto ban), the U.S., Russia, and Kazakhstan — countries with cheap electricity rates and colder climates.

### Why is there a need for a new mechanism?

- Ethereum’s website admitted that their crypto’s total annualised power consumption nearly matches that of Finland while its carbon footprint is comparable to Switzerland.
- For some time, European countries even mulled a crypto mining ban, while China actually carried out a nationwide crackdown on crypto miners, sending them fleeing overseas.
- Probably as a response to the backlash, Ethereum has decided to switch to a ‘proof-of-stake’ consensus mechanism, where Ether owners will stake their own coins in order to serve as collateral and help process new blockchain transactions, in return for rewards.
- Ethereum claims the proof-of-stake consensus mechanism offers better security.

### Significance of the merge

- Developers say the transition to what is called a ‘proof-of-stake’ consensus mechanism will cut Ethereum’s energy consumption by 99.95%.
- Blockchains have a short history so far, but in that history, the Merge has become one of the most widely publicized and awaited events.

### Which other cryptocurrencies are changing to proof-of-stake now?

- For now, no other top coin is planning an Ethereum-style Merge.
- After Bitcoin, Dogecoin [DOGE] is the largest proof-of-work based cryptocurrency. It was initially created as a joke by its founders. After that comes Ethereum Classic [ETC], formerly part of Ethereum before a community schism.
- Ethereum Classic has made it clear that it is loyal to the proof-of-work mechanism.

## **SEMICONDUCTOR PLI: 50% OF PROJECT COST CLEARED**

### Context

- Changes to the Rs 76,000-crore semiconductor Production Linked Incentive (PLI) scheme were recently approved by the Union Cabinet.
- The PLI scheme incentivizes businesses to improve their domestic manufacturing.
- The PLI schemes are carried out by the relevant Ministries/Departments.
- PLI Schemes for 13 industries were announced in the Union Budget 2021-22. Later, the textile industry was added.
- This now allows for consistent fiscal support of 50% of project costs for semiconductor fabs across technology nodes and display manufacturing.

**Relevance:** GS Paper – 2: Government Policies & Interventions, GS Paper – 3; Growth & Development, Indigenization of Technology, Industrial Policy, Scientific Innovations & Discoveries

### Mains Question

- "It is not a wise policy to rely entirely on global supply chains for something as critical as semiconductor chips, which are the heart and brain of all modern electronics." India must become self-sufficient in this sector." Analyse. (250 Words)

#### Background:

- Semiconductors and displays are at the heart of the modern electronics industry.
- Semiconductors are essential components that power electronics ranging from computers and smartphones to brake sensors in automobiles
- Semiconductor and display manufacturing is a highly complex and technologically advanced industry.
- It entails large capital investments, high risk, long gestation and payback periods, and rapid technological changes that necessitate significant and sustained investments.
- The Need for Domestic Semiconductor Manufacturing:
- Because India does not produce semiconductors, the country's needs are met through imports.
- According to reports, the demand for semiconductors in India will reach around USD 100 billion by 2025, up from the current demand of USD 24 billion.
- Additionally, the lack of local manufacturing harmed India the most during the Covid-19 pandemic lockdown.
- There was a global surge in demand for electronics during this time period.
- In today's geopolitical environment, trusted sources of semiconductors and displays are critical to the security of critical information infrastructure.
- The Cabinet has approved the following major incentives for the sector:
- The Central Government approved a comprehensive programme for the development of a sustainable semiconductor and display ecosystem in the country in December 2021. This includes the following:
- The India Semiconductor Mission
- It will be established as the nodal agency for the efficient and smooth implementation of the Semiconductor and Display ecosystem schemes.
- It will be the driving force behind long-term strategies for developing a sustainable semiconductor and display ecosystem.
- The Mission will be led by global semiconductor and display industry experts.
- Semiconductor Design Firms -
- Assistance will be provided to 100 domestic semiconductor design companies for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), and other products.
- The scheme aims to help not less than 20 such businesses grow to a turnover of more than Rs. 1500 crore in the next five years.

#### Semiconductor and display fabrication plants -

- The Scheme for Establishing Semiconductor and Display Fabs in India will provide fiscal assistance of up to 50% of project cost.
- The Central Government will collaborate closely with the State Governments to approve applications for at least two greenfield semiconductor fabs and two display fabs in the country.

#### Financial Assistance -

- The Central Government has announced incentives for all components of the supply chain, including electronic components, sub-assemblies, and finished goods.
- The government has pledged Rs. 2,30,000 crore (USD 30 billion) in support of positioning India as a global hub for electronics manufacturing, with semiconductors serving as the foundational building block.

#### So far, performance:

- So far, three applicants have been approved for the establishment of semiconductor fabs: a Vedanta-Foxconn joint venture, the international consortium ISMC, and Singapore-based IGSS Ventures.
- o The Vedanta-Foxconn joint venture recently signed a USD 20 billion agreement with the Gujarat government to establish a semiconductor and display manufacturing plant in the state.
- ISMC, backed by Abu Dhabi-based Next Orbit and Israel's Tower Semiconductor, and Singapore-based IGSS Ventures, respectively, are establishing operations in Karnataka and Tamil Nadu.
- Vedanta and Elest have applied to establish display manufacturing facilities.

#### Other reservations:

- Previously, incentives for semiconductor fabs were based on node size.
- For example, higher end nodes were given a 30% discount on the project cost.
- As a result of recent PLI changes for semiconductors, all fab plants will receive 50% fiscal support, regardless of node size.

#### The following are the reasons for this policy change:

- Higher-end nodes are typically used for applications such as automotive, telecommunications, and low-end laptops and desktops.
- According to the government, this segment accounts for approximately 50% of the total semiconductor market, which is one of the primary reasons for increasing support for these legacy nodes.
- These changes to the semiconductor policy will pique the interest of investors in the scheme and generate new proposals.

## NavIC

#### Context:

- The Indian government is pushing smartphone makers to enable support for its NavIC navigation system in new devices sold in the country from next year, a move that has spooked the industry due to additional costs and tight time frame.

#### Relevance:

- GS III: Science and Technology

#### Dimensions of the Article:

- What is NavIC?
- How does NavIC compare?
- Why is India promoting NavIC?

#### What is NavIC?

- NavIC, or Navigation with Indian Constellation, is an independent stand-alone navigation satellite system developed by the Indian Space Research Organisation.
- NavIC was originally approved in 2006 at a cost of \$174 million. It was expected to be completed by late 2011, but only became operational in 2018.
- NavIC consists of eight satellites and covers the whole of India's landmass and up to 1,500 km (930 miles) from its boundaries.
- Currently, NavIC's use is limited. It is being used in public vehicle tracking in India, for providing emergency warning alerts to fishermen venturing into the deep sea where there is no terrestrial network connectivity, and for tracking and providing information related to natural disasters.

#### How does NavIC compare?

- The main difference is the serviceable area covered by these systems.
- GPS caters to users across the globe and its satellites circle the earth twice a day, while NavIC is currently for use in India and adjacent areas.
- Like GPS, there are three more navigation systems that have global coverage –
  - Galileo from the European Union,
  - Russia-owned GLONASS
  - China's Beidou
- QZSS, operated by Japan, is another regional navigation system covering Asia- Oceania region, with a focus on Japan.
- India's 2021 satellite navigation draft policy stated the government will work towards "expanding the coverage from regional to global" to ensure availability of NavIC signal in any part of the world.

#### Why is India promoting NavIC?

- NavIC is conceived with the aim of removing dependence on foreign satellite systems for navigation service requirements, particularly for “strategic sectors.”
- Relying on systems like GPS and GLONASS may not always be reliable, as those are operated by the defence agencies of respective nations and it is possible that civilian services can be degraded or denied.
- NavIC is an indigenous positioning system that is under Indian control. There is no risk of the service being withdrawn or denied in a given situation.
- India also wants to encourage its ministries to use NavIC applications to promote local industry engaged in developing indigenous NavIC-based solutions.

## **Cervavac**

### **Context:**

- Union Minister of Science and Technology has announced the scientific completion of Cervavac, India’s first indigenously developed quadrivalent human papillomavirus (qHPV) vaccine for the prevention of cervical cancer.

### **Relevance:**

- GS III- Science and Technology

### **Dimensions of the Article:**

- What is Cervavac?
- How effective is the new vaccine?
- What are the challenges?
- About Cervical cancer

### **What is Cervavac?**

- Cervavac was developed by the Pune-based Serum Institute of India in coordination with the Department of Biotechnology (DBT).
- The project to develop the vaccine was implemented by the then secretary of the DBT, Dr. M K Bhan in 2011.
- Since then, 30 meetings of scientific advisory groups and site visits conducted by DBT have helped review the scientific merit of the entire journey to develop the vaccine.
- Cervavac received market authorisation approval from the Drug Controller General of India on July 12 this year.

### **How effective is the new vaccine?**

- Data indicates that the antibodies that form after receiving both doses of the HPV vaccine can last up to six or seven years.

- The cervical cancer vaccination might not need booster shots, unlike Covid immunizations.
- Up until now, the HPV vaccines sold in India were made by foreign companies and ran between Rs 2,000 and Rs 3,500 per dosage.
- Cervavac is anticipated to cost between Rs 200 and 400, making it much less expensive.
- Additionally, it has shown a strong antibody response against all targeted HPV strains in both dose and age groups that is nearly 1,000 times higher than the baseline.

### What are the challenges?

- The biggest task will be in allocating adequate resources and manpower for vaccinating the massive demographic of adolescent girls aged between 9 and 15, to ensure that they are protected from HPV early on.
- There is a huge need for stepping up awareness about the disease and the vaccine in the community.
- Unlike Covid and the vaccination programme, there is very little awareness about cervical cancer.
- Overall awareness and screening is very low in the community and that is a concern. This is a preventable disease and hence a huge awareness programme is required.

### About Cervical cancer:

- Cervical cancer is preventable, but kills one woman every eight minutes in the country.
- It is preventable as long as it is detected early and managed effectively.
- Cervical cancer is a common sexually transmitted infection.
- Long-lasting infection with certain types of HPV is the main cause of cervical cancer.
- Worldwide, cervical cancer is the second most common cancer type and the second most common cause of cancer death in women of reproductive age (15– 44).
- India accounts for about a fifth of the global burden, with 1.23 lakh cases and around 67,000 deaths per year according to the World Health Organization's International Agency for Research on Cancer (IARC-WHO).

### How common is cervical cancer in India?

- India accounts for about a fifth of the global burden of cervical cancer, with 1.23 lakh cases and around 67,000 deaths per year.
- Almost all cervical cancer cases are linked to certain strains of human papillomavirus (HPV), a common virus that is transmitted through sexual contact.
- While the body's immune system usually gets rid of the HPV infection naturally within two years, in a small percentage of people the virus can linger over time and turn some normal cells into abnormal cells and then cancer, according to the Centers for Disease Control and Prevention (CDC).

### Existing vaccines

- Two vaccines licensed globally are available in India — a quadrivalent vaccine (Gardasil, from Merck) and a bivalent vaccine (Cervarix, from GlaxoSmithKline).

- Although HPV vaccination was introduced in 2008, it has yet to be included in the national immunisation programme.

## Ladakh to have India's first 'Dark Sky Reserve'

### Context:

- Recently, Minister of State (Independent charge) for Science and Technology, announced that by the end of 2022, India will establish the country's first Dark Sky Reserve in the cold desert regions of Ladakh.
- This facility will also promote astronomy-tourism

### Relevance:

- GS III: Science and Technology

### Dimensions of the Article:

- What is a Dark Sky Reserve?
- How does a site become a 'Dark Sky Reserve'?
- Who is developing India's first Dark Sky Reserve?
- Why was Ladakh chosen for the project?

### What is a Dark Sky Reserve?

- A Dark Sky Reserve is public or private land with a distinguished nocturnal environment and starry nights that has been developed responsibly to prevent light pollution.
- According to the International Dark Sky Association (IDSA) website, these reserves "consist of a core area meeting minimum criteria for sky quality and natural darkness, and a peripheral area that supports dark sky preservation in the core."
- These reserves, it said, are formed through a "partnership of multiple land managers who have recognized the value of the natural nighttime environment through regulations and long-term planning".

### How does a site become a 'Dark Sky Reserve'?

- Individuals or groups can nominate a site for certification to the International Dark Sky Association (IDSA).
- There are five designated categories, namely
  - International Dark Sky parks,
  - Communities,
  - Reserves,

- Sanctuaries
- Urban Night Sky Places.
- The certification process is similar to that of a site being awarded the UNESCO World Heritage Site tag or getting recognised as a Biosphere Reserve.
- Between 2001 and January 2022, there have been 195 sites recognised as International Dark Sky Places globally.
- The IDSA considers a piece of land suitable for dark sky place only,
- If it is either publicly or privately owned;
- Is accessible to the public partially or entirely during the year;
- The land is legally protected for scientific, natural, educational, cultural, heritage and/or public enjoyment purposes;
- The core area of the land provides an exceptional dark sky resource relative to the communities and cities that surround it and the land offers prescribed night sky brightness either for a reserve, park or sanctuary.
- India is still in the process of filing its nomination to IDSA.

### Who is developing India's first Dark Sky Reserve?

- The Ladakh Union Territory administration is leading the efforts in establishing the country's first Dark Sky Reserve.
- To be situated at a height of 4,500 metres above sea level, the Hanle Dark Sky Reserve (HDSR) will come up within the Changthang Wildlife Sanctuary.
- The Department of Science and Technology and experts from the Indian Institute of Astrophysics (IIA), Bengaluru, are providing scientific and technological support in developing this first-of-its-kind facility.
- The IIA already manages the Indian Astronomical Observatory (IAO) complex at Hanle, Ladakh.
- Here, scientists have been carrying out astronomical observations using the existing gamma ray, an infrared and an optical telescope to study exoplanets, galaxies and stars through the pristine skies of Hanle.

### Why was Ladakh chosen for the project?

- Ladakh is a unique cold desert located about 3,000 metres above sea level with high mountainous terrains. Long and harsh winters with minimum temperatures dropping to minus 40 degrees Celcius make large parts of the UT highly inhabitable.
- This aridity, limited vegetation, high elevation and large areas with sparse populations – all make it the perfect setting for long-term astronomical observatories and dark sky places.
- But the primary objective of the proposed Dark Sky Reserve is to promote astronomy tourism in a sustainable and environment-friendly manner.
- Scientific methods will be used here to preserve the night sky from ever- increasing light pollution.
- With metros, cities and peripheral areas experiencing light pollution and remaining constantly lit up, there are diminishing areas that offer a view of clear skies on cloudless nights, experts have noted.

## Rohini RH-200

### Context:

- The Indian Space Research Organisation (ISRO) is planning the 200th successful launch of the Rohini RH-200 sounding rocket in a row.

### Relevance:

- GS III: Science and Technology

### Dimensions of the Article:

- Details
- About RH-200
- What are the Sounding Rockets?

### Details:

- The Rohini sounding rocket RH-200 has made 198 straight successful flights.
- World Space Week (4th-10th October) events will include the 199th launch in October 2022.
- The 200th will occur either at the end of October or the start of November 2022.

### About RH-200:

- The two-stage RH-200 rocket can carry research payloads up to a height of 70 km.
- Solid motors power the RH-200's first and second stages.
- The RH-200 rocket had been propelled by polyvinyl chloride (PVC) for many years.
- The first RH-200 to successfully launch from the TERLS in September 2020 was using a new propellant based on hydroxyl-terminated polybutadiene (HTPB).
- HTPB-based propellants are more energetic, have greater mechanical and interface qualities, and have fewer flaws than PVC-based propellants because of lower processing temperatures.

### What are the Sounding Rockets?

- Sounding rockets are one or two stage solid propellant rockets used for probing the upper atmospheric regions and for space research.
- Sounding rockets take their name from the nautical term "to sound," which means to take measurements.
- They also serve as easily affordable platforms to test or prove prototypes of new components or subsystems intended for use in launch vehicles and satellites.

### History:

- On November 21st, 1963, the Thumba Equatorial Rocket Launching Station (TERLS) was founded. The magnetic equator of the earth is not far from its southern tip.

- The Indian Space Program got its start in 1963 with the launch of the American Nike-Apache sounding rocket from Thumba, which served as the foundation for all subsequent rockets.
- Since 1965, ISRO has been launching sounding rockets that were domestically produced. In 1967, the ISRO launched Rohini RH-75, its own variant.
- The Rohini Sounding Rocket (RSR) Program was established in 1975 and covered all sounding rocket operations.
- The Rohini series of sounding rockets includes the RH 200, RH 300, and RH 560, which are the three most significant models.

## Dvorak technique

### Context:

- Recently, the American meteorologist Vernon Dvorak passed away at the age of 100 who pioneered the widely used Dvorak Technique.

### Relevance:

- GS III: Science and Technology

### Dimensions of the Article:

- Who was Vernon Dvorak?
- What is the Dvorak technique?
- Why is technique still widely in use?

### Who was Vernon Dvorak?

- Dvorak was an American meteorologist best credited for developing the Dvorak (read as Do-rak) technique in the early 1970s.
- The technique helps forecast the tropical storm.
- His technique has saved the lives of millions of people across the world and will continue to do so.

### What is the Dvorak technique?

- The Dvorak technique was first developed in 1969 and tested for observing storms in the northwest Pacific Ocean.
- Forecasters used the available satellite images obtained from polar orbiting satellites to examine the features of the developing tropical storms (hurricanes, cyclones and typhoons).
- During day time, images in the visible spectrum were used while at night, the ocean would be observed using infrared images.
- It was a cloud pattern recognition technique based on a concept model of the development and decay of the tropical cyclone.

### Why is technique still widely in use?

- Unlike land, ocean observations in the 1970s were sparse.
- Today, there continues to be an improved network of land-based meteorological observations, either in the form of taking manual observations, installing automatic weather stations or automatic rain gauges.
- On the other hand, ocean observations still remain limited.
- There are many vast regions across the four oceans that have not been fully examined with meteorological instruments.
- Ocean observations are mostly taken by deploying buoys or dedicated ships, but the number of observations from the seas is still not sufficient across the world.
- That is why meteorologists have had to depend more on satellite-based imageries, and combine it with the available ocean-data at the time of forecasting the intensity and wind speed of the tropical cyclones.

## IMEI number

### Context:

- The Department of Telecommunications (DoT) has made it mandatory for mobile phone manufacturers to register the International Mobile Equipment Identity (IMEI) – the 15-digit numbers that uniquely identify each mobile device – of all handsets made in India with the government.
- Importers, too, will have to register with the government the IMEI number of each phone before importing it.

### Relevance:

- GS III: Science and Technology

### Dimensions of the Article:

- What is the IMEI number, and its function?
- Why the increased scrutiny on IMEI numbers?

### What is the IMEI number, and its function?

- The IMEI is a unique number that is used to identify a device on a mobile network.
- It has 15 digits and is like a phone's unique identity.
- The number is used to verify the identity of a device when a user uses the Internet or places a call through it.
- Phones with a dual-SIM option have two IMEI numbers, one for each SIM.
- The IMEI number can help network providers track down a device in case it gets stolen or is lost.
- Once such loss or theft is reported, the carriers can deny the device access to the cellular network even with a new SIM card.

### Why the increased scrutiny on IMEI numbers?

- In a bid to curtail the rampant cloning and theft of mobile phones, the Communications Ministry had earlier rolled out a Central Equipment Identity Register.
- The identity register categorises mobile phones based on their IMEI status in three lists – white, grey and black.
- Mobile phones with IMEI numbers on the white list are permitted for use, while those on the blacklist are the ones that are reported stolen or lost and are not be allowed to access the network.
- Devices with IMEI numbers in the greylist do not conform to standards but are permitted to connect under supervision. The register also allows the DoT to carry out IMEI-based “lawful interception”.
- In 2017, the government had notified rules to prevent tampering with IMEI numbers of phones by making it a punishable offence which could also attract a jail term.
- The theft and cloning of mobile phones have become a serious problem.
- The theft of mobile phones is not just a financial loss but also a threat to personal life of the citizens as well as national security. Counterfeit mobile phones in the market are another issue for DoT.
- A substantial number of counterfeit mobile phones are active in our mobile networks with fake IMEI numbers.

## Inflatable Aerodynamic Decelerator (IAD) technology

### Context:

- Recently, the Indian Space Research Organisation (ISRO) has successfully tested the Inflatable Aerodynamic Decelerator (IAD) technology that could aid cost-effective recovery of spent rocket stages and safely land payloads on other planets.

### Relevance:

- GS III: Science and Technology

### Dimensions of the Article:

- What is IAD?
- Significance

### What is IAD?

- The IAD is designed, developed and successfully test-flown by ISRO's Vikram Sarabhai Space Centre (VSSC).
- The IAD was successfully test flown in Rohini-300 (RH300 Mk II) sounding rocket from Thumba Equatorial Rocket Launching Station.
- Rohini sounding rockets are routinely used for flight demonstration of new technologies being developed by ISRO as well as by scientists from India and abroad.
- The IAD serves to decelerate an object plunging down through the atmosphere.

- The IAD was initially folded and kept inside the payload bay of the rocket. At around 84 km altitude, the IAD was inflated and it descended through the atmosphere with the payload part of a sounding rocket.
- The IAD has systematically reduced the velocity of the payload through aerodynamic drag and followed the predicted trajectory.
- The force on an object that resists its motion through a fluid is called drag. When the fluid is a gas like air, it is called aerodynamic drag or air resistance.

**Significance:**

- The IAD has huge potential in a variety of space applications like recovery of spent stages of rocket, for landing payloads on to Mars or Venus and in making space habitat for human space flight missions.

**INS Vikrant**

**Focus:** GS II: Science and Technology

**Why in News?**

- The nation’s first Indigenous Aircraft Carrier (IAC-1) will be commissioned on September 2,
- the Indian Navy has announced.

**About INS Vikrant:**

- Vikrant is the largest warship to have ever been built in India, and the first indigenously designed and built aircraft carrier for the Indian Navy.
- It puts India in an elite club of nations that have the capability to design and build these giant, powerful warships.
- The Navy took delivery of the warship, designed by the Warship Design Bureau (WDB), its in-house organisation, from the manufacturer, Cochin Shipyard Ltd (CSL), a public sector shipyard under Ministry of Ports, Shipping & Waterways
- The 262 m long and 62 m wide ‘Vikrant’ displaces approximately 43,000 tonnes when fully loaded, and has a maximum designed speed of 28 knots (about 52 km/h) with an endurance of 7500 NM.
- The ship has around 2,200 compartments designed for a crew of around 1,600, including specialised cabins to accommodate women officers and sailors.
- The carrier is designed with a very high degree of automation for machinery operations, ship navigation and survivability.
- The carrier is equipped with the latest state of the art equipment and systems.
- It boasts a fully-fledged state of the art medical complex with the latest medical equipment facilities including major modular OT, emergency modular OT, physiotherapy clinic, ICU, laboratories, CT scanner, X-Ray machines, dental complex, isolation ward and telemedicine facilities.

**Why is it important for India to have an aircraft carrier?**

- An aircraft carrier is one of the most potent marine assets for any nation, which enhances a Navy's capability to travel far from its home shores to carry out air domination operations.
- Many experts consider having an aircraft carrier as essential to be considered a "blue water" navy — that is, a navy that has the capacity to project a nation's strength and power across the high seas.
- An aircraft carrier generally leads as the capital ship of a carrier strike/ battle group.
- As the aircraft carrier is a prized and sometimes vulnerable target, it is usually escorted in the group by destroyers, missile cruisers, frigates, submarines, and supply ships.
- Only five or six nations currently have the capability of manufacturing an aircraft carrier, and India has joined this prestigious club now.
- India has had aircraft carriers earlier too — but those were built either by the British or the Russians.
- The 'INS Vikramaditya', which was commissioned in 2013 and which is currently the Navy's only aircraft carrier, started out as the Soviet-Russian warship 'Admiral Gorshkov'.
- India's two earlier carriers, the 'INS Vikrant' and the 'INS Viraat', were originally the British-built 'HMS Hercules' and 'HMS Hermes'. These two warships were commissioned into the Navy in 1961 and 1987 respectively.

#### What weapons and equipment will the new 'Vikrant' have?

- The new warship is comparable to India's existing carrier 'INS Vikramaditya', which is a 44,500-tonne vessel and can carry up to 34 aircraft, including both fighter jets and helicopters.
- Once commissioned, IAC-1 will be "the most potent sea-based asset".
- Ship will be capable of operating 30 aircraft including MiG-29K fighter jets, Kamov-31 Air Early Warning Helicopters, MH-60R Seahawk multi-role helicopters, as well as the Advanced Light Helicopters (ALH) built by Bengaluru-based Hindustan Aeronautics Ltd, and the indigenously manufactured Light Combat Aircraft (LCA) (Navy).
- Using a novel aircraft-operation mode known as Short Take Off But Arrested Recovery (STOVAR), the IAC is equipped with a ski-jump for launching aircraft, and a set of three 'arrestor wires' for their recovery onboard.
- The MiG-29K and Kamov-31 aircraft are already in use on the 'Vikramaditya'.
- The MH-60R Seahawks are manufactured by the American aerospace and defence company Lockheed Martin. The new warship will offer an "incomparable military instrument with its ability to project Air Power over long distances, including Air Interdiction, Anti-Surface Warfare, offensive and defensive Counter-Air, Airborne Anti-Submarine Warfare and Airborne Early Warning".

## Hydrogen Fuel Cell

**Context:**

- Recently, Germany launched the world's first fleet of fully hydrogen-powered trains, these are emissions-free trains that can reach speeds of 140 kilometres per hour and can run about 1,000 km before the tank runs dry.

**Relevance:** GS III: Scientific Innovations & Discoveries

**Dimensions of the Article:**

- About Hydrogen fuel cells
- How are they different from conventional Batteries?
- Advantages of the Hydrogen Fuel Cell technology:

**About Hydrogen fuel cells**

- Hydrogen fuel cells are a clean, reliable, quiet, and efficient source of high-quality electric power.
- They use hydrogen as a fuel to drive an electrochemical process that produces electricity, with water and heat as the only by-products.
- Hydrogen is one of the most abundant elements on earth for a cleaner alternative
- fuel option.

**How does it work?**

- A fuel cell is an electrochemical cell that converts the chemical energy of a fuel (often hydrogen in the case of Hydrogen Fuel Cell) and an oxidizing agent (often oxygen) into electricity through a pair of redox reactions.
- A Fuel Cell consists of an anode, a cathode, and an electrolyte that allows ions, often positively charged hydrogen ions (protons), to move between the two sides of the fuel cell.
- A fuel cell converts chemical potential energy (energy stored in molecular bonds) into electrical energy.
- A PEM (Proton Exchange Membrane) cell uses hydrogen gas (H<sub>2</sub>) and oxygen gas (O<sub>2</sub>) as fuel.
- The products of the reaction in the cell are water, electricity, and heat.
- This is a big improvement over internal combustion engines, coal burning power plants, and nuclear power plants, all of which produce harmful by-products.
- Since O<sub>2</sub> is readily available in the atmosphere, we only need to supply the fuel cell with H<sub>2</sub> which can come from an electrolysis process (see Alkaline electrolysis or PEM electrolysis).

**How are they different from conventional Batteries?**

- Fuel cells are different from most batteries in requiring a continuous source of fuel and oxygen (usually from air) to sustain the chemical reaction, whereas in a battery the chemical energy usually comes from metals and their ions or oxides that are commonly already present in the battery.
- Fuel cells can produce electricity continuously for as long as fuel and oxygen are supplied.

**Advantages of the Hydrogen Fuel Cell technology:**

- By converting chemical potential energy directly into electrical energy, fuel cells avoid the “thermal bottleneck” (a consequence of the 2nd law of thermodynamics) and are thus inherently more efficient than combustion engines, which must first convert chemical potential energy into heat, and then mechanical work.
- Direct emissions from a fuel cell vehicle are just water and a little heat. This is a huge improvement over the internal combustion engine’s litany of greenhouse gases.
- Fuel cells have no moving parts. They are thus much more reliable than traditional engines.
- Hydrogen can be produced in an environmentally friendly manner, while oil extraction and refining is very damaging.

**INDUSTRY STANDARDS AND BATTERY NORMS****Context:**

- Recently, eight people died as a result of suffocation after a fire broke out in a building that housed an electric vehicle (EV) dealership.
- Following recent incidents of EVs catching fire across the country, the government formed expert committees to investigate the fires and develop regulatory changes for safer EVs.

**Relevance**

- GS Paper 3: indigenization of technology and developing new technology.
- Mains Question
- 'Electric vehicles are the transportation of the future.' Discuss, in light of the statement, the challenges associated with electric vehicle penetration in the Indian market. (250 Words)

**Background:**

- At the 26th Conference of the Parties (COP26) in November 2021, India committed to achieving net-zero emissions by 2070, which will necessitate clear pathways to decarbonize high greenhouse gas (GHG) intensive sectors such as transportation and energy.
- The transition to clean mobility, led by electric vehicles (EVs), is critical for decarbonizing transportation.
- India is on the verge of an e-mobility revolution, with the two-wheeler (2W) and three-wheeler (3W) vehicle segments leading the way.
- 2Ws account for 70-80% of all private vehicles, while 3Ws are essential for public transportation, freight transportation, and last-mile connectivity in cities.

**Electric vehicles in India:**

- Retail sales of electric vehicles increased by 4.2 lakh units in FY22 (April 2021-March 2022), compared to 1.34 lakh units in FY21, owing to increased product availability, high fuel prices, and state subsidies and sops offered under the FAME-II Initiative.
- FAME India stands for "Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India."
- In 2019, the Central Government approved Phase-II of the FAME Scheme, with a budget of Rs. 10,000 crore for a three-year period.
- It was extended earlier this year until March 31, 2024.
- Phase II intends to generate demand by supporting 7000 e-buses, 5 lakh e-3 wheelers, 55,000 e-4 wheeler passenger cars (including Strong Hybrids), and 10 lakh e-2 wheelers.
- The FAME-II scheme has provided assistance to nearly 2 lakh vehicles.
- Other steps taken by the government to encourage the use of EVs include:
- Battery Swapping Policy: o Battery swapping is an option that involves exchanging discharged batteries for charged ones while also allowing you to charge them separately.
- This disconnects charging and battery usage and keeps the vehicle operational with minimal downtime.
- The NITI Aayog recently released a draught battery swapping policy in which all metropolitan cities with populations greater than 40 lakhs will be prioritised for the development of a battery swapping network in the first phase.
- Choosing an EV: The federal and state governments provide an upfront subsidy that lowers the overall cost of electric vehicles.
- E-AMRIT Portal: The e-AMRIT portal provides a variety of resources to aid in the transition to electric vehicles.

### **New EV Battery Safety Standards:**

- In response to EV fire incidents in various parts of the country, the Union Ministry of Road Transport and Highways formed an expert committee.
- This committee, chaired by Tata Narsingh Rao, was tasked with recommending additional safety requirements to the existing battery safety standards notified under the Central Motor Vehicle (CMV) Rules.
- The ministry issued EV amendments based on the expert committee report's recommendations.
- These amendments include additional safety requirements for o Battery cells, o Battery management system, o On-board charger, o Battery pack design, o Thermal propagation due to internal cell short circuit resulting in fire, and so on.
- These regulations will go into effect on October 1st, 2022.

## **ENVIRONMENT AND ECOLOGY**

### **Sand mining**

**Context:**

- From flora and fauna to human residents, no one has been left untouched due to the wanton extraction of sand mining from Yamuna River.

**Relevance:**

- GS-III: Environment and Ecology, GS-III: Industry and Infrastructure

**Dimensions of the Article:**

- What is sand?
- What is Sand mining?
- Concerns regarding sand mining
- The Constitution and Legislations on Rules regarding mining
- Guidelines by the Government of India

**What is Sand?**

- Sand is a granular material made up of finely divided rock and mineral fragments.
- According to The Mines and Minerals (Development and Regulations) Act of 1957, sand is classified as a “minor mineral”.

**What is Sand mining?**

- Sand mining is the process of extracting sand through an open pit but sometimes mined from inland dunes from oceans, riverbeds and beaches.
- It is defined under section 3(e) of the mines and mineral development and regulation act,1957.
- The extracted sand can be used for various types of manufacturing, such as concrete used in the construction of buildings and other structures.
- The use of sand for cement-making in industrial projects has generated significant
- demand in India.
- The sand can also be used as an abrasive or can be mixed with salt and applied to icy roads to reduce the melting point of ice.

**Concerns regarding sand mining**

- Sand mining damages the ecosystem of rivers and the safety of bridges, weakens riverbeds, destroys natural habitats of organisms living on riverbeds, affects fish breeding and migration, and increases saline water in the rivers
- Lack of enforcement for sand-mining regulations and insufficient subsidy programs for affected communities detrimentally impact coastal welfare.
- The sand mafia, a network of criminal syndicates that illegally mine sand, has proven especially destructive, with attempts to curtail their behaviour often leading to violent altercations.

- Beaches, dunes, and sandbanks act as barriers to flooding. When sand mining removes such barriers, areas near the sea or river become more prone to flooding.
- Sand mining destroys the aesthetic beauty of beaches and river banks, and also makes the ecological system in these areas unstable. If such beaches and riverside areas are popular tourist destinations, then the tourism potential of such areas will be lost.
- A recent study by the World Wide Fund for Nature (WWF) shows mining is responsible for a 90 per cent drop in sediment levels in major Asian rivers, including the Ganges, Brahmaputra, Meghna, Mekong and Yangtze.
- This has resulted in the shrinking of the delta regions of these rivers, leaving local people extremely vulnerable to floods, land loss, contaminated drinking water and crop damage.

### The Constitution and Legislations on Rules regarding mining

- The Mines and Minerals (Development and Regulation) Act, 1957 has empowered state governments to make rules to prevent illegal mining, transportation and storage of minerals.
- However, there was a large number of illegal mining cases in the country and in some cases, many of the officers lost their lives while executing their duties to curb illegal mining.
- Illegal and uncontrolled illegal mining also leads to loss of revenue to the State and degradation of the environment.
- The entry at serial No. 23 of List II (State List) to the Constitution of India mandates the state government to own the minerals located within their boundaries.
- The entry at serial No. 54 of List I (Central List) mandates the central government to own the minerals within the exclusive economic zone of India (EEZ). In pursuance to this Mines & Minerals (Development and Regulation) (MMDR) Act of 1957 was framed.
- Also, the Central Government notifies certain minerals as 'minor' minerals from time to time for which the absolute powers for deciding on procedures of seeking applications for and granting mineral concessions, fixing rates of royalty, dead rent, and power to revise orders rest only with the State Government. Example of minor minerals include building stones, gravel, ordinary clay, ordinary sand.

### Guidelines by the Government of India

- To address the issue of unregulated extraction of sand, the Union ministry of mines prepared a uniform set of framework that can be followed by the states as per their suitability and applicability. The framework document charts out suggestions for various elements of the process chains, starting from the objectives of the states, demand-supply situation, operations, monitoring, transportation and sales of sand, etc.
- The Union environment ministry released some guidelines in 2016 that laid emphasis on monitoring of the mined-out material. It recommended alternative sources of extraction of sand and gravel. Yet, several cases against illegal sand mining are pending with the National Green Tribunal (NGT).
- The current system has not been fruitful and powerful in helping the circumstances. The current mechanism needs to be revised for effective monitoring of sand and rock mining.

## Single use plastic

### Context:

- Since July 1, 2022, India has banned the manufacture, import, stocking, distribution, sale, and use of single-use plastics (SUP) items with low utility and high littering potential.

### Relevance:

- GS III- Environment and Ecology

### Dimensions of the Article

- About Single use plastic
- What are the items being banned?
- How will the ban be enforced?
- Impacts of Single Use Plastic (SUP)
- Challenges with banning single use plastic
- Measures taken so far in India

### About Single use plastic

- Single-use plastics, often also referred to as disposable plastics, are commonly used for plastic packaging and include items intended to be used only once before they are thrown away or recycled.
- These include, among other items, grocery bags, food packaging, bottles, straws, containers, stirrers, styrofoam cups or plates etc.

### What are the items being banned?

- The items on which the Central Pollution Control Board (CPCB) have announced a ban are earbuds; balloon sticks; candy and ice-cream sticks; cutlery items including plates, cups, glasses, forks, spoons, knives, trays; sweet boxes; invitation cards; cigarette packs; PVC banners measuring under 100 microns; and polystyrene for decoration.
- The Ministry had already banned polythene bags under 75 microns in September 2021, expanding the limit from the earlier 50 microns.
- From December, the ban will be extended to polythene bags under 120 microns.
- Ministry officials have explained that the ban is being introduced in phases to give manufacturers time to shift to thicker polythene bags that are easier to recycle.
- While manufacturers can use the same machine for 50- and 75-micron bags, the machinery will need to be upgraded for 120 microns.
- According to the Plastic Waste Management Rules, 2016, there is also a complete ban on sachets using plastic material for storing, packing or selling gutkha, tobacco and pan masala.

### How will the ban be enforced?

- The ban will be monitored by the CPCB from the Centre, and by the State Pollution Control Boards (SPCBs) that will report to the Centre regularly.
- Directions have been issued at national, state and local levels — for example, to all petrochemical industries — to not supply raw materials to industries engaged in the banned items.
- Directions have also been issued to SPCBs and Pollution Control Committees to modify or revoke consent to operate issued under the Air/Water Act to industries engaged in single-use plastic items.
- Local authorities have been directed to issue fresh commercial licenses with the condition that SUP items will not be sold on their premises, and existing commercial licences will be cancelled if they are found to be selling these items.

#### **Punishment:**

- Those found violating the ban can be penalised under the Environment Protection Act 1986 – which allows for imprisonment up to 5 years, or a penalty up to Rs 1 lakh, or both.
- Violators can also be asked to pay Environmental Damage Compensation by the SPCB. In addition, there are municipal laws on plastic waste, with their own penal codes.

#### **Impacts of Single Use Plastic (SUP)**

- **Environmental pollution:** A staggering total of it remains uncollected causing choking of drainage and river systems, littering of the marine ecosystem, soil and water pollution, ingestion by stray animals, and open air burning leading to adverse impact on environment.
- **Disposal issue:** They do not biodegrade instead they slowly break down into smaller pieces of plastic called microplastics which again causes more issues. It can take up to thousands of years for plastic bags and Styrofoam containers to decompose.
- **Human health:** The toxins, poisons and persistent pollutants present in some of these plastic products leach and enter human bodies where they cause several diseases, including cancer and can damage nervous systems, lungs and reproductive organs. Humans may be consuming anywhere from 39,000 to 52,000 microplastic particles a year through fish (contaminated with microplastics) alone.
- **Marine life & climate change:** Plastic waste is at epidemic proportions in the world's oceans with an estimated 100 million tonnes dumped there to date. o Plastic kills an estimated 1 million sea birds every year and affects around 700 species which get infected by ingesting plastics. Single-use plastics make up on average 49% of beach litter.
- **Increasing Carbon dioxide:** If the production, disposal and incineration of plastic continues on its present-day growth trajectory, by 2030 these global emissions could reach 1.34 gigatonne per year — equivalent to more than 295 coal-based power plants of 500-MW capacity.
- **More impact on developing countries:** The ubiquitous plastic seems to be a curse for the third world countries, because poor countries, especially in Asia, not only have their own plastic dump to deal with but also the plastic trash that lands on their shores from developed countries.

#### **Challenges with banning single use plastic**

- No immediate alternatives: It is difficult to ban the product which is of immense use to the public, without thinking of a sustainable and equally utilitarian alternative product.
- For e.g. Single-use plastic helps keep medical equipment sterile and safe to use.
- There is no alternative to plastic yet and sectors like pharmaceuticals, hardware, toys, food processing, food delivery will be in total chaos.
- While there is increased awareness in urban area, the challenge will be to find a suitable cost effective alternatives in tier II and tier III towns and remote locations.
- Impact on packaging industry: It impacts most industries since SUP forms part of packaging and hence is linked to all industries directly or indirectly.
- If plastic sachets made from multi-layered packaging are banned, it can disrupt supplies of key products such as biscuits, salt and milk etc which has made life easier for the poor in terms of affordable small packs and convenience.
- Ban will increase the price of most FMCG products as manufacturers would try and shift to alternative packaging (which can be costlier).
- Loss of jobs and revenue: Ban can lead to loss of revenue as well as job loss in the plastic manufacturing industry.
- India's plastic industry officially employs around 4 million people across 30,000 processing units, out of which 90% are small to medium-sized businesses.
- Plastics also support thousands employed informally such as ragpickers as well as street food and market vendors who are reliant on single-use plastic.
- Attitudinal change: It is difficult as no one takes the responsibility for the single use plastic thrown by them and behaviour change towards the shift from non-using of single use plastic is difficult.

### Measures taken so far in India

- Plastic Waste Management Rules, 2016 state that every local body has to be responsible for setting up infrastructure for segregation, collection, processing, and disposal of plastic waste.
- Plastic Waste Management (Amendment) Rules 2018 introduced the concept of Extended Producer Responsibility (EPR).
- Ban on Single-Use Plastics in a bid to free India of single-use plastics by 2022.
- World Environment Day, 2018 hosted in India, the world leaders vowed to "Beat Plastic Pollution" & eliminate its use completely.

## Community forest rights

### Context:

- Residents of the four villages in Chhattisgarh's Mungeli district have received Community Forest Resource Rights (CFRR).
- Achanakmar became the second tiger reserve in Chhattisgarh to get CFRR,
- following Udanti Sitanadi Tiger Reserve in Dhamtari district.

### Relevance:

- GS III- Environment and Ecology

### **Dimensions of the Article:**

- What is a community forest resource?
- What are Community Forest Resource rights?
- Why is the recognition of CFR rights important?
- Forest Rights Act, 2006

### **What is a community forest resource?**

- The community forest resource area is the common forest land that has been traditionally protected and conserved for sustainable use by a particular community.
- The community uses it to access resources available within the traditional and customary boundary of the village; and for seasonal use of landscape in case of pastoralist communities.
- Each CFR area has a customary boundary with identifiable landmarks recognised by the community and its neighboring villages.
- It may include forest of any category – revenue forest, classified & unclassified forest, deemed forest, DLC land, reserve forest, protected forest, sanctuary and national parks etc.

### **What are Community Forest Resource rights?**

- The Community Forest Resource rights under Section 3(1)(i) of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (commonly referred to as the Forest Rights Act or the FRA) provide for recognition of the right to “protect, regenerate or conserve or manage” the community forest resource.
- These rights allow the community to formulate rules for forest use by itself and others and thereby discharge its responsibilities under Section 5 of the FRA.
- CFR rights, along with Community Rights (CRs) under Sections 3(1)(b) and 3(1)(c), which include nistar rights and rights over non-timber forest products, ensure sustainable livelihoods of the community.
- These rights give the authority to the Gram Sabha to adopt local traditional practices of forest conservation and management within the community forest resource boundary.

### **Why is the recognition of CFR rights important?**

- Aimed at undoing the “historic injustice” meted out to forest-dependent communities due to curtailment of their customary rights over forests.
- It is important as it recognises the community’s right to use, manage and conserve forest resources, and to legally hold forest land that these communities have used for cultivation and residence.
- It also underlines the integral role that forest dwellers play in sustainability of forests and in conservation of biodiversity.

- It is of greater significance inside protected forests like national parks, sanctuaries and tiger reserves as traditional dwellers then become a part of management of the protected forests using their traditional wisdom.
- But while CFR rights are an important empowerment tool, getting a consensus amongst various villages about their traditional boundaries often proves a challenge.

### **Forest Rights Act, 2006**

- Schedule Tribes and Other Forest Dwellers Act or Recognition of Forest Rights Act came into force in 2006.
- The Nodal Ministry for the Act is Ministry of Tribal Affairs.
- It has been enacted to recognize and vest the forest rights and occupation of forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers, who have been residing in such forests for generations, but whose rights could not be recorded.
- This Act not only recognizes the rights to hold and live in the forest land under the individual or common occupation for habitation or for self-cultivation for livelihood, but also grants several other rights to ensure their control over forest resources.
- The Act also provides for diversion of forest land for public utility facilities managed by the Government, such as schools, dispensaries, fair price shops, electricity and telecommunication lines, water tanks, etc. with the recommendation of Gram Sabhas.
- Rights under the Forest Right Act 2006:
  - Title Rights- ownership of land being framed by Gram Sabha.
  - Forest management rights- to protect forests and wildlife.
  - Use rights- for minor forest produce, grazing, etc.
  - Rehabilitation- in case of illegal eviction or forced displacement.
  - Development Rights- to have basic amenities such as health, education, etc.

### **Ranipur Tiger Reserve**

#### **Context:**

- The UP cabinet approved the notification of Ranipur Tiger Reserve under Section 38(v) of the Wild life (Protection) Act of 1972.

#### **Relevance:**

- GS III: Environment and Ecology

#### **Dimensions of the Article:**

- About Ranipur WS
- About the National Tiger Conservation Authority (NTCA)

#### **About Ranipur WS**

- Ranipur WS, an attraction in the Chitrakoot region of Uttar Pradesh, was established in 1977.
- Despite being 230 sq. km in size and well known for its variety of species, travellers do not typically visit due to the challenging access.
- According to the statement, the Ranipur TR contains tropical dry deciduous forests and is home to a variety of wildlife, including tigers, leopards, sloth bears, spotted deer, sambhar, chinkara, as well as a number of birds and reptiles.
- The Ranipur TR will follow Dudhwa, Pilibhit, and Amangarh as the fourth in UP (buffer of Corbett Tiger Reserve).
- Additionally, it will be the first in the state's share of the Bundelkhand region, which it has with Madhya Pradesh's neighbour.

### Advantages of notifying as tiger reserve

- The arguments of the officials that the notification would ensure financial aid from the Centre and the National Tiger Conservation Authority (NTCA), better conservation and management of the tiger population and help generate more employment opportunities

### About the National Tiger Conservation Authority (NTCA)

- The National Tiger Conservation Authority (NTCA) was established in December 2005 following a recommendation of the Tiger Task Force, constituted by the Prime Minister of India for reorganised management of Project Tiger and the many Tiger Reserves in India.
- The Wildlife Protection Act of 1972 was amended in 2006 to provide for constituting the National Tiger Conservation Authority responsible for implementation of the Project Tiger plan to protect endangered tigers.
- The National Tiger Conservation Authority is set up under the Chairmanship of the Minister for Environment and Forests.
- The Authority will have eight experts or professionals having qualifications and experience in wildlife conservation and welfare of people including tribals, apart from three Members of Parliament of whom two will be elected by the House of the People and one by the Council of States.
- The Authority, inter alia, would lay down normative standards, guidelines for tiger conservation in the Tiger Reserves, apart from National Parks and Sanctuaries.
- It would provide information on protection measures including future conservation plan, tiger estimation, disease surveillance, mortality survey, patrolling, report on untoward happenings and such other management aspects as it may deem fit, including future plan for conservation.
- The Authority would also facilitate and support tiger reserve management in the States through eco-development and people's participation as per approved management plans, and support similar initiatives in adjoining areas consistent with the Central and state laws.
- The Tiger Conservation Authority would be required to prepare an Annual Report, which would be laid in the Parliament along with the Audit Report.
- Every 4 years the National Tiger Conservation Authority (NTCA) conducts a tiger census across India.

## Cheetah mitras

### Context:

- With the arrival of African cheetahs in Madhya Pradesh's Kuno National Park has begun the process of their re-introduction, around 70 years after they went extinct in India. Concerns have been raised about whether the big cats can settle in and survive in the Indian landscape.
- One way the government is trying to smoothen the settling in of the cheetahs is through the medium of "cheetah mitras" or 'cheetah friends'.

### Relevance:

- GS III: Environment and Ecology

### Dimensions of the Article:

- Who are the cheetah mitras?
- What is their role?

### Who are the cheetah mitras?

- Cheetah mitras have mainly been involved by the government to familiarise the local populations with the big cats and minimise potential conflicts.
- As the cheetahs have been brought to Kuno, the nearby villages might be unaware of the changes that can come about with the new animal being introduced.
- To make the local population understand more about the cheetah and its characteristics, forest officials have trained around 400 cheetah mitras from 51 villages, including school teachers, village headmen and patwaris

### What is their role?

- They explain they will take care that the animal does not move outside the park and into the villages, and alert officials if need be, adding that there is a bigger threat to cheetahs from humans than the other way round. Along with informing the villagers, keeping the big cats safe from poachers will be an important task.
- Hunting was why the Asiatic cheetah went extinct in India in 1952, and to protect the cheetahs today, two drone squads have been readied, five watch towers with CCTV cameras have been put up and at least 24 retired military personnel have been hired.

## Community forest rights

### Context:

- Recently, residents of Karipani and Budra villages in Chhattisgarh carried out a massive afforestation drive over 100 acres, as it was the last-ditch effort of the villagers to secure rights over their forest land.
- As many as 10 villages in protected areas of the state received the Community Forest Resource Rights (CFRR) titles on Adivasi Divas observed on August 9, 2022 but Karipani and Budra were not among them.

#### Relevance:

- GS III- Environment and Ecology

#### Dimensions of the Article:

- What is a community forest resource?
- What are Community Forest Resource rights?
- Why is the recognition of CFR rights important?
- Forest Rights Act, 2006

#### What is a community forest resource?

- The community forest resource area is the common forest land that has been traditionally protected and conserved for sustainable use by a particular community.
- The community uses it to access resources available within the traditional and customary boundary of the village; and for seasonal use of landscape in case of pastoralist communities.
- Each CFR area has a customary boundary with identifiable landmarks recognised by the community and its neighboring villages.
- It may include forest of any category – revenue forest, classified & unclassified forest, deemed forest, DLC land, reserve forest, protected forest, sanctuary and national parks etc.

#### What are Community Forest Resource rights?

- The Community Forest Resource rights under Section 3(1)(i) of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (commonly referred to as the Forest Rights Act or the FRA) provide for recognition of the right to “protect, regenerate or conserve or manage” the community forest resource.
- These rights allow the community to formulate rules for forest use by itself and others and thereby discharge its responsibilities under Section 5 of the FRA.
- CFR rights, along with Community Rights (CRs) under Sections 3(1)(b) and 3(1)(c), which include nistar rights and rights over non-timber forest products, ensure sustainable livelihoods of the community.
- These rights give the authority to the Gram Sabha to adopt local traditional practices of forest conservation and management within the community forest resource boundary.
- Why is the recognition of CFR rights important?

- Aimed at undoing the “historic injustice” meted out to forest-dependent communities due to curtailment of their customary rights over forests.
- It is important as it recognises the community’s right to use, manage and conserve forest resources, and to legally hold forest land that these communities have used for cultivation and residence.
- It also underlines the integral role that forest dwellers play in sustainability of forests and in conservation of biodiversity.
- It is of greater significance inside protected forests like national parks, sanctuaries and tiger reserves as traditional dwellers then become a part of management of the protected forests using their traditional wisdom.
- But while CFR rights are an important empowerment tool, getting a consensus amongst various villages about their traditional boundaries often proves a challenge.

### Forest Rights Act, 2006

- Schedule Tribes and Other Forest Dwellers Act or Recognition of Forest Rights Act came into force in 2006.
- The Nodal Ministry for the Act is Ministry of Tribal Affairs.
- It has been enacted to recognize and vest the forest rights and occupation of forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers, who have been residing in such forests for generations, but whose rights could not be recorded.
- This Act not only recognizes the rights to hold and live in the forest land under the individual or common occupation for habitation or for self-cultivation for livelihood, but also grants several other rights to ensure their control over forest resources.
- The Act also provides for diversion of forest land for public utility facilities managed by the Government, such as schools, dispensaries, fair price shops, electricity and telecommunication lines, water tanks, etc. with the recommendation of Gram Sabhas.

### Rights under the Forest Right Act 2006:

- Title Rights- ownership of land being framed by Gram Sabha.
- Forest management rights- to protect forests and wildlife.
- Use rights- for minor forest produce, grazing, etc.
- Rehabilitation- in case of illegal eviction or forced displacement.
- Development Rights- to have basic amenities such as health, education, etc.

## Indian rhinoceros

### Context:

- Three lifeless rhinos have risen from the ashes of the most conspicuous part of the herbivore, at the Kaziranga National Park and Tiger Reserve.

### Relevance:

- Prelims, GS-III: Environment and Ecology (Conservation of Environment and Ecology, Protected Areas, Species in news)

### Dimensions of the Article:

- About Indian rhinoceros
- Status of Rhinoceros in India
- Indian Rhino Vision (IRV) 2020 programme
- Other efforts to conserve rhinoceros in India
- Kaziranga National Park

### Details:

- Three lifeless rhinos have risen from the ashes of the most conspicuous part of the herbivore, at the Kaziranga National Park and Tiger Reserve.
- Assam Chief Minister unveiled a memorial to the greater one-horned rhino and the forest guards the 1,300 sq. km tiger reserve owes its existence to.
- The ash collected from the burning of a stockpile of 2,479 rhino horns, seized from poachers and smugglers and collected from animals that died naturally, was used in the concrete mix to create the life-size rhinos – a 10.5-foot-long and 6-foot-tall male, an 11x5.6 foot female and a 3.5x1.5 foot calf.

### About Indian rhinoceros

- The Indian rhinoceros also called the Indian rhino, greater one-horned rhinoceros or great Indian rhinoceros, is a rhinoceros species native to the Indian subcontinent.
- It is listed as Vulnerable on the IUCN Red List, as populations are fragmented and restricted to less than 20,000 square kilometers.
- Moreover, the extent and quality of the rhino's most important habitat, the alluvial Terai-Duar savanna and grasslands and riverine forest, is considered to be in decline due to human and livestock encroachment.
- The Census of Rhinoceros is undertaken at the State-level by the respective State Governments periodically.

### Status of Rhinoceros in India

- The population of Greater One-horned Rhinoceros reached to the brink of extinction by the end of the 20th century with fewer than 200 animals in wild.
- The Indian rhinoceros once ranged throughout the entire stretch of the Indo- Gangetic Plain, but excessive hunting and agricultural development reduced its range drastically to 11 sites in northern India and southern Nepal.
- Nearly 85% of the global Indian rhinoceros population is concentrated in Assam, where Kaziranga National Park contains 70% of rhino population.
- Kaziranga National Park alone had an estimated population of more than 2,000 rhinos in 2009.
- Pobitora Wildlife Sanctuary in Assam has the highest density of Indian rhinos in the world.

- Although poaching remains a continuous threat (more than 150 rhinos were killed in Assam by poachers between 2000 and 2006), their numbers have increased due to conservation measures taken by the government.

### Indian Rhino Vision (IRV) 2020 programme

- The WHO-India launched Indian Rhino Vision (IRV) 2020 programme to protect and increase the population of the one-horned rhinoceros.
- It is an ambitious effort to attain a wild population of at least 3,000 greater one-horned rhinos spread over seven protected areas in the Indian state of Assam by the year 2020.

### IRV 2020 is a partnership among:

- Government of Assam,
- International Rhino Foundation,
- World Wide Fund for Nature (WWF),
- Bodoland Territorial Council, and
- U.S. Fish & World Wildlife foundation.

### Procedure followed

- The horns of rhinos will be trimmed (in a way that any damage is not done to their internal organs and the trimmed horns will grow back to their original shape within a few months) before their translocation to protect them from the poachers, who hunt them just to take away their horns.
- Manas National Park was the first to receive translocated rhinos.
- One of the biggest challenges turned out to be the difficulty in obtaining etorphine — a major component of the tranquilizing drug used to sedate large wild animals like rhinos and elephants.
- In partnership with local NGO's and the State Agriculture Department, the livelihood options of the communities living on the fringes of the park are being developed by undertaking agriculture support programs.

### Other efforts to conserve rhinoceros in India

- National Conservation Strategy for the Indian One-Horned Rhinoceros
- It was launched in 2019 to conserve the greater one-horned rhinoceros.
- It is a first of its kind for the species in India which aims to work for the conservation of the species under five objectives which include strengthening protection, expanding the distribution range, research and monitoring, and adequate and sustained funding.
- Its goal is to repopulate Rhinoceros population in those areas also which used to hold the Rhinoceros earlier by augmenting the existing conservation efforts and strengthening them through scientific and administrative measures.

### New Delhi Declaration on Asian Rhinos 2019

- India and four rhino range nations have signed a declaration ‘The New Delhi Declaration on Asian Rhinos 2019’ for the conservation and protection of the species.
- India will collaborate with Bhutan, Nepal, Indonesia and Malaysia to increase the population of three species of Asian rhinos, including the Greater one- horned rhinoceros found in the Indian sub-continent.
- The declaration was signed to conserve and review the population of the Greater one-horned, Javan and Sumatran rhinos every four years to reassess the need for joint actions to secure their future.

### **Kaziranga National Park**

- Kaziranga National Park is a national park in the Golaghat, Karbi Anglong and Nagaon districts of the state of Assam.
- It is a World Heritage Site and hosts two- thirds of the world's great one-horned rhinoceroses.
- Kaziranga is recognized as an Important Bird Area by BirdLife International for conservation of avifaunal species.
- Along with the iconic Greater one-horned rhinoceros, the park is the breeding ground of elephants,
- Over the time, the tiger population has also increased in Kaziranga, and that’s the reason why Kaziranga was declared as Tiger Reserve in 2006.
- Due to the difference in altitude between the eastern and western areas of the park, here one can see mainly four types of vegetation’ like alluvial inundated grasslands, alluvial savanna woodlands, tropical moist mixed deciduous forests, and tropical semi-evergreen forests.
- Kaziranga is a vast expanse of tall elephant grass, marshland, and dense tropical moist broadleaf forests, criss-crossed by four major rivers, including the Brahmaputra, and the park includes numerous small bodies of water.
- Kaziranga has flat expanses of fertile, alluvial soil, formed by erosion and silt deposition by the River Brahmaputra.
- The history of Kaziranga as a protected area can be traced back to 1904 when the wife of the Viceroy of India, Lord Curzon visited the area and persuaded to take measures to protect rhinoceros in the area.

### **‘Triple dip’ La Nina**

#### **Context:**

- Recently, The Australian Bureau of Meteorology confirmed the occurrence of La Niña
- phenomenon for the third consecutive year in the Pacific Ocean.
- India Meteorological Department data shows, La Niña lasting for more than two years has been recorded only on six instances

#### **Relevance:**

- GS-I: Geography (Climatology, Important Geophysical Phenomena), GS-III: Environment and Ecology (Environmental Pollution and Degradation, Impact of Climate Change)

**Dimensions of the article:**

- La Niña
- El Niño
- ENSO
- How does La Nina impact India's monsoon?
- Why have La Nina conditions continued for three years?
- La Nina conditions and cyclone formation

**La Niña**

- La Niña is a coupled ocean-atmosphere phenomenon that is the colder counterpart of El Niño, as part of the broader El Niño–Southern Oscillation (ENSO) climate pattern.
- During a period of La Niña, the sea surface temperature across the equatorial Eastern Central Pacific Ocean will be lower than normal by 3 to 5 °C (5.4 to 9°F).
- An appearance of La Niña persists for at least five months.
- It has extensive effects on the weather across the globe, particularly in North America, even affecting the Atlantic and Pacific hurricane seasons, in which more tropical cyclones occur in the Atlantic basin due to low wind shear and warmer sea surface temperatures, while reducing tropical cyclogenesis in the Pacific Ocean.
- La Niña is a complex weather pattern that occurs every few years, as a result of variations in ocean temperatures in the Equatorial Pacific.
- It occurs as strong winds blow warm water at the ocean's surface from South America across the Pacific Ocean towards Indonesia.
- As this warm water moves west, cold water from the deep sea rises to the surface near South America.
- As a result, it is considered to be the cold phase of the broader El Niño–Southern Oscillation weather pattern, as well as the opposite of El Niño weather pattern.
- La Niña impacts the global climate and disrupts normal weather patterns, which as a result can lead to intense storms in some places and droughts in others.

**El Niño**

- El Niño is the warm phase of the El Niño–Southern Oscillation (ENSO) and is associated with a band of warm ocean water that develops in the central and east-central equatorial Pacific (between approximately the International Date Line and 120°W), including the area off the Pacific coast of South America.
- The ENSO is the cycle of warm and cold sea surface temperature (SST) of the tropical central and eastern Pacific Ocean.
- El Niño is accompanied by high air pressure in the western Pacific and low air pressure in the eastern Pacific.
- During the development of El Niño, rainfall develops between September– November.
- The cool phase of ENSO is La Niña, with SSTs in the eastern Pacific below average, and air pressure high in the eastern Pacific and low in the western Pacific.

- The ENSO cycle, including both El Niño and La Niña, causes global changes in temperature and rainfall.

## ENSO

- El Niño and the Southern Oscillation, also known as ENSO is a periodic fluctuation in sea surface temperature (El Niño) and the air pressure of the overlying atmosphere (Southern Oscillation) across the equatorial Pacific Ocean.
- El Niño and La Niña are complex weather patterns resulting from variations in ocean temperatures in the Equatorial Pacific Region. They are opposite phases of what is known as the ENSO cycle.
- El Niño and La Niña episodes typically last nine to 12 months, but some prolonged events may last for years.

### How does La Niña impact India's monsoon?

- El Niño years in India have witnessed extreme heat and below normal rainfall levels during monsoon, even though El Niño might not be the only factor or even have direct links to them.
- In 2014, a El Niño year, India received 12 per cent deficient rainfall from June to September.
- On the other hand, La Niña years are known to favour the Indian summer monsoon.
- This year, India has received 740.3 mm of rainfall, quantitatively 7 per cent higher than the seasonal average till August 30.
- Among the 36 states and union territories, 30 have received rainfall that is categorised as either 'normal,' 'excess' or 'large excess.'
- Uttar Pradesh, Manipur (-44 per cent each), and Bihar (-39 per cent), however, remain the worst affected states this season.

### Why have La Niña conditions continued for three years?

- Climate change could be a driving factor behind such uncommon conditions.
- El Niño has been associated with rising heatwaves and extreme temperatures, such as in parts of the US, Europe and China recently.
- India's Northeast monsoon rainfall remained subdued during past La Niña events, but the 2021 monsoon remains an exception in recent years.
- In 2021, the southern Indian peninsula experienced its wettest recorded winter monsoon since 1901, receiving a whopping 171 per cent surplus of rainfall between October and December, IMD data stated.

### La Niña conditions and cyclone formation

- Intense hurricanes and cyclones have frequently occurred in the Atlantic Ocean and the Bay of Bengal during La Niña years.
- Over the North Indian Ocean as well, the chances of an increased number of cyclones are due to multiple contributing factors, including high relative moisture and relatively low wind shear over the Bay of Bengal.

- The post-monsoon months, from October to December, are the most active months for cyclonic developments over the North Indian Ocean, with November as the peak for cyclonic activity.

## **STRINGENT REDUCTION IN AIR POLLUTION TARGET FOR CITIES BY 2026.**

### **Context**

- The Central Government has increased the target for reducing urban air pollution (particulate matter (PM) concentrations) from 20-30% by 2024 to 40% by 2025-26. The revised target may encourage states to raise their ambitions through city-based action plans under the National Clean Air Programme (NCAP).

**Relevance:** GS Paper 3: Conservation, environmental pollution and degradation,

### **Mains Question**

- Describe the key points of the World Health Organization's recently released revised Global Air Quality Guidelines (AQGs) (WHO). What makes these updates different from the last one in 2005? What changes are needed in India's National Clean Air Programme to meet revised standards? (250 Words)
- Concerning the National Clean Air Programme (NCAP):
- The Ministry of Environment, Forests, and Climate Change (MoEFCC), Government of India, launched NCAP in 2019.
- It is India's flagship programme, outlining a long-term, time-bound national strategy to address the country's air pollution problem comprehensively.
- It aims to achieve a 20% to 30% reduction in PM concentrations (PM10 - coarse particulate matter with a diameter of 10 micrometres or less and PM2.5 - fine particulate matter with a diameter of 2.5 micrometres or less) by 2024, using 2017 as the baseline year for comparison.
- The current annual safe limits for PM2.5 and PM10 in the country are 40 ug/m<sup>3</sup> (micrograms per cubic metre) and 60 ug/m<sup>3</sup>, respectively.
- The Central Pollution Control Board (CPCB) will carry out this nationwide programme in accordance with the Air (Prevention and Control of Pollution) Act of 1981.
- Under NCAP, 131 non-attainment cities have been identified across the country, as they did not meet the national ambient air quality standards (NAAQS) for 2011-15 under the National Air Quality Monitoring Program (NAQMP), including Delhi, Varanasi, Bhopal, Kolkata, Noida, Muzaffarpur, Mumbai, and others.
- City-specific action plans have been created, including measures to strengthen the monitoring network, reduce vehicular or industrial emissions, raise public awareness, and so on.
- The Steering Committee, Monitoring Committee, and Implementation Committee of the Central and State Committees regularly monitor the implementation of city-specific action plans.
- State Pollution Control Boards monitor city air quality and publish their findings on a regular basis. • Some Smart Cities have established Integrated Command and Control Centres (ICCCs) that are also linked to Air Quality Monitors for effective monitoring (AQMs).

- The Center intends to expand India's air quality monitoring network as part of the programme.
- In addition to the existing 101 real-time AQMs, at least 4,000 monitors are estimated to be needed across the country.

### Summary of Recent Events:

- The central government recently revised the targets based on the performance of 95 cities that showed improvement in air quality in 2021-22 compared to 2017 levels.
- According to a recent MoEFCC analysis of NCAP cities, 20 cities (including Chennai, Madurai, Nashik, and Chittur) have even met the National Ambient Air Quality Standards (NAAQS), which establish an acceptable annual average limit of PM10 at 60 ug/m<sup>3</sup>.
- However, the analysis was devoid of the more dangerous PM2.5 because it is not monitored in all NCAP cities. Under NAAQS, the annual average prescribed standard for PM2.5 is 40 ug/m<sup>3</sup>.
- The new goal was communicated to states at a recent national conference of Environment Ministers in Ekta Nagar, Gujarat.
- During the national conference, the MoEFCC decided to rank these 131 cities on a yearly basis based on various actions taken to improve air quality, such as solid waste management, road dust management, construction and demolition waste management, control of vehicular emissions, and industrial pollution.
- The revised target is intended to eventually achieve acceptable limits for both PM10 and PM2.5 concentrations.
- Even a 40% reduction in PM concentrations compared to 2017 levels would result in unacceptable air quality in Delhi and other NCR cities, Mumbai, Kolkata, Lucknow, and Kanpur.
- However, many cities, such as Varanasi, are expected to achieve much higher reductions, such as the highest 53% reduction in PM10 levels in 2021-22. (over 2017 levels).

## INTERNAL SECURITY AND CHALLENGES:

### CHINA HAS BLOCKED THE LISTING OF A LASHKAR OPERATIVE

#### Context

- China has blocked a joint India-US attempt to place a Pakistan-based terrorist on the UN Security Council's 1267 list for the third time in three months. It halted the proposal to add Lashkar-e-Taiba 'commander' Sajid Mir, who is wanted in connection with the 26/11 Mumbai terror attacks.
- In August 2022, China blocked a proposal by India and the United States at the UN Security Council to designate Abdul Rauf Azhar as a global terrorist.

#### Relevance

- GS Paper 3: Internal Security

## Mains Question

- Terrorism poses a serious threat to national security. What solutions do you have to this growing threat? What are the most common sources of terrorist financing? (150 Words)
- In Focus: UN Security Council Sanctions
- The United Nations Security Council has the authority to take action to maintain or restore international peace and security under Chapter VII of the United Nations Charter.
- Sanctions are one of the options available to the Council in this regard.
- Sanctions measures, as defined in Article 41 of the UN Charter, cover a wide range of non-military enforcement options.
- Economic and trade embargoes can be used, as well as more targeted measures against specific individuals, companies, or entities, such as fund freezing and travel bans.
- The UN Security Council currently has 14 active sanctions regimes that focus on supporting political processes in armed conflicts, nuclear non-proliferation, and counter-terrorism.
- A UN Security Council resolution is used to enact sanctions regimes.

## Sanctions committee

- Each sanctions regime is overseen by a sanctions committee comprised of all 15 Security Council members.
- The UN Security Council has 15 members: 5 permanent members and 10 non-permanent members.
- These sanctions committees oversee the implementation of sanctions and can vote unanimously to impose targeted sanctions on specific individuals, businesses, or entities.
- One of them is the UN Security Council Al-Qaeda and ISIL Sanctions Committee, also known as the 1267 sanctions committee.
- The United Nations Security Council Al-Qaeda and ISIL Sanctions Committee is also known as the 1267 sanctions committee.
- It is one of the most important and active UN subsidiary bodies involved in the fight against terrorism, particularly in relation to ISIL (Da'esh), Al Qaida, and other associated individuals, groups, undertakings, and entities.
- When an entity or individual is added to the list, it is designated as a "Global Terrorist."
- The member states are required to: o freeze that individual's or entity's funds and financial assets, o impose a travel ban, and o restrict access to arms and related materials.

## The committee's procedure is as follows:

- Consensus decision o Decisions are made by consensus.
- This requirement effectively grants a veto to all 15 committee members (10 non-permanent + 5 permanent).
- A member can halt the decision.
- A committee member can "hold" the decision if they need more time and information to consider the issue at hand.

- According to the guidelines, a hold can last up to 6 months at a time, but it can be extended further under "extraordinary circumstances."
- Aside from this ambiguous condition, there are no restrictions on invoking a hold multiple times.
- Gathering behind closed doors
- Committee meetings are held in closed sessions, with no publication of the agenda, proceedings, or voting records.

## **DISASTER MANAGEMENT:**

### **INDIA'S CONCERN ON FIRE SAFETY MEASURES**

#### **Context**

- House densification is a phenomenon that occurs in both planned and unplanned settlements in cities. Devastating fires are the most common risk in India's densely packed urban areas.

#### **Relevance**

- GS Paper – 1 : Urbanization, GS Paper – 3: Disaster Management

#### **Mains Question**

- In light of recent fire incidents, discuss the provisions relating to fire safety in India. Suggestions for improving fire safety in India are also welcome. (150 Words)

#### **The survey report and the severity**

- According to India Risk Surveys 2018, India ranks third in fire incidents, particularly in the country's northern and western regions. The use of wood fuel and charcoal for room heating, waste burning around courtyards, and poor city infrastructure for firefighting and accessibility are all common causes of fire disasters in urban areas.
- By generating a large amount of smoke pollution and releasing greenhouse gases, urban fires can have a negative impact on human lives and property, as well as the environment and ecosystem.
- Despite major fires in the past, flagrant violations of building and fire safety standards persist, and fire accidents occur with alarming frequency. It is past time that fire safety was taken seriously and violators were prosecuted.

#### **Current Fire Safety Provisions in India**

- The fire service is one of the most important emergency response services in the country, and it is covered by the Indian Constitution's 12th schedule, which deals with municipal functions.

- Currently, fire prevention and suppression services are organised by the respective states, union territories (UTs), and urban local bodies (ULBs).
- The 2016 National Building Code (NBC) of India: The Bureau of Indian Standards publishes NBC as a "recommendatory document," and state governments are expected to incorporate it into their local building codes, making the recommendations mandatory.
- It is primarily composed of administrative regulations, general building requirements such as fire safety requirements, structural design and construction (including safety) provisions.
- 2003 Model Building Bye Laws: The Chief Fire Officer is responsible for fire clearance at each point under the Modern Building Bye Laws 2003. For clearance purposes, the concerned Development Authority must provide the building plans to the Chief Fire Officer.
- National Disaster Management Authority (NDMA): The National Disaster Management Authority's guidelines specify fire safety requirements for public buildings, including hospitals, as well as design guidelines for maintaining a minimum level of open space, exit mechanisms, stairs, and evacuation drills.

### Issues Contributing to Urban Fires in India

- Lack of Uniform Fire Safety Legislation: According to the Accidental Deaths & Suicides in India report 2020, 11,037 fire accidents occurred in the country in 2020. Despite this, there is no uniform fire safety legislation in India.
- Natural and Climatic Causes: Fires in urban areas are caused by natural weather phenomena such as lightning and extreme heat with low humidity.
- Absence of Smoke Management and Emergency Lighting: Because high-rise buildings frequently contain large enclosed spaces or voids, even a small fire can quickly become a fire hazard due to a lack of smoke management and a warning mechanism via emergency lighting.
- Lack of Vulnerability Analysis: Due to poor regulation and enforcement of the National Building Code 2016, a lack of vulnerability analysis in buildings leads to urban fires because vulnerability has a direct impact on preparedness, response, and recovery.
- Lack of Proper Electric Insulation: Polyurethane foam (PUF) used for plastic insulation is highly flammable due to its proximity to electrical wiring, which immediately catches fire when heated due to overloading or short circuit.

### The Way Forward

- Fire Safety Legislation and Audit: To reduce the vulnerability of urban fires, India requires strong fire safety legislation as well as an effective time-to-time audit mechanism.
- Corporate Safety Responsibility: Building corporations must conduct proper vulnerability assessments prior to construction and keep basements clear of obstructions in order to maintain proper escape channels.
- Fire Hazard Response Plans: It is critical that every Urban Local Body develops a fire hazard plan in collaboration with administration, the fire brigade, and the health department, and conducts regular mock drills in public spaces to promote public awareness and rapid recovery from unforeseen fires.

- Modernization of Fire Safety Equipment: The government should provide funds and assistance to bolster and modernise fire departments with equipment such as smoke detectors, fire hose cabinets, and automatic sprinkler systems.

PM IAS