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1. ECONOMY

1. Census First Phase, NPR Data Collection deferred till September

Why in News?

- The first phase of the census and collection of details to update the National Population Register (NPR) have been postponed at least till September.

About the News:

- The Registrar General of India (RGI) had in December informed the States that freezing of boundaries of districts, sub-districts, tehsils, talukas, police stations etc. has been postponed till June 2022.
- Freezing of boundary limits of administrative units, at least three months prior, is a prerequisite for conducting the census. Even if the RGI issues an order in June to freeze the boundaries again, the exercise can take place only in September.
- Finalisation of administrative units entails covering all jurisdictional changes in an administrative area between two consecutive censuses.
- The first phase of Census 2021 – the House listing and Housing Census along with updating the NPR – was scheduled to be held from April-September, 2020 but was postponed indefinitely due to the COVID-19 pandemic. The second and main phase of the decennial exercise – the population enumeration – was to be concluded by March 5, 2021.
- There was a ban on States to create new administrative units from January 1, 2020 to March 31, 2021.
- The RGI informed the States in July 2020 that after the outbreak of the pandemic, the field work of the first phase of Census 2021 and the other related activities have been postponed until Further Orders.
- In Census, data is collected on demographic and various socio-economic parameters like education, SC/ST, religion, language, marriage, fertility, disability, occupation and migration of the individuals.
- The forthcoming Census is to be the first digital Census and there is a provision for self-Enumeration.

What is Census?

- The census provides information on size, distribution and socio-economic, demographic and other characteristics of the country's population.
- The Census was first started under British Viceroy Lord Mayo in 1872. It helped in framing new policies, government programs to uplift areas of improvement in the community.

- The first synchronous census in India was held in 1881. Since then, censuses have been undertaken uninterruptedly once every ten years.

Who Conducts Census?

- The responsibility of conducting the decennial Census rests with the Office of the Registrar General and Census Commissioner, India under Ministry of Home Affairs, Government of India. The Census is one of the most credible sources of information on the following:
 - ✓ Demography.
 - ✓ Economic Activity.
 - ✓ Literacy and Education.
 - ✓ Housing & Household Amenities.
 - ✓ Urbanization, Fertility, and Mortality.
 - ✓ Scheduled Castes and Scheduled Tribes.
 - ✓ Language.

Historical Significance:

- ‘Rig-Veda’ reveals that some kind of population count was maintained during 800-600 BC in India.
- Arthashastra by ‘Kautilya’ written in the 3rd Century BC prescribed the collection of population statistics as a measure of state policy for taxation.
- During the regime of the Mughal king Akbar, the administrative report ‘Ain-e-Akbari’ included comprehensive data pertaining to population, industry, wealth and many other Characteristics.

2. Extending the GST Compensation

Why in News?

- Finance Ministers of several States have demanded that the GST compensation scheme be Extended beyond June 2022.

What's the Issue?

- The adoption of GST was made possible by States ceding almost all their powers to impose local-level indirect taxes and Agreeing to let the prevailing multiplicity of imposts be Subsumed into the GST.
- This was agreed on the condition that revenue shortfalls arising from the transition to the new indirect taxes regime would be made good from a pooled GST Compensation Fund for a period of five Years that is set to end in June 2022.

Need for Extension:

- Citing the impact of the COVID-19 pandemic on the overall economy and more specifically States' revenues, the States including Tamil Nadu, Kerala, West Bengal, Rajasthan and Chhattisgarh stressed that while their revenues had been adversely impacted by the introduction of GST, the hit from the pandemic had pushed back any possible rebound in revenue especially at a time when they had been forced to spend substantially more to address the public health emergency and its socio-economic fallout on their residents.

What is the GST Compensation?

- The Constitution (One Hundred and First Amendment) Act, 2016, was the law which created the mechanism for levying a common nationwide Goods and Services Tax (GST).
- While States would receive the SGST (State GST) component of the GST, and a share of the IGST (integrated GST), it was agreed that revenue shortfalls arising from the transition to the new indirect taxes regime would be made good from a pooled GST Compensation Fund for a period of five years that is currently set to end in June 2022.

How is the GST Compensation Fund funded?

- This corpus is funded through a Compensation cess that is levied on so-called 'demerit' Goods. The items are pan masala, Cigarettes and tobacco products, aerated water, caffeinated Beverages, Coal and certain Passenger motor vehicles.

Computation of the Shortfall:

- The computation of the shortfall is done annually by projecting a revenue assumption based on 14% compounded growth from the base year's (2015-2016) revenue and calculating the difference between that figure and the actual GST collections in that year.

Can the deadline be Extended? If so, how?

- The deadline for GST compensation was set in the original legislation and so in order to extend it, the GST Council must first recommend it and the Union government must then move an amendment to the GST law allowing for a new date beyond the June 2022 deadline at which the GST compensation scheme will come to a close.

3. Airtel Payments Bank is now a Scheduled Bank

Why in News?

- The Reserve Bank of India (RBI) has announced the inclusion of Airtel Payments Bank Ltd. in the Second Schedule to the Reserve Bank of India Act, 1934.

Implications:

- With this, the bank can now pitch for Government-issued Requests for Proposals (RFP) and Primary Auctions and undertake both Central and State Government business.

What is a Schedule Bank?

- Scheduled Banks in India refer to those banks which have been included in the Second Schedule of Reserve Bank of India Act, 1934.
- Every Scheduled bank enjoys two types of principal facilities: It becomes eligible for debts/loans at the bank rate from the RBI; and, it automatically acquires the membership of Clearing House.

About Airtel Payments Bank:

- It is among the fastest-growing digital banks in the country, with a base of 115 million users.
- It offers a suite of digital solutions through the Airtel Thanks app and a retail network of over 500,000 Neighbourhood Banking Points.
- The bank Turned Profitable in the Quarter ended September 2021.

What is Payment's bank?

- Payment banks were established to promote financial inclusion by offering; 'modest savings accounts and payments/remittance services to migratory labour workforce, low-income households, small enterprises, other unorganised sector entities, and other users.'
- These banks can accept a restricted deposit, which is now capped at Rs 200,000 per person but could be raised in the future.
- These banks are unable to provide loans or credit cards. Banks of this type can handle both current and savings accounts.
- Payments banks can provide ATM and debit cards, as well as online and mobile banking.

GOING FURTHER AFIELD

While some services offered by payments banks and small finance banks will be similar, there are some key differences. Here is a look at what they will offer.

PAYMENTS BANK	SMALL FINANCE BANK
• Can accept deposits, but only up to ₹1 lakh per individual customer	• Allowed to take deposits of any amount
• Can't lend in any form	• Can lend but the focus will be on small lending
• Can open small savings accounts	• Can finance small business units, small and marginal farmers, micro and small industries and unorganised sector entities
• Can provide remittance services	• Can provide remittances as well as credit cards
• Allowed to issue automated teller machine (ATM) or debit cards	• Allowed to issue ATM or debit cards
• Not allowed to issue credit cards	• Has to ensure that 50% of loan portfolio constitutes advances of up to ₹25 lakh
• Can distribute products such as mutual funds, insurance and third-party loans	• Can distribute financial products such as mutual funds, insurance and pension

Source: RBI website

1.1 ECONOMY SNIPPETS

1. Eight Core Industries

Why in News?

- The output of Eight Core Industries grew at 3.1 %, the slowest pace in eight months in November, indicating slowing momentum in the Indian economy.

Highlights:

- The Eight core sectors are Coal, crude oil, natural gas, refinery products, fertiliser, steel, cement and electricity.
- These comprise 40.27% of the weight of items included in the Index of Industrial Production (IIP). Barring crude oil and cement, all other sectors recorded positive growth.
- The eight core sector industries in decreasing order of their weightage: Refinery Products > Electricity > Steel > Coal > Crude Oil > Natural Gas > Cement > Fertilizers.
- IIP is an indicator that measures the changes in the volume of production of industrial products during a given period. It is compiled and published monthly by the Central Statistical Organization (CSO), Ministry of Statistics and Programme Implementation.
- It is a composite indicator that measures the growth rate of industry groups .
 - ✓ These are the classified group sBroad sectors, namely, Mining, Manufacturing, and Electricity.
 - ✓ Use-based sectors, namely Basic Goods, Capital Goods, and Intermediate Goods.
 - ✓ The Base Year for IIP is 2011-2012.
- It is used by government agencies including the Ministry of Finance, the Reserve Bank of India, etc, for policy-making purposes.
- IIP remains extremely relevant for the calculation of the quarterly and advance GDP (Gross Domestic Product) Estimates.

2. Chisumle- Demchok: Worlds' Highest Motorable Road

Why in News?

- Ladakh's Chisumle-Demchok Road, when it crosses the Umling Pass, is now the world's highest motorable road.

Chisumle- Demchok Road:

- The project to build the road through the pass — a part of Border Roads Organization (BRO) Project Himank — had been completed in 2017, after which vehicles had started playing on the route.

- The road is in south Ladakh. It passes through Umling La Pass, which is at a height of over 19,000 feet.
- The height of the pass makes it the highest motorable road in the world, and was recently recognized as such by Guinness World Records.
- The 52-km road 'black-top' tarmac road from Chisumle to Demchok betters the previous record of a road in Bolivia, which connects the volcano Uturuncu at 18,953 feet.
- The road was built under extremely challenging conditions, as temperatures in the region can fall to below minus 40 degrees Celsius, and oxygen levels go down to 50 per cent below normal.

Top of the world:

- At the pass, the road is higher than both the base camps for the climb to Mount Everest, the world's highest mountain.
- The South Base Camp in Nepal is at a height of 17,598 ft, while North Base Camp in Tibet is at 16,900 ft.
- The Chisumle-Demchok road is also higher than the Siachen Glacier, which is situated at 17,700 feet.
- Khardung La in Leh, which at one time was among the highest roads in the world, is at an altitude of 17,582 feet.

Military Significance of the Road:

- This road provides a direct route from Chisumle, which lies on the major road coming from Leh, Karu and Nyoma.
- All of these stations have important military stations which are close to the Line of Actual Control.
- Demchok has been an India-China flashpoint earlier, the site of a standoff between the two armies in 2016.
- In the current standoff in eastern Ladakh, which began in May 2020, Demchok has come up as a point of contention.

Other benefits offered:

- The new axis will be helpful for the armed forces, making it easier to mobilize troops and equipment, including Rations.
- The road will not only enable faster movement of armed forces to the region but will also boost tourism and improve the socio-economic condition of the local people in the region.

Certain Limitations:

- Since the road goes through such a high pass, road transport will be unfeasible during the winter, when the armed forces rely on air support.

3. RBI approves Offline E-Payments

Why in News?

- The Reserve Bank of India (RBI) has come out with the framework for facilitating small-value digital payments in offline mode, a move that would promote digital payments in semi-urban and rural areas.

Offline E-payments:

- Offline digital payment does not require Internet or telecom connectivity.
- Such payments can be carried out face-to-face (proximity mode) using any channel or instrument like cards, wallets and mobile devices.
- Such transactions would not require an Additional Factor of Authentication.
- Since the transactions are offline, alerts (by way of SMS and/or e-mail) will be received by the customer after a time lag.
- There is a limit of ₹200 per transaction and an overall limit of ₹2,000 until the balance in the account is replenished.

Conditions Applied:

- Payment instruments shall be enabled for offline transactions only after the explicit consent of the customer.
- That apart, these transactions using cards will be allowed without a requirement to turn on the contactless transaction channel.
- The customers shall have recourse to the Reserve Bank – Integrated Ombudsman Scheme, as applicable, for grievance redressal.
- RBI retains the right to stop or modify the operations of any such payment solution that enables small value digital payments in offline mode.

4. Centre for Monitoring Indian Economy (CMIE)

Why in News?

- Recently, the Centre for Monitoring Indian Economy (CMIE), India's unemployment rate touched a four-month high of 7.9% in December 2021.

- With Covid-19 cases on the rise amid the threat posed by the Omicron variant and many states imposing fresh curbs, economic activity and consumption levels have been affected.
- This could adversely affect economic recovery further going ahead
- Unemployment occurs when a person who is actively searching for employment is unable to Find Work. Unemployment is often used as a measure of the health of the economy.
- The most frequent measure of unemployment is the unemployment rate, which is the number of unemployed people divided by the number of people in the labour force.
- National Sample Survey Organisation (NSSO) defines employment and unemployment on the following activity statuses of an individual:
 - Working (engaged in an economic activity) i.e. ‘Employed’.
 - Seeking or available for work i.e. ‘Unemployed’.
 - Neither seeking nor available for work.
- The first two constitute the labour force and unemployment rate is the percent of the labour force that is without work.
- $\text{Unemployment rate} = (\text{Unemployed Workers} / \text{Total labour force}) \times 100$

5. A Reality Check on Great CAPEX Expectations

Why in News?

- Economists are predicting a potential virtuous Capital Investments (capex) cycle to kick in Globally as we Emerge from the Pandemic.

Why do Analysts think that Capital Investment Cycle is about to start?

- **Less Leveraged:** Corporates are less leveraged today compared to 2008.
- Indian corporates repaid debts of more than Rs 1.5 trillion.
- **Fiscal and Monetary Support:** Companies are also more confident of durable fiscal and Monetary Support.
- Increased savings: Households have large excess savings built during Covid – \$1.7 trillion in the US and roughly \$300 billion in India as per a UBS report.
- **Cash:** Lastly, corporates are sitting on a large cash pile – S&P 500 firms’ cash has soared from \$1 trillion pre-pandemic to \$1.5 trillion now.

Why capex wave is Difficult in India?

- Fall in capital formation: India’s fixed capital formation rate has steadily fallen from 36 per cent of GDP in 2008 to 26 per cent in 2020.

- For a set of 718 listed companies for which data is consistently available from 2005, the capex growth rate has decreased from 7 per cent in 2008 to around 2 per cent in 2020.
- Low return on invested capital: The return on invested capital in FY21 is still low at 2-3 per cent compared with 16-18 per cent returns in 2005-08.
- Structural issues: Land acquisition is still tough, changes to labour laws have been slow, and reform uncertainty has resurfaced with the rollback of the agriculture reform laws.
- Discouraging current data: As per CMIE data, the quarter ending in June 2021 saw Rs 2.72 lakh crore worth of new projects announced. This fell to Rs 2.22 lakh crore for the September 2021 quarter.
- This is much below the average of Rs 4 lakh crore a quarter of new project announcements during 2018 and 2019.
- Further, new projects are concentrated in fewer industries (power, and technology) with the top three accounting for 44 per cent of the total of new projects announced.
- Low capacity utilisation: At the same time, capacity utilisation for corporate India is at an all-time low.
- From a peak of 83 per cent in 2010, when capex was running hot, utilisation levels declined to 70 per cent just before the pandemic, and further to 60 per cent in June 2021 as per the RBI's latest OBICUS data.
- Capex is funded either from fresh debt or equity issues or from accumulated cash. Large firms are repaying debt.

6. Issues with India's GDP data

Why in News?

- There are three major reasons why the GDP data, and hence any narrative of Economic Recovery based on it, are Questionable.

Background:

- The NSO released the current GDP series in 2015, using 2011-12 as its base year.
- Some have argued that the problem in the new series is the real Growth Rate. This is Debatable.
- Scholars have pointed to measurement problems, both in the nominal and real GDP Growth Rates.
- Three issues with the GDP data, and narrative of economic recovery based on it.

Double Deflation Problem:

- The new series entailed a shift from a volume-based measurement system to one based on nominal values, thereby making the deflator problem more critical.
- Simply put, the NSO calculates real GDP by gathering nominal GDP data in rupees and then deflating this data using various price indices.
- The nominal data needs to be deflated twice: Once for outputs and once for inputs.
- But the NSO — almost uniquely amongst G20 countries — deflates the nominal data only once.
- It does not deflate the value of inputs.
- To see why this is a problem, consider what happens when the price of imported oil goes down.
- In that case, input costs will fall and the profits recorded by Indian firms will rise.
- This increase in profits is merely the result of a fall in input prices, so it needs to be deflated away.
- But the NSO doesn't deflate away the increase in profits.
- Since the cost of inputs is measured by the WPI (wholesale price index), a crude measure of the overestimation caused by the absence of “double deflation” is given by the gap between the WPI and the CPI (consumer price index).
- In the 2014-2017 period, oil prices plunged, causing the WPI to fall sharply relative to the CPI.
- This meant that real growth was probably overstated.
- In the last few months, the exact opposite has been happening. WPI inflation is soaring.
- The rapid increase in the WPI relative to the CPI is imparting an upward bias to the deflator.

Sectoral Weight not Updated:

- When it calculates GDP, it takes a sample of activity in each sector, then aggregates the figures by using sectoral weights.
- To make sure that the weights are reasonably accurate, the NSO normally updates them once a decade.
- It has now been more than 10 years since the weights were changed, and there are no signs of a base Year Revision.
- As a result, the sectoral weights are still based on the structure of the economy in 2010-11, when in particular the information technology sector was much smaller.

Measurement of Unorganised Sector:

- Measurement of the unorganised sector has always been difficult in India.
- Once in a while, the NSO undertakes a survey to measure the size of the sector.
- In the meantime, it simply assumes that the sector has been growing at the same rate as the Organised Sector. However, starting in 2016 the unorganised sector has been disproportionately impacted by a series of Shocks.
- In 2018, the NBFC sector reported serious problems, which in turn impacted unorganised sector firms since they were heavily dependent on NBFCs for funds.
- From 2020 onwards, the pandemic has impacted the unorganised sector more than the organised Sector Enterprises. Despite these shocks, the NSO does not seem to have made any adjustments to its methodology for estimating the growth of the unorganised sector.

7. What is Antrix- Devas Multimedia Deal?

Why in News?

- A Canadian court has ordered the seizure of more than \$30 million worth of Airport Authority of India's assets.

Background:

- In 2005, Devas Multimedia signed an agreement with Antrix —a commercial arm of the IISRO —to provide multimedia services to mobile users using the leased S-band satellite spectrum to be provided by Antrix.
- In 2011, the UPA-2 government canceled this agreement on the ground that it needed the S-band satellite spectrum for national security and other social purposes.
- This led to arbitration between Antrix and Devas at the International Chambers of Commerce (ICC) and two bilateral investment treaty (BIT) arbitrations. India lost all three disputes.

India's Non-Compliance:

- AAI and Air India are being targeted because they are Indian public sector entities with overseas assets and serve as a proxy for the government of India.
- The Canada court can do so through the concept of restrictive immunity.
- In the meanwhile, the National Company Law Tribunal (India) ordered the liquidation of Devas Multimedia on the ground that the affairs of the company were being carried on Fraudulently.

Why did India Cancel the Deal?

- The scandal first came to light when in 2011, the news reported that there were some Irregularities in the agreement between Antrix and Devas.
- They reported the findings of a draft audit report and pointed out discrepancies including Financial Mismanagement, conflict of interest, non-compliance of rules, and favoritism.
- This revelation came at the heel of the 2G spectrum scam which was condemned for the high level of corruption.

How can a Canadian Court order the Attachment of Indian Assets?

- State immunity — a well-established principle of international law — shields a state and its property against legal proceedings in the courts of other countries.
- This covers immunity from both jurisdiction and execution.
- However, there is no international legal instrument in force dealing with state immunity in the municipal legal systems of different countries, which has created an international void.
- Consequently, countries have filled this void through their national legislations and domestic judicial practices on state immunity. Typically, prominent jurisdictions such as Canada follow the concept of restrictive Immunity (a foreign State is immune only for sovereign functions) and not absolute Immunity.

How can assets of AAI be seized when the claim is against India?

- In execution proceedings, assets of an entity can be seized if that entity is an alter ego of the State that fails to comply with the arbitral award. In other words, if the foreign sovereign exercises such Extensive Control over the Entity, then the presumption that the entity has a separate corporate character is set aside.
- Thus, the Canadian court must have concluded that the Indian government extensively controls AAI.

What options does India have?

- The first option is to comply with the two adverse BIT awards. However, it is highly unlikely that India would do so.
- The second option is to challenge this decision in an appellate court in Canada as per Canadian law where India can try proving that the 'extensive control requirement' is not met in the case of AAI. However, state immunity from execution is purely a procedural hurdle to the enforcement of the BIT award.
- It cannot justify India's breach of its international law obligations enshrined in the two BITs and the continued failure to comply with the arbitral awards.

2.1. ENVIRONMENT SNIPPETS

1. Preparing for a green energy shift in 2022

Why in News?

- Political leaders find themselves currently amid a messy reality. The seemingly “irresistible force” for clean energy has met, it would appear, the “immovable object” of an embedded fossil fuel energy system.

Changes in the Energy Sector in 2021:

- Commitment to Net-zero: One hundred and thirty-three countries pledged to a “net-zero carbon emissions date” and most governments, corporates and civic entities have shown determination to “phase down” and eventually phase out fossil fuels from their energy basket.
- Price volatility: The petroleum market seesawed and was expectedly volatile.
- High price: Natural gas prices reached stratospheric levels as demand exceeded supplies and geopolitics compounded the Imbalance.

Five Trends that will shape the Emergent Energy Landscape:

- **Transition to clean energy will be long and expensive**
 - ✓ Redesign and rebuilding: The fossil fuel-based economic system will have to be redesigned and, in parts, rebuilt for clean energy to achieve scale.
 - ✓ The process will take decades and require massive capital infusion.
 - ✓ No country or multilateral institution can finance this transition individually.
 - ✓ The world needs to collaborate: The world will have to collaborate and if it fails to do so, the financing deficit will push back the transition even further.
 - ✓ Fossil fuels will dominate the energy basket during the transition
 - ✓ Fossil fuels will dominate the energy basket during this transition phase.
 - ✓ Contributing factors: As has been the case so far, its market will be defined by the “fundamentals” of demand, supply and geopolitics and the “non-fundamentals” of exchange rates and speculative trade.
 - ✓ The price movements will be sharp, volatile and unexpected.
 - ✓ The resurgence of market influence of OPEC plus after private companies move beyond fossil fuel. The “OPEC plus” will resurge in market influence.
 - ✓ The low-cost, high resource petrostates (Saudi Arabia, the Gulf nations, Iraq, Iran, Russia) will, in particular, gain greater control over the petroleum market as private companies move beyond fossils under pressure from shareholders and regulators.

Transition will Create New Centres of Energy Power:

- The Democratic Republic of Congo controls, more than 50 per cent of the global supply of cobalt; Australia holds a comparably large share of the lithium market; and China controls the mining, processing and refining of rare earth minerals.
- It is difficult to tell how and when these countries will exercise their market power but it is clear that the “green transition” will create new centres of energy power.
- Nationalism and political opportunism will influence energy policy
- The US and China are currently embroiled in a “Cold War” over technology, trade, cyber issues and the South China Sea.
- The US and China appear to be in a similar face-off. But that has not come in the way of their Energy Relations. A few weeks ago, the two countries decided to coordinate the release of oil stocks from their strategic reserves to cool off the oil market.
- The underlying reality is that national self-interest and short-term political ambition will be the defining determinant of future energy supply relations cutting across values and rhetoric.

Suggestions for India:

- Nurture relations with traditional suppliers: India must assiduously Nurture Relations with Our Traditional Suppliers of oil and gas.
- It must not assume their role in the energy market will diminish.
- Increase storage capacity of strategic reserves: It should accelerate the build-up of the storage capacity for oil and gas; the latter to hold strategic oil reserves, the former to store Gas for inter alia conversion to blue hydrogen.
- Ecosystem for search and development of minerals required for clean energy: It must create a Facilitative Ecosystem for the search and development of the minerals and metals required for clean energy.
- Clean energy supply chain: It should create a “clean energy aatmanirbhar supply chain”.

2. Bioenergy Crop

Why in News?

- A New Study has recently found that converting annual crops to perennial bioenergy crops can induce a cooling effect on the areas where they are cultivated.

Highlights:

- The researchers simulated the biophysical climate impact of a range of future bioenergy crop cultivation scenarios. Eucalyptus, poplar, willow, miscanthus and switchgrass were the bioenergy crops used in the study.
- The study also demonstrated the importance of the crop type choice, the original land use type upon which bioenergy crops are expanded, the total cultivation area and its spatial distribution patterns.
- Crops from which Biofuels are produced or manufactured are called Biofuel crops or Bioenergy Crops. “Energy crops” is a term used to describe biofuel crops.
- Wheat, corn, main edible oilseeds/edible oils, sugarcane, and other crops are among them.
- Biofuels have a number of advantages over fossil fuels, including the ability to burn cleaner and emit fewer pollutants and greenhouse gases, such as carbon dioxide, into the sky. They’re also environmentally friendly, and energy corporations frequently mix Biofuels with gasoline
- Cultivating eucalypt shows generally cooling effects that are more robust than if switchgrass is used as the main bioenergy crop, implying that eucalypt is superior to switchgrass in cooling the lands biophysically.
- Cooling effects are more for eucalypt and the greatest warming effects are seen for switchgrass.
- Replacing forests with switchgrass not only results in biophysical warming effects but could also release more carbon through deforestation than converting other short vegetation to bioenergy crops.

3. Red Sanders

Why in News?

- Red Sanders (Red Sandalwood) has fallen back into the ‘endangered’ category in the International Union for Conservation of Nature’s (IUCN) Red List.

Red Sanders:

- The species, *Pterocarpus santalinus*, is an Indian endemic tree species, with a restricted Geographical Range in the Eastern Ghats.
- It is endemic to a distinct tract of forests in Andhra Pradesh.
- It is mainly found in Chittoor, Kadapa, Nandhyal, Nellore, Prakasam districts of Andhra Pradesh.

- It was classified as ‘near threatened’ in 2018 and has now joined the ‘endangered’ list once again in 2021.
- It is listed under Appendix II of CITES and is banned from international trade.

Status of Legal Protection in India:

- The Union Environment Ministry had decided to keep Red Sanders (red sandalwood) OUT of the Schedule VI of Wild Life Protection Act, 1972, arguing that this would discourage the cultivation of the rare plant species.
- Schedule VI regulates and restricts the cultivation, possession, and sale of a rare plant Species.

Significance of listing:

- It was a moment of celebration when the species was lifted off from the endangered Category for the first time since 1997.
- Over the last three generations, the species has experienced a population decline of 50-80 Percent.
- It is also scheduled in appendix II of the CITES and Wildlife Protection Act.
- Threats to this species:
- Red Sanders are known for their rich hue and therapeutic properties, are high in demand across Asia, Particularly in China and Japan.
- They are used in cosmetics and medicinal products as well as for making furniture, woodcraft and Musical Instruments.
- Its popularity can be gauged from the fact that a tonne of Red Sanders costs anything between Rs 50 lakh to Rs 1 crore in the international market.

Red List Categories of IUCN:

- Species are classified by the IUCN Red List into nine groups specified through criteria such as rate of decline, population size, area of geographic distribution, and degree of population and Distribution Fragmentation. They are:
- Extinct (EX) – beyond reasonable doubt that the species is no longer extant.
- Extinct in the wild (EW) – survives only in captivity, cultivation and/or outside native Range, as presumed after Exhaustive Surveys.
- Critically endangered (CR) – in a particularly and extremely critical state.
- Endangered (EN) – very high risk of extinction in the wild, meets any of criteria A to E for Endangered.

- Vulnerable (VU) – meets one of the 5 red list criteria and thus considered to be at high risk of unnatural (human-caused) extinction without further human intervention.
- Near threatened (NT) – close to being at high risk of extinction in the near future.
- Least concern (LC) – unlikely to become extinct in the near future.
- Data deficient (DD)

4. National Ambient Air Quality Standards (NAAQS)

Why in News?

- Delhi and most of the other non-attainment cities under the National Clean Air Programme (NCAP) have shown only a marginal improvement, said a new analysis released.

NCAP:

- The NCAP was implemented across India in 2019 to reduce particulate matter levels in 132 cities by 20-30% in 2024. Cities are declared non-attainment if they consistently fail to meet the National Ambient Air Quality Standards (NAAQS) over a five-year period.

What are NAAQ Standards?

- The mandate provided to the Central Pollution Control Board (CPCB) under the Air (Prevention and Control of Pollution) Act empowers it to set standards for the quality of air.
- Hence the current National Ambient Air Quality Standards were notified in November 2009 by the CPCB.
- Prior to this, India had set Air Quality standards in 1994, and this was later revised in 1998.
- The 2009 standards further lowered the maximum permissible limits for pollutants and made the standards uniform across the nation.
- Earlier, less stringent standards were prescribed for industrial zones as compared to Residential Areas.
- **Pollutants covered:**
 - ✓ Sulphur Dioxide (SO₂)
 - ✓ Nitrogen Dioxide (NO₂),
 - ✓ Particulate Matter (size less than 10 µm) or PM 10
 - ✓ Particulate Matter (size less than 2.5 µm) or PM_{2.5}
 - ✓ Ozone (O₃)

- ✓ Carbon Monoxide (CO)
- ✓ Ammonia (NH₃)
- **(Air Pollutants that most of us NEVER heard of:)**
 - ✓ Lead
 - ✓ Benzene (C₆H₆)
 - ✓ Benzo(a)Pyrene (BaP)
 - ✓ Arsenic(As)
 - ✓ Nickel (Ni)

5. Darvaza Gas Crater

Why in News?

- Turkmenistan President has ordered experts to find a way to extinguish a fire in a huge natural gas crater, the Darvaza gas crater also known as the ‘Gateway to Hell’.

Darvaza Gas Crater:

- Located in the Karakum desert, 260 kilometres away from Turkmenistan’s capital, Ashgabat, the crater has been burning for the last 50 years.
- The crater is 69 metres wide and 30 metres deep.
- While the details of the origin of the crater are contested but it has been said that the crater was created in 1971 during a Soviet drilling operation.
- In 1971, Soviet geologists were drilling for oil in the Karakum desert when they hit a pocket of natural gas by mistake, which caused the earth to collapse and ended up forming three Huge Sinkholes.



Why is it Flamed?

- This pocket of natural gas contained methane, hence to stop that methane from leaking into the atmosphere, the scientists lit it with fire, assuming the gas present in the pit would burn out within a Few Weeks.
- The scientists seemed to have misjudged the amount of gas present in the pit, because the crater has been on fire for five decades now.

A Popular Tourist Attraction:

- The crater has become a significant tourist attraction in Turkmenistan.
- In 2018, the country’s president officially renamed it as the “Shining of Karakum”.

- Why did Turkmenistan order to extinguish it?
- Calling it a human-made crater, it has negative effects on both environment and the health of the people living nearby.
- It also ends up losing valuable natural resources for which could fetch significant profits.

How Harmful are Methane Leaks?

- Methane is the primary contributor to the formation of ground-level ozone, a hazardous air pollutant and greenhouse gas, exposure to which causes 1 million premature deaths Every Year.
- Methane is also a powerful greenhouse gas. Over a 20-year period, it is 80 times more potent at warming than carbon dioxide.

6. A Planetary Pressure-adjusted Human Development Index (HDI)

Why in News?

- Ever since the UNDP took up computation of the HDI in 1990, there have been Adjustments such as inequality-adjusted HDI. The environment is one such issue now considered to be an essential component to be factored in to measure human development.

Planetary Pressure-Adjusted Human Development Index:

- The purpose of the planetary pressure adjusted HDI, or PHDI, is to communicate to the larger society the risk involved in continuing with existing practices in our resource use and environmental management, and the retarding effect that environmental stress can perpetuate on development.
- When planetary pressure is adjusted, the world average of HDI in 2019 came down from 0.737 to 0.683.
- PHDI of India: In the case of India, the PHDI is 0.626 against an HDI of 0.645 with an Average per capita CO₂ emission (production) and material footprints of 2.0 tonnes and 4.6 tonnes, respectively.
- India gained in global rankings by eight points (131st rank under HDI and 123rd rank under PHDI), and its per capita carbon emission (production) and material footprint are well below the global average.

India's Twin Challenge:

- India faces the twin challenges of poverty alleviation and environmental safeguarding.
- India's natural resource use is far from efficient, environmental problems are growing, and the onslaught on nature goes on unabated with little concern about its fallout.

- At the same time, India has 27.9% people under the Multidimensional Poverty Index ranging from 1.10% in Kerala to 52.50% in Bihar, and a sizable section of them directly depend on natural resources for their sustenance.

India's Performance on SDGs:

- The SDGs have acquired high priority in the context of the issue of climate change and its impact on society.
- The Sixth Assessment Report (AR6) of IPCC 2021 laid stress on limiting global temperature rise at the 1.5° C level and strengthening the global response to the threat of climate change, sustainable development, and efforts to Eradicate Poverty.
- 'No poverty' and 'Zero hunger' are the First and second SDGs.
- According to NITI Aayog (2020-21), out of 100 points set for the grade of Achiever, India scored 60 (Performer grade, score 50-64) for no poverty and 47 (Aspirant grade, score 0-49) for zero hunger, with wide State-level variations.
- India's score in the SDGs of 8, 9, and 12 ('Decent work and economic growth'; 'Industry, Innovation and Infrastructure' and 'Responsible Consumption and Production', respectively) — considered for working out planetary pressure — are 61 (performer), 55 (performer) and 74 (front runner), respectively.

Way Forward:

- Nature-based solutions: It is now well established that there are interdependencies of Earth System processes including social processes, and their relationships are non-linear and dialectic.
- Therefore, the central challenge is to nest human development including social and Economic Systems into the ecosystem, and biosphere building on a systematic approach to nature-based solutions that put people at the core.
- Integrated perspective and local level involvement: Social and environmental problems cannot be addressed in isolation anymore; an integrated perspective is necessary.
- This can be conceived and addressed at the local level, for which India has Constitutional Provisions in the form of the 73rd and 74th Amendments.

3. POLITY & GOVERNANCE

1. 8 Lakh Income reasonable cap for EWS Quota, Centre tells SC

Why in News?

- A Government Committee Report in the Supreme Court has said that “income” is a “feasible criterion” for Defining the “Economical Weaker Sections” (EWS) in society and the annual family income of ₹8 lakh is a “reasonable” threshold to determine EWS in order to extend reservation in Admissions and Jobs.

About the News:

- The committee report as part of a government affidavit concluded that a feasible criterion for defining EWS can be based on income [family income]. A threshold of ₹8 lakh of annual family income, in the current situation, seems reasonable for determining EWS.
- The committee did not agree with the notion that the Centre had “mechanically adopted” ₹ 8 lakh as a number because it was also used for the OBC creamy layer cut-off. It said the Income Criterion for EWS was “more stringent” than the one for the OBC creamy layer.

What is the Issue?

- The report is the result of the Supreme Court’s repeated grilling of the government, since October, to explain how it zeroed in on the figure of ‘₹8 lakh’ as the annual income criterion to identify EWS among forward classes of society for grant of 10% reservation in NEET medical admissions under the All India Quota (AIQ) category.
- The court was hearing a batch of petitions filed by NEET aspirants challenging a July 29 notification of the Centre announcing 27% quota to OBCs and 10% reservation to EWS in AIQ. The Supreme Court’s query was significant as the One Hundred and Third Constitutional Amendment of 2019, which introduced the 10% EWS quota, is itself under challenge before a larger Bench.
- The Amendment is under question for making economic criterion as the sole ground for grant of Reservation Benefits.
- On November 25, the Centre had informed the court that it had taken a considered decision to revisit the criteria for determining EWS.
- The Centre had then formed an expert committee comprising Ajay Bhushan Pandey, former Finance Secretary; professor V.K. Malhotra, Member Secretary, ICSSR; and Sanjeev Sanyal, Principal Economic Adviser to the Government of India. The committee had submitted its report on December 31.

What does the Committee's Report Says?

- The Current Gross Annual Family Income limit for EWS of ₹8 lakh or less may be retained. In other words, only those families whose annual income is up to ₹8 lakh would be eligible to get the benefit of EWS reservation.
- The committee said the ₹8 lakh criterion struck a “fine balance” between over-inclusion and inclusion errors.
- The figure ensures that most low-income people who are not required to pay income tax are not excluded and are covered in EWS and at the same time it should not be so high that it becomes over-inclusive by including many incomes tax-paying middle-and high-income families into EWS.
- Though we may not completely eliminate yet we can try to minimise both exclusions as well as inclusion errors. Therefore, considering that the currently effective income tax exemption limit is around ₹8 lakh for individuals, the committee is of the view that the gross annual income limit of ₹8 lakh for the entire family would be reasonable for inclusion into EWS.

What are the Centre's Argument?

- Firstly, EWS's criteria relates to the financial year prior to the year of application whereas the income criterion for the creamy layer in OBC category is applicable to gross annual income for three consecutive years.
- Secondly, in case of OBC creamy layer, income from salaries, agriculture and traditional artisanal professions are excluded from the consideration whereas the ₹8 lakh criteria for EWS includes all sources, including farming. So, despite being the same cut-off number, their composition is different and hence, the two cannot be equated.
- It found no fault in the uniform application of the ₹8-lakh criteria across the country.
- The desirability of a uniform income-based threshold has been upheld by the Supreme Court, and it can be adopted across the country as a matter of Economic and Social Policy.

Who are “Economically Weaker Sections”?

- For the purposes of article 15 and article 16, “economically weaker sections” shall be such as may be notified by the State from time to time **on the basis of family income and other Indicators of Economic Disadvantage.**
- Central Government of India has specified certain criteria for identifying the EWS. This will be a class distinct from the already specified classes of SCs, STs and socially and educationally backward classes (OBCs).

- The EWS quota applies to household with
 - ✓ Annual household income below Rs 8 lakh.
 - ✓ Agriculture land below 5 acres.
 - ✓ Residential house below 1000 sq ft.
 - ✓ Residential plot below 100 yards in notified municipality.
 - ✓ Residential plot below 200 yards in non-notified municipality area.

What are the Implications?

- The 10% reservation will be in addition to the existing cap of 50% reservation for the Scheduled Castes, Scheduled Tribes and the Other Backward Classes, taking total reservation to 60%.
- The quota targets the poor among the upper castes. This will be over and above 50% Mandated by Constitution and hence the need for Constitution amendment Bill.

SC verdict in Indira Sawhney case:

- The proposed law would face roadblocks if challenged in the Supreme Court.
- A nine-judge Constitution Bench of the Supreme Court in the Indira Sawhney case of 1992 specifically answered the question “whether backward classes can be identified only and exclusively with reference to the economic criterion.”
- The constitution bench had categorically ruled that a backward class cannot be determined only and Exclusively with reference to economic criterion.
- The bench had held that Economic Criterion may be a consideration or basis along with, and in addition to, social backwardness, but it can never be the sole criterion.
- The bench in its judgement declared 50% quota as the rule unless extraordinary situations “inherent in the great diversity of this country and the people” happen. Even then, the court stated that extreme caution is to be exercised and a special case should be made out.

2. Don't indulge in Hate Speech, says Vice President

Why in News?

- Vice President M Venkaiah Naidu recently expressed his strong disapproval of attempts to ridicule other Religions and create dissensions in the society, saying every person has the right to Practice and Preach his or her Faith in the Country.

What is Hate Speech?

- According to Law Commission of India (267th report), hate speech is “incitement to hatred primarily against a group of persons defined in terms of race, ethnicity, gender, sexual orientation, religious Belief and the like”

- The report of the Commission Further Clarifies that hate speech is “any word written or spoken, signs, visible representations within the hearing or sight of a person with the Intention to cause fear or alarm, or Incitement to violence.

What are the Constitutional Provisions regarding the Freedom of speech?

- Article 19(1)(a) of the Indian Constitution guarantees freedom of speech and expression. Any restriction on this right shall only be permitted if the speech falls within one of the eight grounds set out in Article 19(2) of the Constitution.
- The freedom of speech under Article 19(1)(a) includes the right to express one’s views and opinions at any issue through any medium, e.g. by words of mouth, writing, printing, picture, film, movie, etc.
- It thus includes the freedom of communication and the right to propagate or publish an opinion.

Can Freedom of speech be curtailed?

- This right is subject to reasonable restrictions being imposed under Article 19(2). Out of the eight different grounds listed on Article 19(2) of the Constitution, the majority of hate speech laws are saved by the ‘public order’ exception. The eight different grounds are;
 - ✓ Security of the State.
 - ✓ Friendly relations with foreign States.
 - ✓ Public order.
 - ✓ Decency and morality.
 - ✓ Contempt of court.
 - ✓ Defamation.
 - ✓ Incitement to an offence, and
 - ✓ Sovereignty and integrity of India.
- Reasonable restrictions on these grounds can be imposed only by a duly enacted law and not by executive action.

Issues of Social Media Misuse:

- **Rumour Mongering:** Fake narratives on online platforms have real life implications. For example, recently in India, online rumours, regarding child traffickers, through popular messaging platform WhatsApp, led to a spate of lynching’s in rural areas.
- **Facilitating Polarisation:** It enables the communalising agents to polarise people for Electoral Gains.

- ✓ For example, during the election campaign of recently conducted Delhi legislative assembly elections, a leader enticed crowds with the use of communalising and violence on social media platforms.
- ✓ Following this, a young man translated these words into reality by opening fire on protesters. This incident highlighted how the spread of hate speech through social media has real consequences.
- **Social Media AI poorly adapted to local languages:** Social media platforms' artificial intelligence based algorithms that filter out hate speeches are not adapted to local languages. Also, the companies have invested little in staff fluent in them. Due to this, it failed to limit the ultranationalist Buddhist monks using Facebook for disseminating hate speech which eventually led to Rohingya massacres.

Way Forward:

- **Harmonising the Laws:** Harmonising the regulations to check misuse of social media are scattered across multiple acts and rules.
- Thus, there is a need to synchronise the relevant provisions under the Indian Penal Code, the Information Technology Act and Criminal Procedure Code.
- **Obeying the regulation by Supreme Court:** In *Shreya Singhal v. Union of India* (2015) case, Supreme Court gave a verdict on the issue of online speech and intermediary liability in India.
 - ✓ It struck down the Section 66A of the Information Technology Act, 2000, relating to restrictions on online speech, on grounds of violating the freedom of speech guaranteed under Article 19(1)(a) of the Constitution of India.
 - ✓ It also gave the direction on how hate content should be regulated and the government should follow this direction, where the user reports to the intermediary and the platforms then takes it down after following due process.
- **Transparency obligation for digital platforms:** Digital platforms can be made to publish the name and amount paid by the author in the event that content is sponsored.
 - ✓ For example, with regard to fake news, France has an 1881 law that defines the criteria to establish that news is fake and being disseminated deliberately on a large scale.
 - ✓ A legal injunction should be created to swiftly halt such news from being disseminated.
- **Establishing regulatory framework:** Responsible broadcasting and institutional arrangements should be made with consultations between social media platforms, media industry bodies, civil society and law enforcement as an ideal regulatory framework.

- ✓ Even global regulations could be made to establish baseline content, electoral integrity, privacy, and data standards.
- **Creating Code of Conduct:** It can be framed without creating an ambiguous statutory structure that could leave avenues for potential legislative and state control.
- ✓ For example, the European Union has also established a code of conduct to ensure non-proliferation of hate speech under the framework of a 'digital single market.'

3. Constitutional Validity of Dam Safety Act challenged in HC

Why in News?

- Dravida Munnetra Kazhagam (DMK) Lok Sabha member S. Ramalingam, representing Mayiladuthurai constituency in Tamil Nadu, has moved the Madras High Court challenging the constitutional validity of Dam Safety Act, 2021 on the grounds that it goes against federalism and is beyond the legislative competence of the Centre.

About the News:

- The litigant claimed that the Act usurped the power of the State governments and placed the operation of specified dams under the control of the Centre.
- He contended that certain terms, including the word 'dam' in the Act, had been deliberately defined vaguely to give unbridled power to the Centre to treat any dam as a 'specified dam'. He also feared that if those definitions were followed, almost all dams in the country would fall under the purview of the Act.
- Referring to Entries 17, 18 and 35 of List II (State list) of the seventh schedule of the Constitution, the petitioner contended that dams would squarely fall within the legislative domain of State Governments.
- The power of the Centre under Entry 56 of List I (Union list) was only with respect to inter-State rivers or river valleys and nothing more, he asserted.
- Entry 56 cannot be stretched to include dams and embankments exclusively within the control of the States. Parliament cannot make a declaration in relation to a subject matter of List II entries when such power is conspicuously absent in List I subjects. Power over the subject 'interstate river and river valley' cannot be confused with the control over dams.
- Claiming that the State governments would be in a better position than the Centre to take a call on dam safety, the legislator told the court that the Act under challenge, if not nullified, would have an adverse impact on agriculture, fisheries, hydro power generation, provision of drinking water to the people and so on.

About Dam Safety Act, 2021:

- The Act provides for surveillance, inspection, operation and maintenance of dams to prevent disasters, and institutional mechanisms to ensure safety.
- It applies to over 5,000 dams across the country, many of which are currently in poor conditions.
- It has been met with significant opposition, particularly from several states that claim the Act oversteps the Centre's mandate.

What is its Constitutional Validity?

- According to Entry 17 of State List, the states are eligible to make laws on irrigation, water supply, canals, embankments, drainage, water power and water storage.
- According to Entry 56 of the Union List, the Parliament is allowed to make laws on regulation of river valleys and inter state rivers.
- Article 252 allows the Parliament to make laws on subjects in State list if two or more states pass resolution requiring a law. In this issue, West Bengal and Andhra Pradesh have passed resolution asking for a law on dam safety.

Which dams are Covered?

- All dams in India with a height above 15 metres come under the purview of the Act.
- Dams between 10 to 15 metres of height are also covered but only if they meet certain other specifications in terms of design and structural conditions.

National Committee on Dam Safety:

- The Act provides for the constitution of a National Committee on Dam Safety (NCDS) which is to be chaired by the Central Water Commissioner (CWC).
- The other members of the NCDS will be nominated by the Centre and will include up to 10 representatives of the Centre, 7 state government representatives, and 3 experts on dam safety.
- The NCDS is to formulate policies for dam safety and to prevent dam failures.
- In the event of a dam failure, the NCDS will analyse why the failure occurred, and suggest changes in dam safety practices to ensure there aren't any Repetitions.

National Dam Safety Authority (NDSA):

- The Act provides for the formation of a NDSA which will be responsible for implementing the policies of the NCDS, and will resolve issues between State Dam Safety Organisations (or SDSOs) and dam owners.

- The NDSA will also specify regulations for the inspection of dams and will provide accreditation to the various agencies working on the structure of dams and their Alteration.

State Dam Safety Organisations (SDSOs)

- The Act will also result in the establishment of SDSOs, and State Committees on Dam Safety (SCDSs).
- The jurisdiction of the SDSOs will extend to all dams in that specific state.
- SDSOs will be in charge of scrutinizing dams under their jurisdiction and maintaining a database of the same.
- The SCDS will review the work of the SDSO, and will also have to assess the impact of dam-related projects on upstream and downstream states.
- The NDSA will, in some cases, possess this jurisdiction, for example, if a dam owned by one state is situated in another or crosses multiple states, or if a dam is owned by a central public sector undertaking.
- The Act gives the Central government the power to amend the functions of any of the above bodies through a notification, whenever it is deemed necessary to do so.

How does Act change the Functioning of Dams?

- If the Act is made into a law, then dam owners will have to provide a dam safety unit in each dam.
- The dam safety unit will be required to inspect the dam before and after the monsoon session, and also during and after natural disasters such as earthquakes and floods.
- The Act requires dam owners to prepare EMERGENCY action plans. Risk-assessment studies will also have to be undertaken by owners, regularly.
- At specified, regular intervals, and in the event of either a modification to the dam's structure or a natural event that may impact the structure, dam owners will have to produce a comprehensive safety evaluation by experts.

4. Denial of FCRA to MoC Challenged

Why in News?

- A U.S.-incorporated organisation, Global Peace Initiative, and its founder, evangelist K.A. Paul, have approached the Supreme Court challenging the refusal of the government to renew the registration of Mother Teresa's Missionaries of Charity under the Foreign Contribution Regulation Act (FCRA).

About the News:

- The NGO registered in Kolkata has more than 250 bank accounts across the country to utilise the foreign funds.
- Some of the biggest donors are Missionaries of Charity in the U.S.A and United Kingdom that contributed over ₹15 crore to MoC, India, for “primary health care, education assistance, treatment of leprosy patients” among others.
- MHA said in a statement that the renewal was refused for not meeting the eligibility conditions and no request / revision application has been received from Missionaries of Charity (MoC) for review of this refusal of renewal.
- The registration was not renewed purportedly on the basis of some “adverse inputs”, the writ petition said. “The cancellation of the license of a renowned charitable organisation like the Missionaries of Charity on vague grounds such as 'adverse inputs' will have a chilling effect on all other Non- Governmental Organisations,” it said.
- The plea has also urged the court to quash the government's direction to not renew the registration of “close to 6,000 NGOs”.

About Foreign Contribution (Regulation) Act (FCRA), 2010:

- Foreign funding of voluntary organizations in India is regulated under FCRA act which is implemented by the Ministry of Home Affairs.
- The Act ensures that the recipients of Foreign Contributions adhere to the stated purpose for which such contribution has been obtained.
- Under the Act, organisations are required to register themselves every five years.

About Non-Governmental Organisations (NGO):

- Worldwide, the term ‘NGO’ is used to describe a body that is neither part of a government nor a conventional for-profit business organisation.
- NGOs are groups of ordinary citizens that are involved in a wide range of activities that may have charitable, social, political, religious or other interests.
- NGOs are helpful in implementing government schemes at the grassroots.
- In India, NGOs can be registered under a plethora of Acts such as the Indian Societies Registration Act, 1860, Religious Endowments Act, 1863, Indian Trusts Act, etc.
- India has possibly the largest number of active NGOs in the world; a study commissioned by the Government put the number of NGOs in 2009 at 33 lakh.
- That was one NGO for less than 400 Indians, and many times the number of primary schools and primary health centres.

- Ministries such as Health and Family Welfare, Human Resource Department, etc provides funding to a handful of NGOs.
- NGOs also receive funds from abroad, if they are registered with the Home Ministry under the Foreign Contribution (Regulation) Act (FCRA).
- Without this, no NGO can receive cash or anything of value higher than Rs 25,000.

Controversies Related to FCRA:

- The FCRA regulates the receipt of funding from sources outside of India to NGOs working in India. It prohibits the receipt of foreign contribution “for any activities detrimental to the national interest”.
- The Act also held that the government can refuse permission if it believes that the donation to the NGO will adversely affect “public interest” or the “economic interest of the state”. However, there is no clear guidance on what constitutes “public interest”.
- The FCRA restrictions have serious consequences on both the rights to free speech and freedom of association under Articles 19(1)(a) and 19(1)(c) of the Constitution. The right to free speech is affected in two ways:
 - ✓ By allowing only some political groups to receive foreign donations and disallowing some others, can induce biases in favour of the Government.
 - ✓ NGOs need to tread carefully when they criticise the regime, knowing that too much criticism could cost their Survival.
- FCRA norms can reduce critical voices by declaring them to be against the public interest. This chilling effect on free speech can lead to self-censorship.
- Similar to this on unclear guidelines on public interest, in *Shreya Singhal v. Union of India* (2015), the Supreme Court (SC) struck down Section 66A of the Information Technology Act. The SC held that the Act could be used in a manner that has a chilling effect on free speech.
- Besides, given that the right to freedom of association is part of the Universal Declaration of Human Rights (Article 20), a violation of this right also constitutes a human rights violation.
- In April 2016, the UN Special Rapporteurs on the Rights to Freedom of Peaceful Assembly and of Association undertook a legal analysis of the FCRA, 2010.
 - ✓ It stated that restrictions in the name of “public interest” and “economic interest” as invoked under the FCRA failed the test of “legitimate restrictions”.

- ✓ The terms were too vague and gave the state excessive discretionary powers to apply the provision in an Arbitrary Manner.
- ✓ In this context, though it is necessary to regulate corrupt NGOs, there needs to be clarity on terms like Public Interest.

5. Mekedatu Issue

Why in News?

- Tamil Nadu has once again asserted its stand on sharing of river water with neighbouring states by opposing the Mekedatu reservoir project being planned by Karnataka.

What's the Issue?

- Tamil Nadu has protested against Karnataka's move to build a reservoir on river Cauvery at Mekedatu. However, the Karnataka Government has asserted that there is no "compromise" on the Mekedatu project and the state wants to undertake the project.

What's the Way out Then?

- The Centre has said the project required the approval of the Cauvery Water Management Authority's (CWMA). The Detail Project Report (DPR) sent by Karnataka was tabled in the CWMA several times for approval, but the discussion on this issue could not take place due to a lack of consensus among party states Karnataka and Tamil Nadu.
- Also, as per the Cauvery Water Dispute Tribunal's final award, which was modified by the Supreme Court, acceptance of CWMA would be a prerequisite for consideration of the DPR by the Jal Shakti Ministry. Since the project was proposed across an inter-state river, it required approval of lower riparian state(s) as per the interstate water dispute act.

About the Project:

- Mekedatu is a multipurpose (drinking and power) project.
- It involves building a balancing reservoir, near Kanakapura in Ramanagara district in Karnataka. The project once completed is aimed at ensuring drinking water to Bengaluru and neighbouring areas (4.75 TMC) and also can generate 400 MW power.
- The estimated cost of the project is Rs 9,000 crore.

Why Tamil Nadu is against this Project?

- It says, the CWDT and the SC have found that the existing storage facilities available in the Cauvery basin were adequate for storing and distributing water so Karnataka's proposal is ex-facie (on the face of it) untenable and should be rejected outright.

- It has also held that the reservoir is not just for drinking water alone, but to increase the extent of irrigation, which is in clear violation of the Cauvery Water Disputes Award.

Award by the Tribunal and the Supreme Court:

- The tribunal was set up in 1990 and made its final award in 2007, granting 419 tmcft of water to Tamil Nadu, 270 tmcft to Karnataka, 30 tmcft to Kerala and 7 tmcft to Puducherry. The tribunal ordered that in rain-scarcity years, the allocation for all would stand reduced.
- However, both Tamil Nadu and Karnataka expressed unhappiness over the allocation and there were protests and violence in both states over water-sharing. That saw the Supreme Court take up the matter and, in a 2018 judgment, it apportioned 14.75 tmcft from Tamil Nadu's earlier share to Karnataka.
- The new allocation thus stood at 404.25 tmcft for Tamil Nadu while Karnataka's share went up to 284.75 tmcft. The share for Kerala and Puducherry remained unchanged.

6. Tamil Nadu reiterates stand over Mullaperiyar level

Why in News?

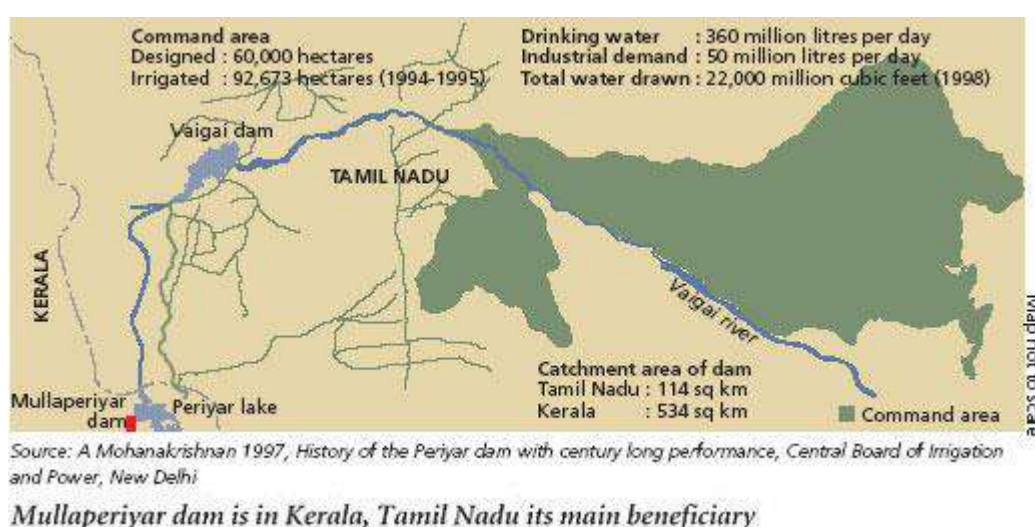
- Tamil Nadu has once again asserted its stand on sharing of river water with neighbouring states by declaring its intention to take necessary steps to restore the full reservoir level (FRL) of 152 ft in Mullaperiyar Dam located in Kerala.

About Mullaperiyar Dam:

- The Mullaperiyar Dam is a masonry gravity dam on the Periyar River in the Indian state of Kerala.
- The dam situated at the confluence of the Mullayar and Periyar rivers
- It is located 881 m (2,890 ft) above mean sea level, on the Cardamom Hills of the Western Ghats in Thekkady, Idukki District of Kerala, South India.
- It was constructed between 1887 and 1895 by John Pennycuick and also reached in an agreement to donate water eastwards to the Madras Presidency area (present-day Tamil Nadu). The Periyar National Park in Thekkady is located around the dam's reservoir.
- The dam is located in Kerala on the river Periyar, but is operated and maintained by Tamil Nadu state. Dam was given to British-ruled Madras Presidency on a 999-year lease in 1886. The agreement was renewed in 1970.
- Tamil Nadu was given rights to the land and the water from the dam as well as the authority to develop hydro-power projects at the site, and Kerala would receive rent in return.

About Periyar River:

- The Periyar River is the longest river in the state of Kerala with a length of 244 km.
- It is also known as ‘Lifeline of Kerala’ as it is one of the few perennial rivers in the state.
- A perennial river is a channel that has continuous flow in parts of its stream bed all year round.
- Periyar River originates from Sivagiri hills of Western Ghats and flows through the Periyar National Park.
- The main tributaries of Periyar are Muthirapuzha, Mullayar, Cheruthoni, and Perinjankutti.



What is the Controversy?

- For Tamil Nadu, the Mullaperiyar dam and the diverted Periyar waters act as a lifeline for Theni, Madurai, Sivaganga and Ramnad districts, providing water for irrigation and drinking, and also for generation of power in Lower Periyar Power Station.
- Tamil Nadu has insisted on exercising its unfettered rights to control the dam and its waters, based on the 1886 lease agreement.
- Kerala has pointed out the unfairness in the 1886 lease agreement and has challenged its validity.
- However, safety concerns posed by the 119-year-old dam to the safety of the people of Kerala in the event of a dam collapse have been the focus of disputes from 2009 onwards.
- Kerala’s proposal for decommissioning the dam and constructing a new one was challenged by Tamil Nadu.
- Idukki district, where the dam is located, is earthquake-prone and has experienced multiple low-intensity quakes. So, the dam is situated in a seismically active zone.

- A 2009 report by IIT Roorkee stated that the dam “was likely to face damage if an earthquake of the magnitude of 6.5 on the Richter scale struck its vicinity when the water level is at 136 feet”. It poses danger to life and property to three million people living in the vicinity of the reservoir living downstream.
- In early August 2018, on Mr. Joy’s plea, the court agreed with the conclusion of the disaster management sub-committee that the water level in the reservoir should be maintained two or three feet below the permissible limit of 142 feet till August 31 as an immediate precaution to Guard against Floods or other Disasters.
- The sub-committee had met on an urgent basis in the aftermath of the deluge that ravaged Kerala where the dam is located. It informed the court that the water level in the reservoir was 139.998 feet.

What is Tamil Nadu’s Stand?

- The Tamil Nadu Government has so far stood firm by its position in the court that the dam is “hydrologically, structurally and seismically safe”. It had blamed a “social media campaign” triggered in Kerala against the dam.
- It said the steady flow of petitions to the court from Kerala, questioning the dam’s safety, even calling for its decommissioning, was a bid to harass it.
- It accused Kerala of trying “somehow to prevent Tamil Nadu to raise the level to 142 ft. at the Mullaiperiyar dam on one pretext or the other by raising issues which have been fully addressed by experts from Central Water Commission [CWC]”.
- Tamil Nadu, in an affidavit, noted that the safety of the dam had been supported by reports of the expert committee and the empowered committee after extensive study. The height of storage level of the dam at 142 ft. was endorsed by the court in 2014 in a judgment.
- The safety aspects of the dam were being constantly monitored by the Supervisory Committee set up seven years ago.

What is Kerala’s Demand?

- Kerala, in turn, has demanded a reconsideration of the rule curve, as the dam was situated in a seismic zone. It accused Tamil Nadu of adopting an “obsolete” gate operation schedule dating back to 1939.
- The court is hearing a petition filed by Idukki resident Dr. Joe Joseph and office-bearers of the Kothamangalam block panchayat in Kerala expressing their apprehensions about the lack of proper supervision of water levels in the dam located along the Periyar tiger reserve.

- The petitioners, including Dr. Joseph, had accused the Supervisory Committee of having become “lethargical” in the safety inspection and survey of the dam, saying it has delegated its duties to a sub-committee of local officials.
- Idukki-based Periyar Protection Movement alleged that there was “deep” seepage issues in the dam structure.
- Tamil Nadu cannot dismiss the apprehensions of 50 lakh people in Kerala about the dam’s safety by calling it a Social Media Campaign.

7. Use Drones more Effectively, says Civil Aviation Ministry

Why in News?

- In a nationwide programme to take the third eye to the sky, the Ministry of Civil Aviation (MoCA) has called for more effective utilisation of drone applications and urged the Ministry of Home Affairs to deploy unmanned aerial vehicles for surveillance, situational Analysis, Crime Control, VVIP security, Disaster Management, etc.

What is a Drone?

- Drone is a layman terminology for Unmanned Aircraft (UA). There are three subsets of Unmanned Aircraft- Remotely Piloted Aircraft, Autonomous Aircraft and Model Aircraft.
- Remotely Piloted Aircraft consists of remote pilot station(s), the required command and control links and any other components, as specified in the type design.
- Besides combat use, drones are used for a range of purposes like package delivery, in agriculture (spraying pesticides etc), Monitoring Environmental changes, aerial Photography, and during search and relief Operations, among others.

Key Changes brought in the Drone Rules, 2021:

- Digital sky platform shall be developed as a business-friendly single-window online system. No flight permission required upto 400 feet in green zones and upto 200 feet in the area between 8 and 12 km from the airport perimeter.
- No pilot licence required for micro drones (for non-commercial use), nano drone and for R&D organisations. No restriction on drone operations by foreign-owned companies registered in India.
- Import of drones and drone components to be regulated by DGFT.
- No security clearance required before any registration or Licence Issuance.
- No requirement of certificate of Airworthiness, Unique Identification Number, Prior Permission and remote pilot licence for R&D entities.

- Coverage of drones under Drone Rules, 2021 increased from 300 kg to 500 kg. This will cover drone taxis also.
- Issuance of Certificate of Airworthiness delegated to Quality Council of India and Certification entities Authorised by it.
- Manufacturer may Generate their drone's unique identification number on the digital sky platform through the self-certification route.
- Maximum penalty under Drone Rules, 2021 reduced to INR 1 lakh. This shall, however, not apply to penalties in respect of violation of other laws.
- Drone corridors will be developed for cargo deliveries.
- Drone promotion council to be set up to facilitate a business-friendly regulatory regime.

Need for Stricter Rules and Regulations:

- Recently, Drones were used for the first time to drop explosive devices, triggering blasts inside the Air Force Station's technical area in Jammu.
- Over the past two Years, drones have been deployed regularly by Pakistan-based outfits to Smuggle Arms, Ammunition and drugs into Indian territory.
- According to Government figures, 167 drone sightings were recorded along the border with Pakistan in 2019, and in 2020, there were 77 such sightings.
- With the rapid Proliferation of drone technology and exponential growth of its global market in recent years, the possibility of a drone attack cannot be ruled out even in the safest cities in the world.
- Drones are becoming Security threats particularly in conflict zones where non-state actors are active and have easy access to the Technology.

8. Centre yet to notify rules of Citizenship Amendment Act

Why in News?

- The Ministry of Home Affairs (MHA) did not notify the Citizenship (Amendment) Act, 2019 rules even the third extended deadline after the Act was passed.

About the News:

- The CAA was passed by the Lok Sabha in Dec 9, 2019, by the Rajya Sabha on Dec 11, 2019 and was assented by the President on December 12, 2019.
- The MHA issued a notification later that the provisions of the act will come into force from Jan 10, 2020.

- January 9 was the last day of an extension it sought from the two parliamentary committees in the Lok Sabha and the Rajya Sabha to frame the rules.
- But still the rules are not yet notified.
- The legislation cannot be implemented without the rules being notified.

About the CAA and Foreigners Tribunal:

- The Parliament passed the Citizenship Amendment Act (CAA), 2019 that seeks to give citizenship to refugees from the Hindu, Christian, Buddhist, Sikh and Zoroastrian communities fleeing religious persecution from Pakistan, Bangladesh and Afghanistan, who came to India before 31st December, 2014.
- Residential Requirement for citizenship through naturalization from the above said countries is at least 5 years. Residential requirement for citizenship through naturalization for others is 11 years.
- The Act applies to all States and Union Territories of the country.
- The beneficiaries of Citizenship Amendment Act can reside in any state of the country.
- In 1964, the govt. brought in the Foreigners (Tribunals) Order.
 - ✓ Advocates not below the age of 35 years of age with at least 7 years of practice (or) Retired Judicial Officers from the Assam Judicial Service (or) Retired IAS of ACS Officers (not below the rank of Secretary/Addl. Secretary) having experience in quasi-Judicial Works.
 - ✓ The Ministry of Home Affairs (MHA) has amended the Foreigners (Tribunals) Order, 1964, and has empowered district magistrates in all States and Union Territories to set up tribunals (quasi-judicial bodies) to decide whether a person staying illegally in India is a foreigner or not.
 - ✓ Earlier, the powers to constitute tribunals were vested only with the Centre.
 - ✓ Typically, the tribunals there have seen two kinds of cases: those concerning persons against whom a reference has been made by the border police and those whose names in the electoral roll has a “D”, or “doubtful”, marked against them.

Who are Illegal Immigrants?

- According to the Citizenship Act, 1955, an illegal immigrant is one who enters India without a valid passport or with forged documents, or a person who stays beyond the Visa Permit.

What is NRC?

- The National Register of Citizens (NRC) is meant to identify a bona fide citizen.

- In other words, by the order of the Supreme Court of India, NRC is being currently updated in Assam to detect Bangladeshi nationals who might have entered the State illegally after the midnight of March 24, 1971.
- The date was decided in the 1985 Assam Accord, which was signed between the then Prime Minister Rajiv Gandhi and the AASU.
- The NRC was first published after the 1951 Census in the independent India when parts of Assam went to the East Pakistan, now Bangladesh.
- The first draft of the updated list was concluded by December 31, 2017.

Arguments against the Act:

- The Fundamental Criticism of the Act has been that it specifically targets Muslims. Critics argue that it is violative of **Article 14** of the Constitution (which guarantees the right to equality) and the principle of secularism.
- India has several other refugees that include Tamils from Sri Lanka and Hindu Rohingya from Myanmar. They are not covered under the Act.
- Despite exemption granted to some regions in the North-eastern states, the prospect of citizenship for massive numbers of illegal Bangladeshi migrants has triggered deep anxieties in the states.
- It will be difficult for the government to differentiate between Illegal Migrants and those Persecuted.

Arguments in Favour:

- The government has clarified that Pakistan, Afghanistan and Bangladesh are Islamic republic's where Muslims are in majority hence they cannot be treated as persecuted minorities. It has assured that the government will examine the application from any other community on a case to case basis. This Act is a big boon to all those people who have been the victims of Partition and the subsequent conversion of the three countries into theocratic
- Islamic republics. Citing partition between India and Pakistan on religious lines in 1947, the government has argued that millions of citizens of undivided India belonging to various faiths were staying in Pakistan and Bangladesh from 1947.
- The constitutions of Pakistan, Afghanistan and Bangladesh provide for a specific state religion. As a result, many persons belonging to Hindu, Sikh, Buddhist, Jain, Parsi and Christian communities have faced persecution on grounds of religion in those countries.

- Many such persons have fled to India to seek shelter and continued to stay in India even if their travel documents have expired or they have incomplete or no documents.
- After Independence, not once but twice, India conceded that the minorities in its neighbourhood is its responsibility. First, immediately after Partition and again during the **Indira-Mujib Pact in 1972** when India had agreed to absorb over 1.2 million refugees. It is a historical fact that on both occasions, it was only the Hindus, Sikhs, Buddhists and Christians who had come over to Indian side.

9. Cheetah Reintroduction Project

Why in News?

- The Government is preparing to translocate the first batch of eight from South Africa and Namibia to Kuno National Park in Madhya Pradesh soon after the situation linked to the current third wave of Covid-19 becomes normal, and total 50 in various parks over a period of Five Years.

What Next?

- In this regard, the Union Minister for Environment, Forests and Climate Change has launched the 'Action Plan for Introduction of Cheetah in India' under which 50 of these big cats will be introduced in the next Five Years.
- The action plan was launched at the 19th meeting of the National Tiger Conservation Authority (NTCA).

What is Reintroduction and why Reintroduce Cheetah Now?

- 'Reintroduction' of a species means releasing it in an area where it is capable of surviving.
- Reintroductions of large carnivores have increasingly been recognised as a strategy to conserve Threatened Species and restore Ecosystem Functions.
- The cheetah is the only large carnivore that has been extirpated, mainly by over-hunting in India in Historical Times.
- India now has the economic ability to consider restoring its lost natural heritage for ethical as well as Ecological Reasons.

About the Cheetah:

- The cheetah, *Acinonyx jubatus*, is one of the oldest of the big cat species, with ancestors that can be traced back more than five million years to the Miocene era.
- The cheetah is also the world's fastest land mammal.
- It is listed as vulnerable in IUCN red listed species.

- The country's last spotted feline died in Chhattisgarh in 1947. Later, the cheetah — which is the fastest land animal — was declared extinct in India in 1952.
- The **African Cheetah** has been classified as **Vulnerable** by the IUCN; while the **Asiatic Cheetah** (found only in Iran) has been classified as **Critically Endangered** and both are listed under **Appendix I** of **CITES** (Convention on International Trade in Endangered Species).



African Cheetah

Asiatic Cheetah

Cheetah Reintroduction Programme in India:

- The Wildlife Institute of India at Dehradun had prepared a ₹260-crore cheetah re-introduction project seven years ago.
- India has plans to reintroduce cheetahs at the Kuno National Park in Sheopur and Morena districts of Madhya Pradesh's Gwalior-Chambal region.
- This could be the world's first inter-continental cheetah translocation project.

Reasons for Extinction:

- The reasons for extinction can all be traced to man's interference. Problems like human-wildlife conflict, loss of habitat and loss of prey, and illegal trafficking, have decimated their numbers.
- The advent of climate change and growing human populations have only made these problems worse.
- With less available land for wildlife, species that require vast home range like the cheetah are placed in competition with other animals and humans, all fighting over less space.

10. SC to Urgently Hear Hate Speeches Case

Why in News?

- The Supreme Court recently agreed to urgently hear a petition seeking the arrest and trial of people who made hate speeches, inciting violence towards Muslims, at the Haridwar Dharm Sansad.

What is Hate Speech?

- According to Law Commission of India (267th report), hate speech is “incitement to hatred primarily against a group of persons defined in terms of race, ethnicity, gender, sexual orientation, religious belief and the like”
- The report of the commission further clarifies that hate speech is “any word written or spoken, signs, visible representations within the hearing or sight of a person with the Intention to cause fear or alarm, or Incitement to Violence.

What are the Constitutional Provisions Regarding the Freedom of Speech?

- Article 19(1)(a) of the Indian Constitution guarantees freedom of speech and expression. Any restriction on this right shall only be permitted if the speech falls within one of the eight grounds set out in Article 19(2) of the Constitution.
- The freedom of speech under Article 19(1)(a) includes the right to express one’s views and opinions at any issue through any medium, e.g. by words of mouth, writing, printing, picture, film, movie, etc.
- It thus includes the freedom of communication and the right to propagate or publish an opinion.

Can Freedom of Speech be Curtailed?

- This right is subject to reasonable restrictions being imposed under Article 19(2). Out of the eight different grounds listed on Article 19(2) of the Constitution, the majority of hate speech laws are saved by the ‘public order’ exception. The eight different grounds are;
 - ✓ Security of the State.
 - ✓ Friendly relations with FOREIGN STATES.
 - ✓ Public order.
 - ✓ Decency and morality.
 - ✓ Contempt of court.
 - ✓ Defamation.
 - ✓ Incitement to an offence, and
 - ✓ Sovereignty and integrity of India.

- Reasonable restrictions on these grounds can be imposed only by a duly enacted law and not by executive action.

Issues of Social Media Misuse:

- **Rumour Mongering:** Fake narratives on online platforms have real life implications. For example, recently in India, online rumours, regarding child traffickers, through popular messaging platform WhatsApp, led to a spate of lynching's in rural areas.
- **Facilitating Polarisation:** It enables the Communalising agents to polarise people for Electoral Gains.
 - ✓ For example, during the election campaign of recently conducted Delhi legislative assembly elections, a leader enticed crowds with the use of communalising and violence on social media platforms.
 - ✓ Following this, a young man translated these words into reality by opening fire on protesters.
 - ✓ This incident highlighted how the spread of hate speech through social media has real consequences.
- **Social Media AI poorly adapted to local languages:** Social media platforms' Artificial Intelligence based Algorithms that filter out hate speeches are not adapted to local languages. Also, the companies have invested little in staff fluent in them. Due to this, it failed to limit the ultranationalist Buddhist monks using Facebook for disseminating hate speech which eventually led to Rohingya Massacres.

Way Forward:

- **Harmonising the Laws:** Harmonising the regulations to check misuse of social media are scattered across multiple acts and rules.
- Thus, there is a need to synchronise the relevant provisions under the Indian Penal Code, the Information Technology Act and Criminal Procedure Code.
- **Obeying the regulation by Supreme Court:** In Shreya Singhal v. Union of India (2015) case, Supreme Court gave a verdict on the issue of online speech and intermediary liability in India.
 - ✓ It struck down the Section 66A of the Information Technology Act, 2000, relating to restrictions on online speech, on grounds of violating the freedom of speech guaranteed under Article 19(1)(a) of the Constitution of India.
 - ✓ It also gave the direction on how hate content should be regulated and the government should follow this direction, where the user reports to the intermediary and the platforms then takes it down after following due process.

- **Transparency obligation for Digital Platforms:** Digital platforms can be made to publish the name and amount paid by the author in the event that content is sponsored.
 - ✓ For example, with regard to fake news, France has an 1881 law that defines the criteria to establish that news is fake and being disseminated deliberately on a large scale.
 - ✓ A legal injunction should be created to swiftly halt such news from being disseminated.
- **Establishing Regulatory Framework:** Responsible broadcasting and institutional arrangements should be made with consultations between social media platforms, media Industry bodies, civil society and law enforcement as an ideal regulatory framework.
 - ✓ Even global regulations could be made to establish baseline content, electoral integrity, privacy, and data standards.
- **Creating Code of Conduct:** It can be framed without creating an ambiguous statutory structure that could leave avenues for potential legislative and state control.
 - ✓ For example, the European Union has also established a code of conduct to ensure non-proliferation of hate speech under the framework of a ‘digital single market.’

11. Two SC Judges pull out of Krishna Water Case

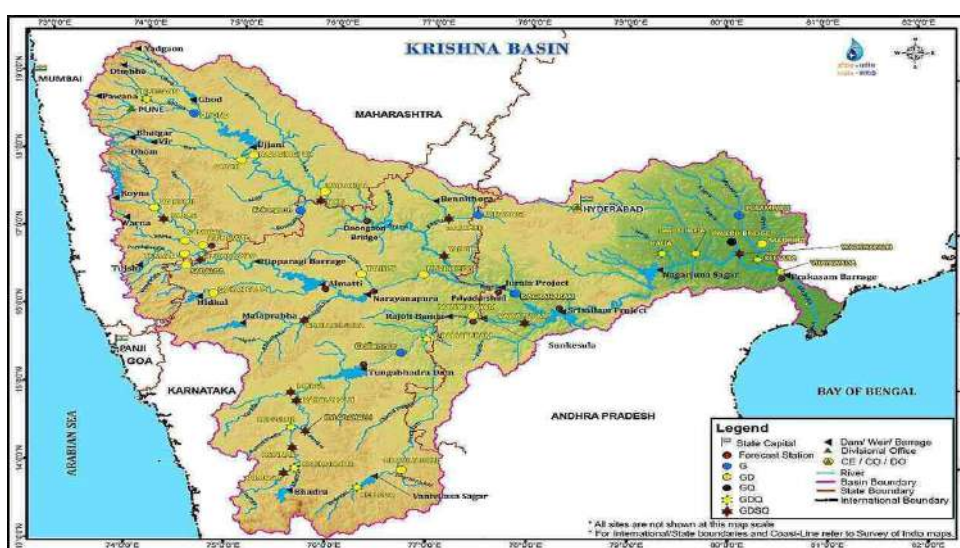
Why in News?

- Both Justices D.Y. Chandrachud and A.S. Bopanna of the Supreme Court recently recused from hearing a dispute among the neighbouring States of Telangana, Andhra Pradesh and Karnataka on the allocation of Krishna River Water.

About the Krishna Water Dispute:

- Karnataka has sought the vacation of a November 16, 2011 of the Supreme Court which stopped the Centre from publishing in the Official Gazette the final order of the Krishna Water Disputes Tribunal II (KWDT) pronounced in December 2010, allocating the river water to Karnataka, erstwhile Andhra Pradesh and Maharashtra.
- The KWDT had further modified its final order and report on November 29, 2013 to allot surplus water to Karnataka, Maharashtra and the erstwhile State of Andhra Pradesh while preserving the allocation of 2130 TMC already made amongst them.
- However, following the bifurcation of Andhra Pradesh, its successors Telangana and Andhra Pradesh had moved the Supreme Court challenging the KWDT’s allocation of shares.
- Karnataka has argued that the dispute raised by Andhra Pradesh and Telangana was between them and did not concern it.

- The State said the decision of the KWDT was enforceable only till 2050, after which it has to reviewed or revised. Ten years have already lapsed in litigation since 2010.
- Karnataka required at least 10 years to complete several irrigation projects whose costs were pegged at ₹60,000 crore in 2014-15.
- The costs would escalate annually by 10% to 15%. Even if the irrigation projects are completed in 10 years, the Central Water Commission clearances would take time.
- The life of the KWDT award is 40 years, out of which 10 years have already lapsed and 10 years is required to complete the work. As a result, Karnataka will not be in a position to utilise water 20 out of 40 years.



About Inter-State River Water Disputes:

- Article 262 of the Constitution provides for the adjudication of inter-state water disputes.
- Under this, Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution and control of waters of any inter-state river and river valley.
- Parliament may also provide that neither the Supreme Court nor any other court is to exercise jurisdiction in respect of any such dispute or complaint.
- The Parliament has enacted the two laws, the River Boards Act (1956) and the Inter-State Water Disputes Act (1956).
- The River Boards Act provides for the establishment of river boards by the Central government for the regulation and development of inter-state river and river valleys.
- A River Board is established on the request of state governments concerned to advise them.

- The Inter-State Water Disputes Act empowers the Central government to set up an ad hoc tribunal for the adjudication of a dispute between two or more states in relation to the waters of an inter-state river or River Valley.
- The decision of the tribunal is final and binding on the parties to the dispute.
- Neither the Supreme Court nor any other court is to have jurisdiction in respect of any water dispute which may be referred to such a tribunal under this Act.

About Krishna River:

- **Source:** It originates near Mahabaleshwar (Satara) in Maharashtra. It is the second biggest river in peninsular India after the Godavari River.
- **Drainage:** It runs from four states Maharashtra (303 km), North Karnataka (480 km) and the rest of its 1300 km journey in Telangana and Andhra Pradesh before it empties into the Bay of Bengal.
- **Tributaries:** Tungabhadra, Mallaprabha, Koyna, Bhima, Ghataprabha, Yerla, Warna, Dindi, Musi and Dudhganga.

12. Jallikattu

Why in News?

- With a steep rise in the daily cases of COVID-19, the district administration in Vellore, Tiruvannamalai, Ranipet and Tirupattur, have banned the conduct of Jallikattu events, ahead of Pongal festival, as part of Safety Measures.

What is Jallikattu?

- The bull-taming sport is popular in Madurai, Tiruchirappalli, Theni, Pudukkottai and Dindigul districts known as the Jallikattu belt.
- Jallikattu is celebrated in the second week of January, during the Tamil harvest festival, Pongal.
- A tradition over 2,000 years old, Jallikattu is a competitive sport as well as an event to Honour Bull Owners who rear them for Mating.
- It is a violent sport in which contestants try to tame a bull for a prize; if they fail, the bull Owner Wins the Prize.

Why is Jallikattu Important in Tamil culture?

- Jallikattu is considered a traditional way for the peasant community to preserve their pure-breed native bulls.

- At a time when cattle breeding is often an artificial process, conservationists and peasants argue that Jallikattu is a way to protect these male animals which are otherwise used only for Meat if not for Ploughing.

Why has Jallikattu been the Subject of Legal Battles?

- Jallikattu first came under legal scrutiny in 2007 when the Animal Welfare Board of India and the animal rights group PETA moved petitions in the Supreme Court against Jallikattu as well as bullock cart races.
- The Tamil Nadu government, however, worked its way out of the ban by passing a law in 2009, which was signed by the Governor.
- In 2011, the UPA regime at the Centre added bulls to the list of animals whose training and exhibition is prohibited.
- In May 2014, days before the BJP was elected to power, the Supreme Court banned the bull-taming sport, ruling on a petition that cited the 2011 notification.

So, is it legal or Banned Now?

- In January 2017, massive protests erupted across Tamil Nadu against the ban, with Chennai city witnessing a 15-day-long Jallikattu uprising.
- The same year, the Tamil Nadu government released an ordinance amending the central Act and allowing Jallikattu in the state; this was later ratified by the President.
- The amendment was subsequently approved by the President of India, effectively overturning the Supreme Court ban and allowing the sport to be played without any legal hurdle.
- PETA challenged the state move, arguing it was unconstitutional (Article 29(1)).
- In 2018, the Supreme Court referred the Jallikattu case to a Constitution Bench, where it is Pending Now.

13. Punjab Lok Congress receives its Party Symbol

Why in News?

- Former Punjab CM Amarinder Singh's newly formed party Punjab Lok Congress has received its party symbol – Hockey stick and ball.

Firstly, how are symbols allotted to political parties?

- As per the guidelines, to get a symbol allotted:
 - ✓ A party/candidate has to provide a list of three symbols from the EC's free symbols list at the time of filing nomination papers.

- ✓ Among them, one symbol is allotted to the party/candidate on a first-come-first-serve basis. When a recognised political party splits, the Election Commission takes the decision on assigning the symbol.

Powers of Election Commission:

- The Election Symbols (Reservation and Allotment) Order, 1968 empowers the EC to recognise political parties and allot symbols.
- Under Paragraph 15 of the Order, it can decide disputes among rival groups or sections of a recognised political party staking claim to its name and symbol.
- The EC is also the only authority to decide issues on a dispute or a merger. The Supreme Court upheld its validity in Sadiq Ali and another vs. ECI in 1971.

How many Types of Symbols are there?

- As per the Election Symbols (Reservation and Allotment) (Amendment) Order, 2017, party symbols are either:
 - ✓ **Reserved:** Eight national parties and 64 state parties across the country have “Reserved” Symbols.
 - ✓ **Free:** The Election Commission also has a pool of nearly 200 “free” symbols that are allotted to the thousands of unrecognised regional parties that pop up before Elections.

What are the Election Commission’s powers in a dispute over the election symbol when a Party Splits?

- On the question of a split in a political party outside the legislature, Para 15 of the Symbols Order, 1968, states: “When the Commission is satisfied that there are rival sections or Groups of a Recognised political party each of whom claims to be that party the Commission may decide that one such rival section or group or none of such rival sections or groups is that recognised political party and the decision of the Commission shall be binding on all such rival sections or groups.”
- This applies to disputes in recognised national and state parties (like the LJP, in this case). For splits in registered but unrecognised parties, the EC usually advises the warring factions to resolve their differences internally or to approach the court.
- Please note that before 1968, the EC issued notifications and executive orders under the Conduct of Election Rules, 1961.

14. SC Seeks Response from Government on Hate speech

Why in News?

- The SC has recently asked the Ministry of Home Affairs (MHA) and the police chiefs of Delhi and Uttarakhand to respond to petitions that people accused of delivering hate speeches at a Dharam Sansad organised in Haridwar have not been arrested yet.

What is Hate Speech?

- According to Law Commission of India (267th report), hate speech is “incitement to hatred primarily against a group of persons defined in terms of race, ethnicity, gender, sexual orientation, religious belief and the like”
- The report of the Commission further clarifies that hate speech is “any word written or spoken, signs, visible representations within the hearing or sight of a person with the intention to cause fear or alarm, or incitement to violence.”

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- It thus includes the freedom of communication and the right to propagate or publish an opinion.

Can Freedom of Speech be Curtailed?

- This right is subject to reasonable restrictions being imposed under Article 19(2). Out of the eight different grounds listed on Article 19(2) of the Constitution, the majority of hate speech laws are saved by the ‘public order’ exception. The eight different grounds are;
 - ✓ Security of the State.
 - ✓ Friendly relations with foreign States
 - ✓ Public order
 - ✓ Decency and morality
 - ✓ Contempt of court
 - ✓ Defamation
 - ✓ Incitement to an offence, and
 - ✓ Sovereignty and integrity of India.

- Reasonable restrictions on these grounds can be imposed only by a duly enacted law and not by executive action.

Issues of Social Media Misuse:

- **Rumour Mongering:** Fake narratives on online platforms have real life implications. For Example, Recently in India, online rumours, regarding child traffickers, through popular messaging platform WhatsApp, led to a spate of lynchings in rural areas.
- **Facilitating Polarisation:** It enables the communalising agents to polarise people for Electoral Gains.
 - ✓ For example, during the election campaign of recently conducted Delhi legislative assembly elections, a leader enticed crowds with the use of communalising and violence on social media platforms.
 - ✓ Following this, a young man translated these words into reality by opening fire on protesters. This incident highlighted how the spread of hate speech through social media has real consequences.
- **Social Media AI poorly adapted to local languages:** Social media platforms' artificial intelligence based algorithms that filter out hate speeches are not adapted to local languages.
- Also, the companies have invested little in staff fluent in them. Due to this, it failed to limit the ultranationalist Buddhist monks using Facebook for disseminating hate speech which eventually led to Rohingya massacres.

Way Forward:

- **Harmonising the Laws:** Harmonising the regulations to check misuse of social media are scattered across multiple acts and rules.
- Thus, there is a need to synchronise the relevant provisions under the Indian Penal Code, the Information Technology Act and Criminal Procedure Code.
- **Obeying the regulation by Supreme Court:** In Shreya Singhal v. Union of India (2015) case, Supreme Court gave a verdict on the issue of online speech and intermediary liability in India.
 - ✓ It struck down the Section 66A of the Information Technology Act, 2000, relating to restrictions on online speech, on grounds of violating the freedom of speech guaranteed under Article 19(1)(a) of the Constitution of India.
 - ✓ It also gave the direction on how hate content should be regulated and the government should follow this direction, where the user reports to the intermediary and the platforms then takes it down after following due process.

- **Transparency obligation for digital platforms:** Digital platforms can be made to publish the name and amount paid by the author in the event that content is sponsored.
 - ✓ For example, with regard to fake news, France has an 1881 law that defines the criteria to establish that news is fake and being disseminated deliberately on a large scale.
 - ✓ A legal injunction should be created to swiftly halt such news from being disseminated.
- **Establishing regulatory framework:** Responsible broadcasting and institutional arrangements should be made with consultations between social media platforms, media industry bodies, civil society and law enforcement as an ideal regulatory framework.
 - ✓ Even global regulations could be made to establish baseline content, electoral integrity, privacy, and data standards.
- **Creating Code of Conduct:** It can be framed without creating an ambiguous statutory structure that could leave avenues for potential legislative and state control.
- For example, the European Union has also established a code of conduct to ensure non-proliferation of hate speech under the framework of a ‘digital single market.’

15. Stockholm Convention on POPs

Why in News?

- European Commission has proposed to tighten limits for a range of persistent organic pollutants (POPs) to tackle contamination in recycled products, health and environment.

What are POPs?

- In 1995, the Governing Council of the United Nations Environment Programme (UNEP) called for global action to be taken on POPs, which it defined as “chemical substances that persist in the environment, bio-accumulate through the food web, and pose a risk of causing adverse effects to Human Health and the Environment”.

Uniqueness of POPs:

- POPs are lipophilic, which means that they accumulate in the fatty tissue of living animals and human beings.
- In fatty tissue, the concentrations can become magnified by up to 70 000 times higher than the background levels.
- As you move up the food chain, concentrations of POPs tend to increase so that animals at the top of the food chain such as fish, predatory birds, mammals, and humans tend to have the greatest concentrations of these chemicals.

About Stockholm Convention on POPs:

- Signed in 2001 and effective from May 2004 (Ninety days after the ratification by at least 50 signatory states).
- Aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).
- Initially, twelve POPs have been recognized as causing adverse effects on humans and the ecosystem and these can be placed in 3 categories:
 - ✓ **Pesticides:** aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene;
 - ✓ **Industrial chemicals:** hexachlorobenzene, polychlorinated biphenyls (PCBs); and
 - ✓ **By-products:** hexachlorobenzene; polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD/PCDF), and PCBs.
- Since then, additional substances such as carcinogenic polycyclic aromatic hydrocarbons (PAHs) and certain brominated flame-retardants, as well as organometallic compounds such as tributyltin (TBT) have been added to the list of Persistent Organic Pollutants.

Sources of POPs:

- Improper use and/or disposal of agrochemicals and industrial chemicals.
- Elevated temperatures and combustion processes.
- Unwanted by-products of industrial processes or combustion.

Is it Legally Binding?

- Yes. Article 16 of the Convention requires that effectiveness of the measures adopted by the Convention is evaluated in Regular Intervals.

Other Conventions dealing with POPs:

- Convention on Long-Range Transboundary Air Pollutants (LRTAP), Protocol on Persistent Organic Pollutants (POPs).

Recent Developments:

- The Union Cabinet, in 2021, approved the Ratification of seven chemicals listed under the Stockholm Convention on Persistent Organic Pollutants (POPs). The Cabinet has also delegated its powers to ratify chemicals under the Stockholm Convention to the Union Ministers of External Affairs (MEA) and Environment, Forest and Climate Change (MoEFCC) in respect of POPs already regulated under the domestic regulations.
- These are:

- ✓ Chlordecone.
- ✓ Hexabromobiphenyl.
- ✓ Hexabromodiphenyl ether and Heptabromodiphenylether.
- ✓ Tetrabromodiphenyl ether and Pentabromodiphenyl ether.
- ✓ Pentachlorobenzene.
- ✓ Hexabromocyclododecane.
- ✓ Hexachlorobutadiene.

Benefits for India:

- The ratification process would enable India to access Global Environment Facility (GEF) Financial Resources in updating the National Implementation Plan (NIP).

3.1. POLITY & GOVERNANCE SNIPPETS

1. Faecal sludge and septage management in urban areas, Service and Business

Models, by 2021

Why in News?

- According to the NITI Aayog report Faecal sludge and septage management in urban areas, Service and business models, by 2021 more than 700 cities / towns are in various stages of Faecal Sludge and Septage Management (FSSM) implementation.

Highlights:

- India has recognized the gaps in sanitation coverage and embarked purposefully to address them, becoming one of the first countries to announce a national policy on FSSM in 2017.
- FSSM prioritizes human excreta management, a waste stream with the highest potential for spreading diseases.
- It is a low-cost and easily scalable sanitation solution that focuses on safe collection, transportation, treatment, and reuse of human waste.
- As a result, FSSM promises a means to achieve the Sustainable Development Goals (SDG) target 6.2 of adequate and inclusive sanitation for all in a time bound manner.
- According to the latest report of the Central Pollution Control Board (CPCB), Sewage Treatment Plants (STPs) in India are able to treat a little more than a third of the sewage generated per day.
- India generated 72,368 MLD (million litres per day) whereas the installed capacity of STPs was 31,841 MLD (43.9%).

- 5 states and Union Territories (UT) – Maharashtra, Gujarat, Uttar Pradesh, Delhi and Karnataka – account for 60% of the total installed treatment capacity of the country.
- Absence of segregation of waste at source.
- Lack of funds for waste management at Urban Local Bodies (ULB).
- Lack of technical expertise and appropriate institutional arrangement.
- Unwillingness of ULBs to introduce proper collection, segregation, transportation and treatment/disposal systems.
- Indifference of citizens towards waste management due to lack of awareness.
- Lack of community participation towards waste management and hygienic condition

2. Jal Jeevan Mission (JJM)

Why in News?

- The Ministry of Jal Shakti has recently approved Drinking Water Supply schemes of Rs. 15,381.72 Crore for Madhya Pradesh under Jal Jeevan Mission (JJM).

Highlights:

- It aims to ensure assured tap water supply or 'Har Ghar Jal' to all rural households by 2024.
- It is Launched in 2019, it envisages supply of 55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024.
- It looks to create a jan andolan for water, thereby making it everyone's priority. It comes under Jal Shakti Ministry.
- The mission ensures functionality of existing water supply systems and water connections, water quality monitoring and testing as well as sustainable agriculture.
- It also ensures conjunctive use of conserved water; drinking water source augmentation, drinking water supply system, grey water treatment and its reuse.
- It focuses on integrated demand and supply-side management of water at the local level.
- Creation of local infrastructure for source sustainability measures as mandatory elements, like rainwater harvesting, groundwater recharge and management of household wastewater for reuse, is undertaken in convergence with other government programmes/schemes.
- The Mission is based on a community approach to water and includes extensive Information, Education and Communication as a key component of the mission.

- Paani Samitis plan, implement, manage, operate and maintain village water supply systems.
- These consist of 10-15 members, with at least 50% women members and other members from Self-Help Groups, Accredited Social and Health Workers, Anganwadi teachers, etc.
- The committees prepare a one-time village action plan, merging all available village resources.
- The plan is approved in a Gram Sabha before implementation.

3. Financial Resolution and Deposit Insurance (FRDI) Bill

Why in News?

- The Finance Ministry has recently sought views of the Reserve Bank of India (RBI) on drafting a modified version of the Financial Resolution and Deposit Insurance (FRDI) Bill in order to deal with Insolvency of Firms in the financial sector.

Highlights:

- In 2018, the Government had withdrawn the FRDI Bill 2017 amid concerns over the security of bank deposits.
- The bill will provide for establishing a resolution authority, which would have powers to undertake prompt resolution for banks, insurance companies and systemically important financial firms.
- The legislation will also provide for an insurance of up to Rs 5 lakh for bank depositors, which already has a legal backing.
- Even as the RBI has come out with a Prompt Corrective Action framework for NBFCs (Non Banking Financial Companies), a need is being felt for a legislative backing for the entire financial sector. The current resolution regime is especially inappropriate for private sector financial firms in the light of significant expansion and many of these acquiring systemically important status in India.
- The provision of a single agency for resolution of financial firms is in line with the recommendations made by the Financial Sector Legislative Reforms Commission (FSLRC), 2011 headed by Justice B N Srikrishna.
- The Insolvency and Bankruptcy Code, 2011 along with the FRDI bill would have streamlined the procedure for the winding up or revival of an ailing financial sector firm.

4. Insurance Regulatory and Development Authority of India (IRDAI)

Why in News?

- Recently, the Insurance Regulatory and Development Authority of India (IRDAI) has proposed a separate regulator for the healthcare segment or it must be allowed to regulate hospitals.

Highlights:

- It has been noticed that the rate of inflation of hospital charges at present is around 10-15% and tariffs are being changed on a regular basis.
- Hospitals keep changing tariffs on a regular basis. There is no body to regulate them on tariff structure and grading.
- When Covid hit the country last year, patients were charged excessively by some hospitals.
- If insurers continue to pay whatever the hospitals are demanding, the health insurance business will be in poor health in the long run. Already, the industry is experiencing a high number of claims.
- If insurers continue to pay whatever the hospitals are demanding, the health insurance business will be in poor health in the long run. Already, the industry is experiencing a high number of claims
- At present, health care schemes and private insurance have individual hospital empanelment processes, which replicates various activities and contributes to inefficiency and duplication of processes.
- Healthcare has become one of the largest sectors in India in terms of revenue and employment. Booming population, rising income levels, growth in infrastructure, increased awareness, insurance policies and India's emergence as a hub of medical tourism and clinical trials have contributed to the development of the health care sector in India.

5. English is the language of Court: Gujarat HC

Why in News?

- A Division Bench of the Gujarat High Court has asked a convict to speak only in English as that was the language in the higher judiciary referring to Article 348 of the Constitution which mandates that the language of the High Court would be English.

What is Article 348?

- It provides for languages to be used in the Supreme Court and in the High Courts and for Acts, Bills, etc

- Article 348 (1) provides that all proceedings in the Supreme Court and in every High court shall be in English Language until Parliament by law otherwise provides.
- Under Article 348 (2), the Governor of the State may, with the previous consent of the President, authorize the use of the Hindi language or any other language used for any Official Purpose of the State.
- It states that in the proceedings of the High Court having its principal seat in that State provided that decrees, judgments or orders passed by such High Courts shall be in English.

When is use of Other Languages Permitted?

- Section 7 of the Official Languages Act, 1963, provides that the use of Hindi or official language of a State in addition to the English language may be authorized.
- This has to be done with the consent of the President of India, by the Governor of the State for purpose of judgments etc. made by the High Court for that State.

6. Sri Jagannath Temple Act of 1954

Why in News?

- The Odisha state cabinet has recently approved amendments to the Sri Jagannath Temple Act of 1954.

Highlights:

- The powers of management of the temple were passed on to the King of Khordha after three years while the colonial government continued to retain some control.
- After India gained Independence, the Jagannath Temple Act was introduced in the year 1952, which came into effect in 1954.
- The Act contains provision on land rights of the temple, duties of the sevayat (priests), administrative powers of the Shri Jagannath Temple Managing Committee, rights and privileges of the Raja of Puri and other persons connected with the management and administration of the temple.
- The power will now be delegated to temple administration and concerned officials for sale and lease of land in the name of Jagannath temple.
- Unlike earlier, no approval will be required from the state government for the process.
- The Section 16 (2) of the act states that no immovable property taken possession of by the temple committee shall be leased out, mortgaged, sold or otherwise alienated except with the previous sanction of the State Government.

7. Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME)

Scheme.

Why in News?

- The Ministry of Food Processing Industries and NAFED (National Agricultural Cooperative Marketing Federation of India Limited) have recently launched six, One District One Product (ODOP) brands.

Highlights:

- It is under the Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) Scheme.
- It has signed an agreement with NAFED for developing 10 brands of selected ODOPs under the branding and marketing component of the PMFME scheme. Out of these, six brands are Amrit Phal, Cori Gold, Kashmiri Mantra, Madhu Mantra, Somdana, and Whole Wheat Cookies of Dilli Bakes.
- It adopts the One District One Product (ODOP) approach to reap the benefit of scale in terms of procurement of inputs, availing common services and marketing of products.
- ODOP for the scheme will provide the framework for value chain development and alignment of support infrastructure. There may be more than one cluster of ODOP products in one district.
- There may be a cluster of ODOP products consisting of more than one adjacent district in a State. The States would Identify food products for districts keeping in view the existing clusters and availability of Raw Material.
- The ODOP could be a perishable produce based or cereal based or a food item widely produced in an area. E.g. mango, potato, pickle, millet based products, fisheries, poultry, etc.

8. Worrying Trends in Nutrition Indicators in NFHS-5 Data

Why in News?

- The NFHS-5 factsheets for India and all states and Union territories are now out. At First Glance, it appears to be a mixed bag — much to cheer about, but concern areas remain.

Positives from the NFHS-5 survey:

- Change in demographic trends: For the first time since the NFHS 1992-93 survey, the sex Ratio is slightly higher among the adult population.

- Improvement in sex ratio at birth: For the first time in 15 years that the sex ratio at birth has Reached 929 (it was 919 for 1,000 males in 2015-16).
- The total fertility rate has also dropped from 2.2 per cent to a replacement rate of 2 per cent, albeit with not much change in the huge fertility divide between the high and low Fertility States.
- Improvement in literacy level of women: There has been an appreciable improvement in general literacy levels and in the percentage of women and men who have completed 10 years or more of schooling, which has reached 41 per cent and 50.2 per cent respectively.
- Improvements in health indicators: The health sector deserves credit for achieving a significant improvement in the percentage of institutional births, antenatal care, and children's Immunisation Rates.
- There has also been a consistent drop in neonatal, infant and child mortality rates — a decrease of around 1 per cent per year for neonatal and infant mortality and a 1.6 per cent decrease per year for under five mortality rate.

Nutrition: Area of Concern:

- Increase in anaemic people: India has become a country with more anaemic people since NFHS-4 (2015-16), with anaemia rates rising significantly across age groups, ranging from children below six years, adolescent girls and boys, pregnant women, and women between 15 to 49 years.
- Why anaemia is a concern? Adverse effects of anaemia affect all age groups — lower physical and cognitive growth and alertness among children and adolescents, and lesser capacity to learn and play, directly impacting their future potential as productive citizens.
- Further, Anaemia among adolescent girls (59.1 per cent) advances to maternal Anaemia and is a major cause of maternal and infant mortality and general morbidity and ill health in a community.
- The detailed report will explain why a dedicated programme like Anaemia Mukht Bharat which focused on IFA consumption failed to gain impetus.
- Slow pace of improvement in nutritional indicators: Between NFHS 4 and NFHS 5, the percentage of children below five years who are moderately underweight has reduced from 35.8 per cent to 32.1 per cent.
- Moderately stunted children have fallen from 38.4 per cent to 35.5 per cent, moderately wasted from 21 per cent to 19.3 per cent and severely wasted have increased slightly from 7.5 per cent to 7.7 per cent.

- Inadequate diet: The root cause for this is that the percentage of children below two years receiving an adequate diet is a mere 11.3 per cent, increasing marginally from 9.6 per cent in NFHS-4.

Way Forward:

- India's nutrition programmes must undergo a periodic review.
- The Integrated Child Development Services (ICDS), which is perceived as the Guardian of the Nation's Nutritional well-being must reassess itself and address critical intervention Gaps, both conceptually and programmatically, and produce rapid outcomes.

9. Green Energy Corridor (GEC) Phase-II

Why in News?

- Recently, the Cabinet Committee on Economic Affairs approved the scheme on Green Energy Corridor (GEC) Phase-II for Intra-State Transmission System (InSTS).

Highlights:

- Phase 1 of the Green Energy Corridor is already under implementation in Gujarat, Andhra Pradesh, Karnataka, Himachal Pradesh, Maharashtra, Madhya Pradesh, Tamil Nadu, and Rajasthan.
- It is working for the grid integration and power evacuation of about 24GW of Renewable Energy.
- It will facilitate grid integration and power evacuation of approximately 20 GW of Renewable Energy (RE) power projects in seven States namely, Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu and Uttar Pradesh.
- The transmission systems will be created over a period of five years from Financial Year 2021-22 to 2025-26.
- It is targeted to be set up with a total estimated cost of Rs. 12,031 crores, and the Central Finance Assistance (CFA) will be 33% of the project cost.
- The CFA will help in offsetting the Intra-State transmission charges and thus keep the power costs down.
- It aims at synchronizing the electricity produced from renewable resources, such as wind and solar, with the conventional power stations in the grid.
- It aims to achieve the target of 450 GW installed RE capacity by 2030.
- The objective of the GEC is to evacuate approx. 20,000 MW of large-scale renewable power and improvement of the grid in implementing states.

- It will contribute to the long-term energy security of India and will promote ecologically sustainable growth by reducing carbon footprint.
- It will facilitate In generating large direct and indirect employment opportunities for both the skilled and Unskilled Personnel.

10. First Advance Estimates (FAE)

Why in News?

- Recently, the Ministry of Statistics and Programme Implementation (MoSPI) released the First Advance Estimates (FAE) for the current financial year (2021-22).
- According to MoSPI, India's Gross Domestic Product (GDP) will grow by 9.2% in 2021-22.

Highlights

- The FAE, first Introduced in 2016-17, are typically published at the end of the first week of January.
- They are the “first” official estimates of how GDP is expected to grow in that financial year.
- Apart from it, they are also the “advance” estimates because they are published long before the financial year (April to March) is over.
- The FAE Is published soon after the end of the third quarter or Q3 (October, November, December). However, they do not include the formal Q3 GDP data, which is published at the end of February as part of the Second Advance Estimates (SAE).
- The main significance of FAE lies in the fact that they are the GDP estimates that the Union Finance Ministry uses to decide the next financial year's budget allocations.
- From the Budget-making perspective, it is important to estimate the nominal GDP — both absolute level and its growth rate.
- This will further help in calculating Real GDP and inflation.
- The difference between the real and nominal GDP shows the levels of inflation in the year.

11. Citizenship (Amendment) Act, 2019 (CAA).

Why in News?

- Recently, the Ministry of Home Affairs (MHA) missed the deadline of notifying rules under the Citizenship (Amendment) Act, 2019 (CAA).

Highlights:

- Amidst the concerns related to CAA and for better clarity, the two parliamentary committees (committee on subordinate legislation) in the Lok Sabha and the Rajya Sabha had sought MHA to frame the rules that will govern the CAA.

- If the government does not make rules and regulations, a law or parts of it will not get implemented. The Benami Transactions Act of 1988 is an example of a complete law remaining unimplemented in the absence of regulations.
- The CAA provides citizenship on the basis of religion to six undocumented non-Muslim communities (Hindus, Sikhs, Buddhists, Jains, Parsis and Christians) from Pakistan, Afghanistan and Bangladesh who entered India on or before 31st December, 2014.
- It exempts the members of the six communities from any criminal case under the Foreigners Act, 1946 and the Passport Act, 1920.
- The two Acts specify punishment for entering the country illegally and staying here on expired visas and permits.
- : There are apprehensions that the CAA, followed by a country-wide compilation of the National Register of Citizens (NRC), will benefit non-Muslims excluded from the proposed citizens' register, while excluded Muslims will have to prove their Citizenship.
- Issues in the North-East contradicts the Assam Accord of 1985, which states that illegal Migrants, Irrespective of religion, heading in from Bangladesh after 25th March, 1971, would be deported.
- There are an estimated 20 million illegal Bangladeshi migrants in Assam and they have inalienably altered the demography of the state, besides putting a severe strain on the state's resources and economy.
- Critics argue that it is violative of Article 14 of the Constitution (which guarantees the right to equality and is applicable to both the citizens and foreigners) and the principle of Secularism enshrined in the Preamble of the constitution.

12. MHA seeks more time to Frame CAA Rules

Why in News?

- The Ministry of Home Affairs (MHA) has sought another extension from parliamentary committees to frame the rules of the Citizenship (Amendment) Act (CAA), 2019.

What is Citizenship Amendment Act (CAA), 2019?

- The act is sought to amend the Citizenship Act, 1955 to make Hindu, Sikh, Buddhist, Jain, Parsi, and Christian illegal migrants from Afghanistan, Bangladesh, and Pakistan, eligible for citizenship of India.
- In other words, it intends to make it easier for non-Muslim immigrants from India's three Muslim-majority neighbours to become citizens of India.

- Under The Citizenship Act, 1955, one of the requirements for citizenship by naturalization is that the applicant must have resided in India during the last 12 months, as well as for 11 of the previous 14 years.
- The amendment relaxes the second requirement from 11 years to 6 years as a specific condition for applicants belonging to these six religions, and the aforementioned three countries. It exempts the members of the six communities from any criminal case under the Foreigners Act, 1946 and the Passport Act, 1920 if they entered India before December 31, 2014.

Defining Illegal Migrants:

- Illegal migrants cannot become Indian citizens in accordance with the present laws.
- Under the CAA, an illegal migrant is a foreigner who: (i) enters the country without valid travel documents like a passport and visa, or (ii) enters with valid documents, but stays beyond the Permitted Time Period. Illegal migrants may be put in jail or deported under the Foreigners Act, 1946 and The Passport (Entry into India) Act, 1920.

Exceptions:

- The Bill provides that illegal migrants who fulfil four conditions will not be treated as illegal migrants under the Act. The conditions are:
- They are Hindus, Sikhs, Buddhists, Jains, Parsis or Christians;
- They are from Afghanistan, Bangladesh or Pakistan;
- They entered India on or before December 31, 2014;
- They are not in certain tribal areas of Assam, Meghalaya, Mizoram, or Tripura included in the Sixth Schedule to the Constitution, or areas under the “Inner Line” permit, i.e., Arunachal Pradesh, Mizoram, and Nagaland.

Controversy with the Act:

- **Country of Origin:** The Act classifies migrants based on their country of origin to include only Afghanistan, Pakistan and Bangladesh.
- **Other Religious Minorities Ignored:** It is unclear why illegal migrants from only six specified religious minorities have been included in the Act.
- **Defiance of Purpose:** India shares a border with Myanmar, which has had a history of persecution of a religious minority, the Rohingya Muslims.
- **Date of Entry:** It is also unclear why there is a differential treatment of migrants based on their date of entry into India, i.e., whether they entered India before or after December 31, 2014.

13. Hate speech in the Time of Free Speech

Why in News?

- The growing incidence of hate speeches, especially those targeting minorities, in combination with the judicial ambiguity has provided an opportunity to chart legislative Reforms.

Current Legal Provisions to Deal with hate Speech:

- Not defined in legal framework: Hate speech is neither defined in the Indian legal Framework nor can it be easily reduced to a standard definition due to the myriad forms it can take.
- The Supreme Court, in *Pravasi Bhalai Sangathan v. Union of India* (2014), described hate speech as “an effort to marginalise individuals based on their membership in a group” and one that “seeks to delegitimise group members in the eyes of the majority, reducing their Social Standing and Acceptance within society.”
- The Indian Penal Code illegalises speeches that are intended to promote enmity or prejudice the maintenance of harmony between different classes.
- Specifically, sections of the IPC, such as 153A, which penalises promotion of enmity between different groups;
 - ✓ 153B, which punishes imputations, assertions prejudicial to national integration;
 - ✓ 505, which punishes rumours and news intended to promote communal enmity, and
 - ✓ 295A, which criminalises insults to the religious beliefs of a class by words with deliberate or Malicious Intention.
- Summing up various legal principles, in *Amish Devgan v. Union of India* (2020), the Supreme Court held that “hate speech has no redeeming or legitimate purpose other than Hatred towards a particular group”.
- Lack of established legal standard: Divergent decisions from constitutional courts expose the lack of established legal standards in defining hate speech, especially those propagated via the digital medium.

Suggestions:

- The Law Commission of India, in its 267th report, recommended the insertion of two new provisions to criminalise and punish the propagation of hate speech.
- The 189th Report of the Parliamentary Standing Committee on Home Affairs, in 2015, recommended the incorporation of separate and specific provisions in the Information Technology Act to deal with online hate speech.

- Specialised legislation for social media: Much of the existing penal provisions deal with hate speech belong to the pre-Internet era.
- The need of the hour is specialised legislation that will govern hate speech propagated via the Internet and, especially, social media.
- Recognise hate speech as reasonable restriction to free speech: Taking cue from best International Standards, it is important that specific and durable legislative provisions that combat hate speech, especially that which is propagated online and through social media.
- Ultimately, this would be possible only when hate speech is recognised as a reasonable restriction to Free Speech.

14. Quarterly Employment Survey (QES)

Why in News?

- The Labour Bureau, Ministry of Labour and Employment released the results of the Quarterly Employment Survey (QES) for the Second Quarter of 2021 (July-September).

Highlights:

- The Quarterly Employment Survey (QES) is part of the All-India Quarterly Establishment-based Employment Survey (AQEES).
- It covers establishments employing 10 or more workers in the organised segment in 9 sectors.
- These nine sectors are Manufacturing, Construction, Trade, Transport, Education, Health, Accommodation and Restaurant, IT/ BPO and Financial Services.
- These sectors account for a majority of the total employment in non-farm establishments.
- It's objective is to enable the government to frame a “sound national policy on employment.”
- The release of this survey emanates from India's ratification of the International Labour Organization's (ILO) Employment Policy Convention, 1964.
- This requires the ratifying countries to implement “an active policy designed to promote full, productive and freely chosen employment.”
- India does not have a National Employment Policy (NEP) yet.

15. Vulnerable Witnesses

Why in News:

- Recently, the Supreme Court (SC) expanded the meaning of vulnerable witnesses to also include among others sexual assault victims, those with mental illness and people with speech or hearing impairment.

Highlights:

- Vulnerable witnesses will not be limited to mean only child witnesses. It will also include
- Age-neutral victims of sexual assault.
- Gender-neutral victims of sexual assault, under section 377 IPC (Unnatural Offences).
- Witnesses suffering from mental illness as defined in Mental Healthcare Act, 2017.
- Witnesses with threat perception and any speech or hearing impaired individual or person suffering from any other disability.
- The SC directed that all High Court's (HC) adopt and notify a Vulnerable Witness Deposition Centre (VWDC) scheme within a period of two months
- VWDC will provide a safe and barrier-free environment for recording the evidence of vulnerable witnesses.
- The SC asked HC's to ensure that there is one VWDC in each district.
- These VDWC should be established in close proximity to Alternate Dispute Resolution (ADR) Centres.

4. SCIENCE & TECHNOLOGY

1. Pig's Heart Beating Inside Human

Why in News?

- Recently, doctors Transplanted a pig heart into a patient in a last effort to save his life, in Maryland hospital in USA. It was done for the first time in the history of medical.

About the News:

- The patient is doing well three days after this highly experimental surgery.
- This marks a significant step in the decades-long debate on using animal organs for life-saving transplants. However, it is too soon to know, if the operation will work. As per Doctors at University of Maryland Medical Center, transplant highlighted that heart from a genetically modified animal can function in human body, without immediate Rejection.

Who was the Patient?

- The patient was David Bennett aged 57. He knew there was no guarantee of whether the experiment would work. But he was ready for the operation because he was dying and was ineligible for a Human Heart Transplant.

Why this Experiment was Conducted?

- There is a huge shortage of human organs, which are donated for transplant. This drives scientists to figure out how to use animal organs for transplant instead.
- In 2021, there were just around 3,800 heart transplants in the U.S. so, if this experiment works, there will be endless supply of these organs from animals for patients.

How about Prior Attempts?

- Prior attempts of such transplants have failed, largely. This is because, patients' bodies rapidly rejected the Animal Organ. For instance in 1984, Baby Fae, who was a dying infant, lived for 21 days with a Baboon Heart.

How was the Recent Transplant Different?

- In the recent transplant, Maryland surgeons used a heart from a pig after it underwent Gene-Editing in a bid to remove a sugar in its cells which is Responsible for hyper-fast organ Rejection.

About Xenotransplantation:

- Xenotransplantation or heterologous transplant, is the transplantation of living cells, organs or tissues from one species to another. Such cells, organs or tissues are called xenografts or xenotransplants.

- The technique of Xenotransplantation of human tumour cells into Immunocompromised mice is often used in Pre-Clinical Oncology Research.

4.1 SCIENCE & TECHNOLOGY SNIPPETS

1. One Nation-One Grid-One Frequency

Why in News?

- The Power Grid Corp. of India Ltd (PGCIL) has recently celebrated the anniversary of operationalization of One Nation-One Grid-One Frequency i.e National Grid.

Highlights:

- The National Grid Management on a Regional Basis started in the sixties.
- The Indian Power system for planning and operational purposes is divided into five regional grids.
- The integration of regional grids, and thereby establishment of National Grid, was conceptualised in the early nineties.
- Initially, State grids were interconnected to form a regional grid and India was demarcated into 5 regions namely Northern, Eastern, Western, North Eastern and Southern region.
- In 1991 North Eastern and Eastern grids were connected. Further, in 2003, Western region grid was connected with it.
- In August 2006 North and East grids were interconnected thereby 4 regional grids are synchronously connected forming a central grid operating at one frequency.
- On 31st December 2013, the southern Region was connected to the Central Grid. Thereby achieving 'One Nation, One Grid, One Frequency'.
- All possible measures are taken to ensure that the grid frequency always remains within the 49.90-50.05 Hz (hertz) band.
- Presently, the country has a total inter-regional transmission capacity of about 1,12,250 MW which is expected to be enhanced to about 1,18,740 MW by 2022
- Matching Demand-Supply: Synchronisation of all regional grids will help in optimal utilization of scarce natural resources by transfer of Power from Resource centric regions to Load Centric Regions.
- Development of Electricity Market: Further, this shall pave the way for establishment of a vibrant Electricity market facilitating trading of power across regions.

2. Semiconductor

Why in News?

- There has recently been an abrupt and cascading shortage of semiconductors worldwide.

Highlights:

- Semiconductors are materials which have a conductivity between conductors (generally metals) and non-conductors or insulators (such as most ceramics). Semiconductors can be pure elements, such as silicon or germanium, or compounds such as gallium arsenide or Cadmium Selenide.
- Conductivity is the measure of the ease at which an electric charge or heat can pass through a material.
- They are also known as integrated circuits or more commonly just chips; they may be the tiniest yet most exacting product ever manufactured on a global scale
- It's an electric circuit with many components such as transistors and wiring formed on a semiconductor wafer. An electronic device comprising numerous of these components is called Integrated Circuit (IC), and can be found in electronic devices such as computers, smartphones, appliances, gaming hardware and medical equipment.
- These devices find widespread use in almost all industries, especially in the automobile industry. Electronic parts and components today account for 40% of the cost of a new internal combustion engine car, up from less than 20% two decades ago.
- Semiconductor Chips account for a bulk of this increase.

3. Open-Source Software

Why in News?

- The Github, an open-source software repository service was recently used to create and share an offensively Named App that sexually harassed a women in India.

Highlights:

- The app used pictures of the women stolen from their social media handles and invited “users” to bid for them.
- GitHub has blocked the user, and the Indian Computer Emergency Response System (Cert-In), has been asked to form “a high-level committee.
- The term open source refers to something people can modify and share because its design is publicly accessible.

- Underlying Principles: Open source projects, products, or initiatives embrace and celebrate principles of
- Open exchange
 - ✓ Collaborative participation
 - ✓ Rapid prototyping
 - ✓ Transparency
 - ✓ Meritocracy, and
 - ✓ Community-oriented development.
- Open Source Software: Open source software (OSS) is software that is distributed with its source code, making it available for use, modification, and distribution with its original rights. Source code is the part of software that most computer users don't ever see.
- It's the code computer programmers manipulate to control how a program or application behaves. OSS typically includes a licence that allows programmers to modify the software to best fit their needs and control how the software can be distributed.
- The idea of making source code freely available originated in 1983 from an ideological movement informally founded by Richard Stallman, a programmer at MIT.

4. IHU (Instituts Hospitalo-Universitaires)

Why in News?

- Amid the spread of the Omicron Variant of coronavirus, the discovery of a new strain named 'IHU (Instituts Hospitalo-Universitaires)' that emerged in France raises fears across the world.

Highlights:

- The variant is a sub-lineage of the B.1.640. It has been classified as B.1.640.2.
- The variant has 46 mutations and 37 deletions in its genetic code, more than Omicron. Many of these affect the Spike Protein.
- Till now, only a dozen cases have been reported in France. No other country has detected any new cases of the new variant. It is certainly not as alarming as the spread of Omicron.
- While the large number of significant mutations in this variant has attracted the interest of researchers, and raised concerns among the public, the B.1.640 is not spreading at a rate that is Unnerving.
- The World Health Organization (WHO) has not yet deemed this IHU variant a variant of interest, a variant of concern, or even a variant under investigation.

5. Traditional vaccines just as effective, say US Scientists

Why in News?

- Vaccines like Biological E's Corbevax and Bharat Biotech's Covaxin that are made by traditional methods are "just as effective" as the latest mRNA technology-based vaccines a/c to US Scientists.

What are Vaccines?

- A vaccine is a biological preparation that provides active acquired Immunity to a Particular Infectious Disease. It typically contains an agent that resembles a disease-causing microorganism and is often made from weakened or killed forms of the microbe, its toxins, or one of its surface proteins.

Types of Vaccines:

- There are several types of vaccines, including:
 - ✓ Inactivated vaccines
 - ✓ Live-attenuated vaccines
 - ✓ Messenger RNA (mRNA) vaccines
 - ✓ Subunit, recombinant, polysaccharide, and conjugate vaccines
 - ✓ Viral Vector Vaccines

Inactivated Vaccines:

- Inactivated vaccines use the killed version of the germ that causes a disease.
- Inactivated vaccines usually don't provide immunity (protection) that's as strong as live vaccines. So you may need several doses over time (booster shots) in order to get ongoing immunity against diseases. Inactivated vaccines are used to protect against: Hepatitis A, Flu (shot only), Polio (shot only), Rabies etc.

Live-attenuated Vaccines:

- Live vaccines use a weakened (or attenuated) form of the germ that causes a disease.
- Because these vaccines are so similar to natural infection that they help prevent, they create a strong and long-lasting immune response.
- Just 1 or 2 doses of most live vaccines can give you a lifetime of protection against a germ and the disease it causes.
- They need to be kept cool in refrigerated conditions.
- Live vaccines are used to protect against Measles, mumps, rubella (MMR), Rotavirus, Smallpox, Chickenpox, Yellow fever

Messenger RNA Vaccines:

- Researchers have been studying and working with mRNA vaccines for decades and this Technology was used to make some of the COVID-19 vaccines.
- mRNA vaccines make proteins in order to trigger an immune response.
- mRNA vaccines have several benefits compared to other types of vaccines, including shorter manufacturing times and, because they do not contain a live virus, no risk of causing disease in the person getting vaccinated.

How does mRNA Vaccine Work?

- The mRNA vaccines function differently from traditional vaccines.
- Traditional vaccines stimulate an antibody response by injecting a human with antigens.
- mRNA vaccines inject a fragment of the RNA sequence of a virus directly into the cells, which then stimulate an adaptive immune response mRNA fragment is a specific piece of the virus that carries instructions to build the antigen of the virus.
- An advantage of RNA vaccines is that they Stimulate Cellular Immunity.

6. Sea Dragon 22 exercise

Why in News?

- Recently, the US Sea Dragon 22 exercise began along with the navies of India, Australia, Canada, Japan and South Korea in the Pacific Ocean.

Highlights:

- India, Japan, Australia and the US are also part of the Quadrilateral Security Dialogue (Quad), and also participate in the Malabar exercise.
- Sea Dragon is a US-led multi-national exercise designed to practice and discuss Anti-submarine warfare tactics to operate together in response to traditional and non-traditional maritime security challenges in the Indo-Pacific region.
- It Is an annual exercise.
- The exercise assumes significance in the face of strained relations that some countries have with China and the growing forays of the PLA-Navy into the Indian ocean region.
- The Indian Navy has recently inducted two more Poseidon 8I maritime reconnaissance and anti-submarine warfare aircraft, which would further boost its ability to keep an eye over the Chinese ships and submarines in the region.

7. Action Plan for Introduction of Cheetah in India

Why in News?

- Recently, the Union Minister for Environment, Forests and Climate Change has launched the 'Action Plan for Introduction of Cheetah in India' under which 50 of these big cats will be introduced in the next five years.

Highlights:

- The action plan was launched at the 19th meeting of the National Tiger Conservation Authority (NTCA).
- NTCA is a statutory body under the Ministry of Environment, Forests and Climate Change.
- Last year (2021), the Supreme Court lifted its seven-year-long stay on a proposal to introduce African Cheetahs from Namibia into the Indian habitat.
- Reintroduction' of a species means releasing it in an area where it is capable of surviving.
- Reintroductions of large carnivores have increasingly been recognised as a strategy to conserve threatened species and Restore Ecosystem Functions.
- The cheetah is the only large carnivore that has been eliminated, mainly by over-hunting in India in historical times.
- The conservation of the cheetah will revive grasslands and their biomes and habitat, much like Project Tiger has done for forests and all the species that have seen their numbers go up.

8. Environmental DNA (e-DNA)

Why in News?

- DNA floating in the air (i.e. e-DNA) can boost biodiversity conservation efforts across the world.

Highlights:

- Researchers from two teams have independently shown that environmental DNA (e-DNA) can potentially identify and monitor terrestrial animals.
- Animals shed DNA through their breath, saliva, fur or faeces into the environment and these samples are called e-DNA.
- Airborne e-DNA sampling is a biomonitoring method that is rising in popularity among biologists and conservationists as it provides abundant information.
- It can help understand the composition of animal communities and detect the spread of non-native species.

- This method will work with the current techniques to monitor endangered species after some fine-tuning.
- Typically, biologists observe animals in person or by picking up DNA from animals' footprints or faeces, which demand extensive fieldwork.
- Spotting animals can be challenging, especially if they inhabit inaccessible habitats.
- It can aid in tracking long-distance migratory birds and other birds' flying patterns. It can also capture DNA from smaller animals including insects.
- Last year (2021), a proof-of-concept study used airborne e-DNA to monitor terrestrial Insects.
- As wildlife ecosystems become rapidly and extremely chaotic owing to the alarming effects of climate change, terrestrial biomonitoring techniques are expected to adapt and progress rapidly for accurate and Timely Monitoring.
- Environmental DNA (e-DNA) is nuclear or mitochondrial DNA that is released from an Organism into the Environment.
- Sources of eDNA include secreted feces, mucous, and gametes; shed skin and hair; and carcasses. eDNA can be detected in cellular or extracellular (dissolved DNA) form.
- In aquatic environments, eDNA is diluted and distributed by currents and other Hydrological Processes, but it only lasts about 7–21 days, depending on environmental Conditions.

9. BrahMos Missile

Why in News?

- BrahMos Supersonic Cruise Missile was successfully test-fired by DRDO from the Indian Navy destroyer INS Vishakhapatnam off the Western Coast.

About the BrahMos Missile:

- A combination of the names of Brahmaputra and Moskva rivers, BrahMos missiles are designed, developed and produced by BrahMos Aerospace, a joint venture company set up by DRDO and Mashinostroyeniya of Russia.
- It is a two-stage missile with a Solid Propellant booster as the first stage and liquid ramjet as the second stage.
- The cruise missiles like BrahMos are a type of systems known as the 'standoff range weapons' which are fired from a range sufficient to allow the attacker to evade defensive fire from the adversary.

- Brahmos is a multiplatform it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in both day and night irrespective of the weather conditions.
- It operates on the “Fire and Forgets” principle it does not require further guidance after launch.
- Brahmos is one of the fastest cruise missile currently operationally deployed with speed of Mach 2.8, which is 3 times more than the speed of sound.
- These weapons are in the arsenal of most major militaries in the world.
- The range of the missile was originally capped at 290 km as per obligations of the Missile Technology Control Regime (MTCR). Following India’s entry into the club in June 2016, officials said the range would be extended to 450 km and to 600km at a later stage. An extended range missile had been tested earlier.
- INS Visakhapatnam, with a displacement of 7,400 tonnes, is the first of four ingeniously Designed and built Project-15B class stealth Guided missile destroyers and was Commissioned in November 2021.

10. Indigenous Aircraft Carrier (IAC) – INS VIKRANT

Why in News?

- The Indigenous Aircraft Carrier (IAC) 1, which will be called INS Vikrant once it enters service with the Indian Navy, began another set of sea trials.

Highlights:

- An aircraft carrier is “a large ship that carries military aircraft and has a long, flat surface where they take off and land.”
- These floating air bases are equipped with a full-length flight deck capable of carrying, Arming, Deploying and Recovering Aircraft.
- They act as command and control of a naval fleet in times of war and peace.
- A carrier battle Group consists of “an aircraft carrier and its escorts, together making the Group.
- During World War II, the Imperial Japanese Navy was the first to assemble a large number of Carriers into a single task force known as Kido Butai.
- This task force was used during the Pearl Harbour Attack.
- **INS Vikrant (Decommissioned):** Beginning with INS Vikrant which served India from 1961 to 1997.

- India acquired the Vikrant from the United Kingdom in 1961, and the carrier played a stellar role in the 1971 war with Pakistan that led to the birth of Bangladesh.
- In 2014, INS Vikrant, was broken down in Mumbai.
- **INS Viraat (Decommissioned):** INS Vikrant was followed by the Centaur-class carrier HMS (Her Majesty's Ship) Hermes, which was rechristened in India as INS Viraat and served in the Indian Navy from 1987 to 2016.

11. African Swine Fever

Why in News:

- Recently, Thailand has detected African Swine Fever in a surface swab sample collected at a slaughterhouse.

Highlights:

- It is a highly contagious and fatal animal disease that infects and leads to an acute form of hemorrhagic fever in domestic and wild pigs.
- Other manifestations of the disease include high fever, depression, anorexia, loss of appetite, hemorrhages in the skin, vomiting and diarrhoea among others.
- It was first detected in Africa in the 1920s.
- Historically, outbreaks have been reported in Africa and parts of Europe, South America, and the Caribbean.
- However, more recently (since 2007), the disease has been reported in multiple countries across Africa, Asia and Europe, in both domestic and wild pigs.
- In 2021, cases were also detected in India.
- The mortality is close to 100% and since the fever has no cure, the only way to stop its spread is by culling the animals.
- ASF is not a threat to human beings since it only spreads from animals to other animals.
- ASF is a disease listed in the World Organisation for Animal Health (OIE) Terrestrial Animal Health Code and thus, reported to the OIE.
- Classical swine fever is also known as hog cholera, is an important disease of pigs.
- It is one of the most economically-damaging pandemic viral diseases of pigs in the world.
- It is caused by a virus of the genus Pestivirus of the family Flaviviridae, which is closely related to the viruses that cause bovine viral diarrhoea in cattle.
- Recently, the ICAR-IVRI developed a Cell Culture CSF Vaccine (live attenuated) using the Lapinized Vaccine Virus from foreign strain.

5.1. ART AND CULTURE & MISCELLANEOUS SNIPPETS

1. Maya Civilization

Why in News?

- Recently, study in Maya civilization may have had access to nearly 500 drought Resistant Edible Plants.

Highlights:

- The mystery behind Maya civilization's sudden fall from glory still eludes us. Scientists have long suspected that drought pushed its people towards starvation.
- The Maya people faced starvation because of their dependence on drought-sensitive crops such as corn, beans and squash.
- The Maya are an Indigenous people of Mexico and Central America who have continuously inhabited the lands comprising modern-day Yucatan, Quintana Roo, Campeche, Tabasco, and Chiapas in Mexico and southward through Guatemala, Belize, El Salvador and Honduras.
- The Maya civilization originated in the Yucatan Peninsula. Known for its monumental architecture and an advanced understanding of mathematics and astronomy.
- The rise of the Maya began about 250 CE, and what is known to archaeologists as the Classic Period of Mayan culture lasted until about 900 CE. At its height, Mayan civilization consisted of more than 40 cities, each with a population between 5,000 and 50,000.
- But then, suddenly, between 800 and 950 CE, many of the southern cities were abandoned. This period is called the collapse of the Classic Maya civilisations, puzzling modern-day scientists.
- As early as 1500 BCE the Maya had settled in villages and had developed an agriculture based on the cultivation of corn (maize), beans, and squash; by 600 CE cassava (sweet manioc) was also grown.
- They began to build ceremonial centres, and by 200 CE these had developed into cities containing temples, pyramids, palaces, courts for playing ball, and plazas.
- The ancient Maya quarried immense quantities of building stone (usually limestone), which they cut by using harder stones such as chert. They practiced mainly slash-and-burn agriculture, but they used advanced techniques of irrigation and terracing.
- They also developed a system of hieroglyphic writing and highly sophisticated calendrical and Astronomical Systems.

- The Maya made paper from the inner bark of wild fig trees and wrote their hieroglyphs on books made from this paper. Those books are called codices.
- The Maya also developed an elaborate and beautiful tradition of sculpture and relief carving.
- Architectural works and stone inscriptions and reliefs are the chief sources of knowledge about the early Maya.

2. Centre for Science and Environment (CSE)

Why in News?

- Recently, the analysis by the Centre for Science and Environment (CSE), a Delhi-based non-profit, 61% of the coal-based power plants located near million-plus population cities, which have to meet their emission standards by December 2022, will miss their deadlines.

Highlights:

- The Ministry of Environment, Forest and Climate Change (MoEF&CC) had in 2015 set new emission norms and fixed a deadline to meet it
- Category A: The power plants which have to meet the December 2022 target are those which are located within 10 km radius of the National Capital Region (NCR) or cities having million-plus population.
- There are 79 coal-based power plants in this category as per a categorisation list of a task force, constituted by the Central Pollution Control Board (CPCB).
- Category B and C: 68 power plants have been put in Category B (compliance deadline of December 2023) and 449 in Category C (compliance deadline of December 2024).
- The power plants which are located within 10 km radius of critically polluted areas or non-attainment cities fall under category B while the rest others (75% of total) fall in category C.
- Maharashtra, Tamil Nadu, Madhya Pradesh, Chhattisgarh and Andhra Pradesh.
- These defaulting stations are run largely by the respective State Governments.
- At least 17 Indian states have coal-based thermal power stations. A state-wise comparison highlighted the following:
- Except for Assam (AS), none of the other states among these 17 will 100% comply with the stipulated deadlines. This state has a 750-megawatt power station that makes it an insignificant per cent of total coal capacity.

6. INTERNATIONAL RELATIONS

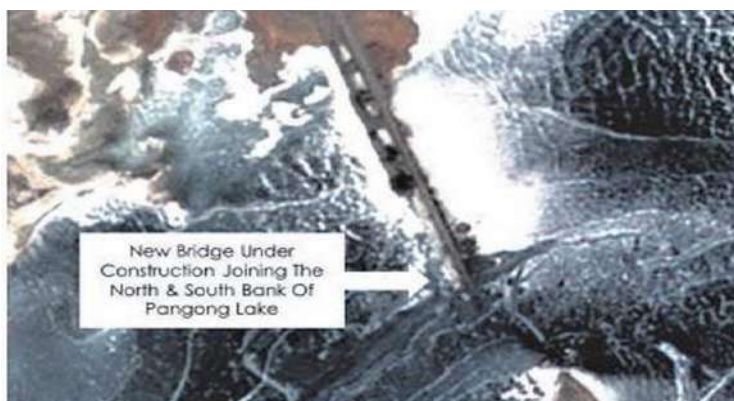
1. China Constructing Bridge on Pangong Lake in Ladakh

Why in News?

- China is constructing a bridge in Eastern Ladakh connecting the North and South Banks of Pangong Tso which would significantly bring down the time for People's Liberation Army (PLA) to move troops and equipment between the two sectors.

About the News:

- Sources said the bridge is being constructed more than 20 km east of Finger 8 on the lake's north bank – India says Finger 8 denotes the LAC.
- The bridge site is just east of Khurnak Fort in Rutog county where the PLA has frontier bases. There is a frontier defence company at Khurnak Fort, and a water squadron further east at Banmozhang.
- Since the military standoff began in May 2020, India and China have not only worked to improve existing infrastructure, but have also built several new roads, bridges, landing strips along the entire frontier. Historically a part of India, Khurnak Fort has been under Chinese control since 1958. From Khurnak Fort, the LAC is considerably west, with India claiming it at Finger 8 and China claiming it at Finger 4.
- The north and south banks of the lake were among the several friction points that surfaced after the start of the standoff. Before India and China pulled back troops from the north and south banks in February 2021, the area had seen massive mobilisation and the two sides even deployed tanks, barely a few hundred metres apart in some locations.



About the Issue:

- India and China have previously reached an agreement on disengagement in the Pangong lake area to cease their forward deployments in a phased, coordinated and verified manner.

- As per the agreement:
 - ✓ The Chinese side will keep its troop presence in the North Bank area to east of Finger 8.
 - ✓ Reciprocally, the Indian troops will be based at their permanent base at Dhan Singh Thapa Post near Finger 3.
 - ✓ A similar action would be taken in the South Bank area by both sides.
 - ✓ Any structures that had been built by both sides since April 2020 will be removed and the landforms restored.
 - ✓ Both sides have agreed on a temporary moratorium on military activities in the North Bank, including patrolling in the Traditional Areas.



Why there is a Dispute here?

- The Line of Actual Control (LAC) – the line that separates Indian and Chinese troops since 1962 – generally runs along the land except for the width of Pangong Tso. Here, it runs through water.
- Both sides have marked their areas announcing which side belongs to which country.
- India controls about 45 km stretch of the Pangong Tso and China the rest.
- The lake is divided into sections called fingers. There are eight of them in contention here. India and China have different understanding of where the LAC passes through.
- India has maintained that the LAC passes through Finger 8, which has been the site of the final military post of China.
- India has been patrolling the area – mostly on foot because of the nature of the terrain – up to Finger 8. But Indian forces have not had active control beyond Finger 4.
- China, on the other hand, says the LAC passes through Finger 2. It has been patrolling up to Finger 4- mostly in light vehicles, and at times up to Finger 2.

Why China wanted to Encroach areas Alongside Pangong Tso?

- Pangong Tso is strategically crucial as it is very close to Chusul Valley, which was one of the battlefronts between India and China during the 1962 war.
- China also does not want India to boost its infrastructure anywhere near the LAC. China fears it threatens its occupation of Aksai Chin and Lhasa-Kashgar highway.
- Any threat to this highway also puts Chinese rather imperialist plans in Pakistan-occupied territories in Ladakh and Jammu and Kashmir, and beyond in Pakistan.

What are its Implications?

- Towards the end of August 2020, India outmanoeuvred China to capture the previously unoccupied heights of the Kailash Range on the south bank of the lake.
- Indian troops positioned themselves on the peaks there, including Magar Hill, Gurung Hill, Rejang La, Rechin La, and this allowed them to dominate the strategic Spanggur Gap – it can be used for launching an offensive, as China had done in 1962 – and also gave them a view of the PLA garrison at Moldo.
- Sources said that the new bridge built by China will allow it to mobilise its troops faster in this area, hoping to prevent a repeat of what happened in August 2020.

About Pangong Tso:

- Pangong Tso or Pangong Lake is an **endorheic lake** (also called closed or terminal basins or internal drainage systems or basins) in the Himalayas is situated at an elevation of 4,225 m (13,862 ft).
- It is 134 km (83 mi) long and extends from Ladakh, India to the Tibetan Autonomous Region, China.
- It is formed from Tethys geosyncline. The Karakoram Mountain range ends at the north bank of Pangong Tso. Its southern bank too has high broken mountains sloping towards Spangur Lake in the south.
- Approximately 60% of the length of the lake lies within the Tibetan Autonomous Region.
- The lake is 5 km (3.1 mi) wide at its broadest point. All together it covers 604 km².
- During winter the lake freezes completely, despite being **Saline Water**.
- It is **not a part of the Indus River basin** area and geographically a separate landlocked River Basin. The lake is in the process of being identified under the Ramsar Convention as a wetland of international importance.
- This will be the first trans-boundary wetland in South Asia under the convention.

2. FCRA Nod for MoC Restored

Why in News?

- The Ministry of Home Affairs (MHA) recently restored the FCRA registration of Missionaries of Charity (MoC), the Catholic religious congregation set up by Nobel laureate Mother Teresa.

About the News:

- The Foreign Contribution Regulation Act (FCRA) registration is mandatory to receive foreign donations.
- The move comes just days after the Ministry issued a statement that the FCRA registration of the MoC was not renewed as “some adverse inputs were noticed”.
- The registration was renewed, making MoC eligible to receive and utilise foreign funds in its bank accounts even as the U.K Parliament debated the issue, seeking to know if the British government had raised the issue of blocking of overseas funds of the MoC and other NGOs with India.

Background:

- The registration of thousands of NGOs was up for renewal in 2020-21. The Ministry had declined to renew the FCRA registration of 179 NGOs, while 5,789 associations did not apply for a renewal before the December 31 deadline.
- After the exercise, the number of active FCRA-registered NGOs is down from 22,762 to 16,907.

How FCRA Regulates NGO funding?

- FCRA regulates foreign donations and ensures that such contributions do not adversely affect the internal security of the country.
- The Act, first enacted in 1976 was amended in the year 2010 and then 2020.
- Section 5 of the Foreign Contribution (Regulation) Act, 2010 gives the Union government “Unchecked and Unbridled Powers” to declare an organisation as being one of political nature and deny it access to funds from sources abroad.
- FCRA is implemented by the Ministry of Home Affairs.

Applicability:

- The provisions of the Act apply to the territory of India, to citizens of India who may be outside India and to companies or their branches outside India that are registered or Incorporated in India.

- The entities covered by the Act include an individual, a Hindu undivided family, an Association, or a Registered Company.

Prior Reference Category under the Act:

- It implies that to donate to such an NGO, a foreign donor has to take prior clearance from the Ministry of Home Affairs.

Latest 2020 Amendments and Criticisms Associated:

- The amendments mandated that registered NGOs open a designated account in the main branch of the State Bank of India in the Capital in which the foreign contributions to their various causes would exclusively land.
- The petitioners have argued that this measure would be cumbersome for NGOs operating in rural India and far away from the Capital.

What is a Foreign Contribution Under FCRA?

- “Foreign contribution” under FCRA covers any “donation, delivery or transfer made by any foreign source of any article” as long as it is not given as a gift for personal use, or if its market value in India at the time it was made is “not more than such sum as may be specified from time to time by the Central government”.

Exceptions:

- Any currency, or security can fall under the ambit of the Act though it excludes any money received “by way of fee or towards cost in lieu of goods or services rendered by such person in the ordinary course of his business, trade or commerce whether within India or outside India”.
- Neither are donations made by Non-Resident Indians (NRIs) considered to be “foreign contribution” although a donation from a person of Indian origin who has assumed foreign nationality is treated as as “foreign contribution”.

Who Cannot Receive Foreign Contribution?

- A host of entities are barred from receiving foreign funds, including election candidates, those connected with a registered newspaper, judges, government servants or employees of any entity controlled or owned by the Government and Members of any Legislature. Political parties and their office bearers, too, are Prohibited from receiving Foreign Funds.

3. Kazakh Leader issues shoot to kill order

Why in News?

- Kazakhstan's President recently rejected calls for talks with protesters after days of unprecedented unrest, vowing to destroy “armed bandits” and authorising his forces to shoot to kill Without Warning.

About the News:

- Recently, a sharp and sudden spike in fuel prices triggered a national crisis in Kazakhstan, with the government officially stepping down following days of violent protests across the country. Russian-led forces have also arrived in Kazakhstan at the request of the country's authoritarian president, amid a violent crackdown on anti-government protests.
- Earlier, the Defence Minister of India held bilateral talks with the Defence Minister of the Republic of Kazakhstan in New Delhi.

What are the Reasons for the Unrest?

- Angry Kazakhs first took to the streets after fuel prices doubled in the oil-rich Central Asian nation when the government lifted price caps for Liquefied Petroleum Gas (LPG), commonly used in Vehicles.
- The protests began in the oil city of Zhanaozen, where at least 16 oil workers protesting against poor working conditions were killed by the police in 2011.
- Demonstrations broke out and quickly turned violent in cities and towns across the country, in what is being called the biggest wave of protests in Kazakhstan's history.
- Kazakhstan has been a largely stable autocracy since the collapse of the Soviet Union, protests of this scale haven't been seen since the 1980s.
- Autocracy is a system of government of a country in which one person has Complete Power. Protesters demanded the resignation of the government and lowering of LPG prices.
- They have argued that the jump in prices would cause a steep increase in food prices and deepen the income inequality that has plagued the nation for decades.
 - ✓ Just last year (2021), inflation in the country was closing in on 9% year-on-year, the highest it has been in over five years.

Demand for Democracy:

- Cheaper fuel is only the tip of the iceberg. There has been a growing discontent among ordinary Kazakhs, both over rising income inequality, which has only worsened due to the coronavirus pandemic, and the lack of democracy.

- While the country has been able to attract millions of dollar's worth of foreign investments by appearing politically stable, its authoritarian government has been widely criticised over the years for violating Fundamental Freedoms.



Significance of the Protests:

- **For the World:**
- Sandwiched between Russia and China, Kazakhstan is the world's largest landlocked country, bigger than the whole of Western Europe, though with a population of just 19 million.
 - ✓ It has vast mineral resources, with 3% of global oil reserves and important coal and gas sectors.
 - ✓ It is the top global producer of uranium, which jumped in price by 8% after the unrest.
 - ✓ The country is also the world's second-largest miner of bitcoin.
- A mainly Muslim republic with a large Russian minority, it has largely escaped the civil strife seen in other parts of Central Asia.
- The latest demonstrations matter because the country has been regarded until now as a pillar of political and economic stability in an unstable region, even as that stability has come at the price of a repressive Government that Stifles Dissent.

For Russia:

- The protests are also significant as Kazakhstan has been aligned with Russia, whose president views the country — a body double of sorts for Russia in terms of its economic and political systems — as part of Russia's sphere of influence.
 - ✓ The intervention by the Collective Security Treaty Organisation, a Russian version of North Atlantic Treaty Organisation (NATO), is the first time that its protection clause has been invoked, a move that could potentially have sweeping consequences for geopolitics in the region.

- ✓ This is the third uprising against an authoritarian, Russia-aligned nation, following pro-democracy protests in Ukraine in 2014 and in Belarus in 2020.
- ✓ The chaos threatens to undermine Russia's sway in the region at a time when Russia is trying to assert its economic and geopolitical power in countries like Ukraine and Belarus.
- The countries of the former Soviet Union are also watching the protests closely, and the events in Kazakhstan could help energise opposition forces elsewhere.

For the US:

- Kazakhstan also matters to the US, as it has become a significant country for American energy concerns, with Exxon Mobil and Chevron having invested tens of billions of dollars in western Kazakhstan, the region where the unrest began this month.
- ✓ The United States government has long been less critical of post-Soviet authoritarianism in Kazakhstan than in Russia and Belarus.

What is the Government's Reaction?

- It called the protesters “a band of terrorists,” declared Kazakhstan under attack and asked the Russian-led military alliance to intervene.
- The government has also tried to quell the demonstrations by instituting a state of emergency and blocking social networking sites and chat apps.
- Public protests without permits were already illegal. It also initially conceded to a few of the demonstrators' demands, dismissing the cabinet and announcing the possible dissolution of Parliament, which would result in new elections. But its moves have so far Failed to Tame Discontent.

Global Stand:

- The United Nations(UN), US, UK, and France have called on all sides to refrain from violence.
- India is closely monitoring the situation in Kazakhstan and will facilitate the return of Indians.

Way Forward:

- The US and other major nations of the world need to tell the Kazakh authorities to stop Throttling the Internet and to Avoid Violence.
- In the long-term, the United Nations (UN) must press the Kazakhs to hold legitimately free and Fair Elections or else they will see more and more Protest Activity.

6.1. INTERNATIONAL RELATIONS SNIPPETS

1. China Issues 'official' names for 15 places in Arunachal Pradesh

Why in News?

- China's Ministry of Civil Affairs has issued standardized names for 15 places in the Indian State of Arunachal Pradesh, to be used henceforth on official Chinese maps.

MEA clarification:

- The Ministry of External Affairs has dismissed the Chinese "invention".
- Arunachal Pradesh has always been, and will always be, an integral part of India, said MEA.

Why is China giving Names to places that are in India?

- China claims some 90,000 sq km of Arunachal Pradesh as its territory.
- It calls the area "Zangnan" in the Chinese language and makes repeated references to "South Tibet".
- Chinese maps show Arunachal Pradesh as part of China, and sometimes parenthetically refer to it as "so-called Arunachal Pradesh".
- China makes periodic efforts to underline this unilateral claim to Indian territory.
- Giving Chinese names to places in Arunachal Pradesh is part of that effort.

Earlier Unilateral Renamings:

- This is the second lot of "**Standardized**" names of places in Arunachal Pradesh that China has Announced.
- Earlier in 2017, it had issued "official" Chinese names for six places spanning the breadth of Arunachal Pradesh

What is China's Argument for Claiming these Areas?

- The PRC disputes the legal status of the McMahon Line, the official boundary under the 'Convention Between Great Britain, China, and Tibet' — of 1914 (Simla Convention).
- China was represented at the Simla Convention by a plenipotentiary of the Republic of China, which had been declared in 1912 after the Qing dynasty was overthrown.
- The present Communist government came to power only in 1949, when the People's Republic was Proclaimed.
- The Chinese representative did not consent to the Simla Convention, saying Tibet had no independent authority to enter into International Agreements.

What is the McMohan Line?

- The McMohan Line, named after Henry McMahon, the chief British negotiator at Shimla, was drawn from the eastern border of Bhutan to the Isu Razi pass on the China-Myanmar border.
- China claims territory to the south of the McMahon Line, lying in Arunachal Pradesh.
- China also bases its claims on the historical ties that have existed between the monasteries in Tawang and Lhasa.

Intention behind these Renaming's:

- This renaming is a part of the Chinese strategy to assert its territorial claims over Indian territory.
- As part of this strategy, China routinely issues statements of outrage whenever an Indian dignitary visits Arunachal Pradesh.
- Beijing keeps harping on its “consistent” and “clear” position that the Indian possession of Arunachal Pradesh.
- These claims have been firmly established and recognized by the world, as “illegal”.

Arunachal not all-alone:

- Laying aggressive claims to territories on the basis of alleged historical injustices done to China is a part of Beijing's foreign policy playbook.
- The claim on Taiwan is one such example, as are the consistent efforts to change the “facts on the ground” in several disputed islands in the South China Sea.
- The aggression is at all times backed in overt and covert ways by the use of China's Economic and Military Muscle.

2. Aquamation

Why in News?

- The Nobel Peace Prize winner Anglican archbishop and anti-apartheid campaigner Desmond Tutu died. He was very passionate about protecting the environment and taking necessary actions.

Highlights:

- In concurrence of his passion to save the environment, his body underwent aquamation, a Green Alternative to traditional cremation methods.
- The process of aquamation uses energy which is five times less than fire. It also reduces by about 35% the amount of greenhouse gases that are emitted during Cremation.

- It is a process in which the body of the deceased is immersed for a few hours in a mixture of water and a strong alkali in a pressurized metal cylinder and heated to around 150 degree centigrade.
- The combination of gentle water flow, temperature and alkalinity accentuate the breakdown of the organic materials.
- The process leaves behind bone fragments and a neutral liquid called effluent.
- The effluent is sterile, and contains salts, sugars, amino acids and peptides.
- There is no tissue and no DNA left after the Process Completes.
- **Background:** The process was developed and patented in 1888 by Amos Herbert Hanson, a farmer who was trying to develop an ingenious way to make fertilizer from animal Carcasses.
- The First Commercial System was installed at Albany Medical College in 1993.
- Thereafter, the process continued to be in use by hospitals and universities with donated body programmes.
- This process is referred to as alkaline hydrolysis or as Cremation Association of North America (CANA) (an international non-profit organisation) calls it flameless cremation.
- The process Is also known as water cremation, green cremation or chemical cremation.

3. China's bridge over Pangong TSO

Why in News?

- China is building a bridge across the Pangong Tso area connecting the North and South Banks which will significantly reduce the time for moving troops and equipment between the two sides.



Pangong Tso:

- Pangong Tso or Pangong Lake is an endorheic lake in the Himalayas situated at a Height of about 4,350 m.
- It is 134 km long and extends from India to the Tibetan Autonomous Region, China.
- Approximately 60% of the length of the lake lies within the Tibetan Autonomous Region.
- The lake is 5 km wide at its broadest point. All together it covers 604 sq.km.
- During winter the lake freezes completely, despite being saline water.
- It is not a part of the Indus river basin area and is geographically a separate landlocked river basin. Earlier, Pangong Tso had an outlet to Shyok River, a tributary of Indus River, but it was closed off due to natural damming.

Tactical Significance of the Lake:

- It lies in the path of the Chushul approach, one of the main approaches that China can use for an offensive into Indian Territory.
- During the 1962 war, this was where China launched its main offensive — the Indian Army fought heroically at Rezang La under Maj. Shaitan Singh.
- Not far away, to the north of the lake, is the Army's Dhan Singh Thapa post, named after Major Dhan Singh Thapa who was awarded the country's highest gallantry award, the Param Vir Chakra.
- Major Thapa and his platoon were manning the Sirijap-1 outpost which was essential for the defense of the Chushul airfield.

Connectivity in the Region:

- Over the years, the Chinese have built motorable roads along their banks of the Pangong Tso. This points to the importance accorded by the Chinese to the area.
- Even during peacetime, the difference in perception over where the LAC lies on the northern bank of the lake makes this contested terrain.
- In 1999, when the Army unit from the area was moved to Kargil for Operation Vijay, China took the opportunity to build 5 km of a road inside the Indian Territory along the lake's bank.
- From one of these roads, Chinese positions physically overlook Indian positions on the Northern Tip of the Pangong Tso Lake.

What is the Importance of the Bridge over Pangong Tso?

- The bridge over Pangong Tso is located around 25 kms ahead of the LAC in Chinese territory and will significantly reduce the time for movement of Chinese army.

- The Indian Army gained tactical advantage over the PLA on the south bank in end August 2020 by occupying several peaks lying vacant since 1962 gaining a dominating view.
- This has prompted China to build deep alternate roads behind the friction points away from the line of sight.

How is India Responding to developments on the ground?

- The bridge is well within Chinese territory.
- The implications of this new bridge will have to be factored in the Indian Army's Operational Planning for the future.
- On its part, over the last few years India has been focusing on infrastructure development in forward areas and improving connectivity to the forward areas.
- Large-scale construction of roads, bridges and tunnels is underway all along the LAC.

4. United Nation Security Council (UNSC)

Why in News?

- The United Nation Security Council (UNSC) had recently got five new Non-Permanent members (Albania, Brazil, Gabon, Ghana and the United Arab Emirates).

Highlights:

- Estonia, Niger, St Vincent and the Grenadines, Tunisia and Vietnam finished their terms recently.
- Albania is joining for the first time while Brazil is taking an 11th turn. Gabon and Ghana each have been on the council three times before and the UAE once.
- More than 50 of the UN's 193 member countries have never been elected to the council since its formation.
- The Security Council was established by the UN Charter in 1945. It is one of the six principal organs of the United Nations.
- The other 5 organs of the United Nations are—the General Assembly (UNGA), the Trusteeship Council, the Economic and Social Council, the International Court of Justice, and the Secretariat.
- Its primary responsibility is to work to maintain international peace and security. The council is headquartered at New York.
- The council has 15 members: the five permanent members and ten non-permanent members elected for two-year terms.

- The five permanent members are the United States, the Russian Federation, France, China and the United Kingdom.
- India, for the eighth time, has entered the UNSC as a non-permanent member last year (2021) and will stay on the council for two years i.e 2021-22.
- Each year, the General Assembly elects five non-permanent members (out of ten in total) for a two-year term. The ten non-permanent seats are distributed on a regional basis.
- The council's presidency is a capacity that rotates every month among its 15 members.

5. CSTO troops deployed in Kazakhstan

Why in News?

- A Moscow-led Military Alliance called Collective Security Treaty Organization (CSTO) dispatched troops to help quell mounting unrest in Kazakhstan.

Ongoing Situation in Kazakhstan:

- Long seen as one of the most stable of the ex-Soviet republics of Central Asia, energy-rich Kazakhstan is facing its biggest crisis.
- There are ongoing protests over rising fuel prices escalated into widespread unrest.
- The nationwide protests are also signifying a wider, region-wide longing for political change. Under increasing pressure, Kazakh President appealed to the Russia for CSTO army to be deployed in Kazakhstan.

Concerns over CSTO Troop's Deployment:

- It is argued that domestic turmoil could be utilized by Russian nationalists for asserting their claims in Northern Kazakhstan.

What is CSTO?

- The CSTO is a Russia-led military alliance of seven former Soviet states that was created in 2002. Current CSTO members are Armenia, Belarus, Kazakhstan, Kyrgyzstan, the Russian Federation and Tajikistan.
- Afghanistan and Serbia hold observer status in the CSTO.
- Its purpose is to ensure the collective defence of any member that faces external aggression.

Outlined Functions of CSTO:

- Version of NATO: It has been described by political scientists as the Eurasian counterpart of NATO, which has 29 member states, while the CSTO has just six.

- Arms trade and mutual defense: CSTO supports arms sales and manufacturing as well as military training and exercises, making the CSTO the most important multilateral defence Organization in the former Soviet Union.
- Non- proliferation of weapons: CSTO also coordinates efforts in fighting the illegal circulation of weapons among member states and has developed law enforcement training for its members in pursuit of these aims.

What does CSTO Membership Provide?

- Barring relations with NATO: While CSTO membership means that member states are barred from joining other military alliances, limiting, for example, their relationship with NATO. Benefits in arms import from Russia: Its members receive discounts, subsidies, and other Incentives to buy Russian arms, facilitating military cooperation.
- Assurance against military conquest: In the CSTO, aggression against one signatory is perceived as aggression against all. It however remains unclear whether this feature works in practice.

6. AIIB

Why in News?

- Former Reserve Bank of India (RBI) governor Urjit Patel has been appointed vice-President of the Beijing-based Asian Infrastructure Investment Bank (AIIB).

About:

- Mr.Patel will serve a three-year term as one of the multilateral development bank's five vice-presidents.
- Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank headquartered in Beijing with a mission to improve social and economic outcomes in Asia and beyond.
- The Parties (57 founding members) to agreement comprise the Membership of the Bank. There are more than 100 members now.
- The bank started operation after the agreement entered into force on 25 December 2015, after ratifications were received from 10 member states holding a total number of 50% of the initial subscriptions of the Authorized Capital Stock.
- **Aim:** By investing in sustainable infrastructure and other productive sectors today, it aims to connect people, services and markets that over time will impact the lives of billions and build a better future.

- **Voting Rights:** China is the largest shareholder with 26.61 % voting shares in the bank followed by India (7.6%), Russia (6.01%) and Germany (4.2 %).
- The regional members hold 75% of the total voting power in the Bank.
- **Various organs of AIIB:**
 - ✓ **Board of Governors:** The Board of Governors consists of one Governor and one Alternate Governor appointed by each member country. Governors and Alternate Governors serve at the pleasure of the Appointing Member.
 - ✓ **Board of Directors:** Non-resident Board of Directors is responsible for the direction of the Bank's general operations, exercising all powers delegated to it by the Board of Governors
 - ✓ **International Advisory Panel:** The Bank has established an International Advisory Panel (IAP) to support the President and Senior Management on the Bank's strategies and Policies as well as on General Operational Issues.

7. Red Sandalwood

Why in News?

- The International Union for Conservation of Nature's (IUCN) recently categorised the Red Sanders (or Red Sandalwood) again into the 'endangered' category in its Red List.

Highlights:

- The species, *Pterocarpus santalinus*, is an Indian endemic tree species, with a restricted geographical range in the Eastern Ghats.
- It was classified as 'near threatened' in 2018.
- The species is endemic to a distinct tract of forests in Andhra Pradesh.
- Red Sanders usually grow in the rocky, degraded and fallow lands with Red Soil and hot and dry climate.
- Illicit felling for Smuggling, Forest fires, cattle grazing and other anthropogenic threats.
- Red Sanders, known for their rich hue and therapeutic properties, are high in demand across Asia, particularly in China and Japan, for use in cosmetics and medicinal products as well as for making Furniture, Woodcraft and Musical Instruments.