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1. INDIAN SOCIETY & POLITY

1. POCSO Act

Why in News?

- The recent Bombay High Court judgement has raised controversy for its interpretation of certain Section of the POCSO Act.

Object of the POCSO Act:

- The Protection of Children from Sexual Offences (POCSO) Act was enacted in 2012 especially to protect children (aged less than 18) from sexual assault.
- The Statement of Objects and Reasons of the Act admitted that a number of sexual offences against children were neither specifically provided for in extant laws nor adequately penalised.
- The UN Convention on the Rights of the Child, ratified by India in 1992, also requires Sexual Exploitation and sexual abuse to be addressed as heinous crimes.

Issues with Bombay High Court's Judgement:

- The Bench acquitted a man under the POCSO Act found guilty of assault on the grounds that he groped his victim over her clothes and there was no skin-to-skin contact between them.
- As this judgment was likely to set a dangerous precedent, the apex court stayed the acquittal.
- Section 7 of the POCSO Act, along with other things, says that whoever with sexual intent touches the breast of the child is said to commit sexual assault.
- Whereas Section 8 of the Act provides minimum imprisonment of three years for sexual assault.
- Section 354 of the Indian Penal Code (IPC) lays down a minimum of one year imprisonment for outraging the modesty of a woman.

Difference between IPC and POCSO:

- The difference between POCSO and IPC, as far as the offence of sexual assault is concerned, is two-fold.
- One, the definition of 'assault or criminal force to woman with intent to outrage her modesty' given in the IPC is generic.
- Whereas in POCSO, the acts of sexual assault are explicitly mentioned such as touching Various Private Parts.

- ‘Sexual assault’ in POCSO specifically excludes rape which requires penetration; otherwise the scope of ‘sexual assault’ under POCSO and ‘outraging modesty of a woman’ under the IPC is the same.
- Two, whereas the IPC provides punishment for the offence irrespective of any age of the victim, POCSO is specific for the protection of children.
- Higher punishment is provided under POCSO not because more serious allegations of sexual assault are required but because the legislature wanted punishment to be more deterrent if the victims are children.

2. No role in State’s Quota Decisions: Centre Tells SC

Why in News?

- The Centre has told the Supreme Court that it has no role in the choices made by the Tamil Nadu government with regard to the Provision of Reservation for specific castes or communities in state Government Jobs and Admissions.

Issue Over 69%:

- The Centre was responding to a petition challenging the constitutionality of the Tamil Nadu Backward Classes, SCs and STs Act of 1993, which provides 69% reservation in the State. The petitioner contends that the TN has acted “outside its competence” by identifying and classifying socially and educationally backward classes (SEBCs).
- It is too far in excess of the 50% limit on quota laid down by a nine-judge Bench of the Supreme Court in its judgment in the Indira Sawhney Case (1992).

Indira Sawhney Case:

- In the famous Mandal case (Indira Sawhney Case, 1992), the scope and extent of Article 16(4), which provides for reservation of jobs in favour of backward classes, has been examined thoroughly by the Supreme Court.
- Though the Court has rejected the additional reservation of 10% for poorer sections of higher castes, it upheld the constitutional validity of a 27% reservation for the OBCs with certain conditions. The advanced sections among the OBCs (the creamy layer) should be excluded from the list of beneficiaries of Reservation.
- No reservation in promotions; reservation should be confined to initial appointments only. Any existing reservation in promotions can continue for five years only (i.e., upto 1997).
- The total reserved quota should not exceed 50% except in some extraordinary situations. This rule should be applied every year.

- The 'carry forward rule' in case of unfilled (backlog) vacancies is valid. But it should not violate the 50% rule.

What did the Centre say in the TN case?

- The inclusion or exclusion of any caste/community in the State List of SEBCs is the subject matter of the State Government, and the Government of India has no role in the matter.
- It referred to the Constitution (102nd Amendment) Act of 2018, which details the difference in the procedure for inclusion or exclusion of castes and communities in the State List for SEBCs and the Central List.

Identifying SEBC:

- The power to identify and specify SEBCs lies with Parliament only with reference to the Central List.
- The State Governments may have separate State Lists of SEBCs for providing reservation for Recruitment to State services or Admissions in State Government Educational Institutions.
- Under the newly-inserted Article 342A of the 102nd Amendment Act of 2018, the President notifies the SEBCs in a State after consultation with the Governor.
- The castes or communities included in such State Lists may differ from those included in the Central List.

A case for TN:

- The senior advocate appearing for Tamil Nadu said the State's case should be heard separately. The filed affidavit said:
- India is an amalgam of States with varied population, size, history, culture and social fabric.
- The circumstances and facts prevailing in Tamil Nadu are not the same or similar to those in any other State.
- Tamil Nadu is a pioneer in the implementation of reservation in public employment and education. The policy of reservation has been in practice since 1921 in this State.
- Factual variations contributing to the grant of reservation need to be reckoned with differently for different States while deciding the question on its validity.
- The State argued that its law was protected under the Ninth Schedule of the Constitution from judicial review.
- Section 4 of the 1993 Act provides 30% reservation to the Backward Classes, 20% for the Most Backward Classes and de-notified communities, 18% for the SCs and 1% for the STs.

3. Sant Ravidas

Why in News?

- The President of India recently addressed the ‘Shri Guru Ravidas Vishva Mahapeeth Rashtriya Adhiveshan-2021’ in New Delhi.

Who was Sant Ravidas?

- Ravidas was an Indian mystic poet-saint of the Bhakti movement and founder of the Ravidassia religion during the 15th to 16th century CE.
- Venerated as a guru (teacher) in the region of Uttar Pradesh, Rajasthan, Maharashtra, Madhya Pradesh and mainly Punjab and Haryana. He was a poet-saint, social reformer and spiritual figure.
- The life details of Ravidas are uncertain and contested. Scholars believe he was born in 1450 CE, in the cobbler caste.
- Ravidas’s devotional Verses were included in the Sikh scriptures known as Guru Granth Sahib.
- The Panch Vani text of the Dadupanthi tradition within Hinduism also includes numerous poems of Ravidas.
- He taught the removal of social divisions of caste and gender and promoted unity in the pursuit of personal spiritual freedoms.

Why his Preaching is Important?

- Philosophy and values of Sant Ravidas like social justice, equality and fraternity have been imbued in our constitutional values.
- He had envisaged a society that is based on equality and free from any kind of discrimination.
- He gave it the name ‘Be-gampura’ (a city near Lahore) where there is no place for any kind of grief or fear.
- Such an ideal city would be bereft of fear, vulnerability or scarcity. Rule of law based on the right ideas like equality and welfare of all would be the principle for governance.

2. GOVERNANCE

1. Corruption Perception Index, 2020

Why in News?

- The Transparency International (TI)'s corruption perception index (CPI) was recently Released for 2020.

Corruption Perception Index:

- The index ranks 180 countries and territories by their perceived levels of public sector corruption.
- It uses a scale of 0 to 100, where 0 is Highly Corrupt and 100 is Very Clean.

Global Prospects:

- Denmark and New Zealand top the index, with 88 points. Syria, Somalia and South Sudan come last, with 14, 12 and 12 points, respectively.
- Nearly half of countries have been stagnant on the index for almost a decade, indicating stalled Government efforts to tackle the root causes of corruption.
- More than two-thirds score below 50.

India's Performance:

- The CPI score for India is constant this year as well as the previous year's score.
- India's rank is 86 out of 180 nations with a score of 40.
- It was ranked at 8 of position out of 180 countries in 2019 with a score of 41.

A Comparison with Neighbours:

- At 40, India's score is below the average score of the Asia-Pacific region (31 countries) and global average, the CPI 2020 report stated.
- India's overall score is also two points less than that of China, which docked at 78th position, with a score of 42. Pakistan, however, scored just 31 points, falling at the 144th position on the index.

What does it Mean for India?

- India is still very low on corruption Index, the report said, noting that experts feel the CPI does not reflect the actual corruption level in any country.
- The integrity score determines the corruption situation of a country.

Recommendations made by TI:

- To reduce corruption and better respond to future crises, Transparency International recommends that All Governments:

-
- Strengthen oversight institutions to ensure resources reach those most in need. Anti-corruption authorities and oversight institutions must have sufficient funds, resources and independence to perform their duties.
 - Ensure open and transparent contracting to combat wrong-doing, identify conflicts of interest and ensure fair pricing.
 - Defend democracy and promote civic space to create the enabling conditions to hold governments accountable.
 - Publish relevant data and guarantee access to information to ensure the public receives easy, accessible, timely and Meaningful Information.

2. Social Stock Exchanges

Why in News?

- The Economic Survey 2021 has backed setting up of Social Stock Exchange in India.

Social Stock Exchanges (SSEs):

- An SSE is a platform which allows investors to buy shares in social enterprises vetted by an official exchange.
- The Union Budget 2019 proposed setting up of first of its kind SSE in India.
- The SSE will function as a common platform where social enterprises can raise funds from the public.
- It will function on the lines of major stock exchanges like BSE and NSE. However, the purpose of the Social Stock Exchange will be different – not profit, but social welfare.
- Under the regulatory ambit of SEBI, a listing of social enterprises and voluntary organizations will be undertaken so that they can raise capital as equity, debt or as units like a Mutual Fund.

Why SSEs?

- India needs massive investments in the coming years to be able to meet the human development goals identified by global bodies like the UN.
- This can't be done through government expenditure alone. Private enterprises working in the social sector also need to step up their activities.
- Currently, social enterprises are very active in India. However, they face challenges in Raising Funds.

- One of the biggest hurdles they face is, apparently, the lack of trust from common Investors.

Benefits:

- There is a great opportunity to unlock funds from donors, philanthropic foundations and CSR spenders, in the form of zero-coupon zero principal bonds. These bonds will be listed on the SSE.
- At first, the SSE could become a repository of Social Enterprises and Impact Investors.
- The registration could be done through a Standard Process.
- The SEs could be categorized into different stages such as as- Idea, growth stage and likewise, investors can also be Grouped Based on the Type of Investment.

Development so far:

- The Economic Survey 2021 highlighted the concept of setting up a social stock exchange (SSE) in India.
- It will be under the regulatory ambit of the Securities and Exchange Board of India (SEBI).
- SEBI constituted a working group (WG) on social stock exchanges back in September 2019.
- The WG has outlined its vision and made recommendations, which include the participation of NPOs and for-profit enterprises (FPE) on SSE subject to committing to minimum reporting requirements.

3. Termination of Pregnancy (MTP) Amendment Bill, 2020

Why in News?

- A panel of doctors to decide on the termination of pregnancy beyond 24 weeks as proposed in the Medical Termination of Pregnancy (MTP) Amendment Bill, 2020, is “unfeasible” as 82% of these posts are lying vacant in the country, finds a new study.

MTP Amendment Bill:

- The MTP Bill was passed in Lok Sabha in March 2020 and is likely to be brought before Rajya Sabha during the ongoing Budget Session. Its salient features included:
- Proposing requirement for the opinion of one provider for termination of pregnancy, up to 20 weeks of gestation and introducing the requirement of the opinion of two providers for termination of pregnancy of 20-24 weeks of Gestation.

- Enhancing the upper gestation limit from 20 to 24 weeks for Special Categories of women which will be defined in the amendments to the MTP Rules and would include ‘vulnerable women including survivors of rape, victims of incest and other vulnerable women (like differently-abled women, Minors) etc.
- Upper gestation limit not to apply in cases of substantial foetal abnormalities diagnosed by Medical Board. The composition, functions and other details of Medical Board to be prescribed subsequently in Rules under the Act.
- Anonymity of the person: Name and other particulars of a woman whose pregnancy has been terminated shall not be revealed except to a person authorised in any law for the time being in force.

Benefits Sought with the Bill:

- It is seen as a step towards the safety and well-being of the Women and many women will be benefitted by this.
- Recently several petitions were received by the Courts seeking permission for aborting pregnancies at a gestational age beyond the present permissible limit on grounds of foetal abnormalities or pregnancies due to sexual violence Faced by Women.
- The proposed increase in gestational age will ensure dignity, autonomy, confidentiality and justice for women who need to Terminate the Pregnancy.

Flaws in the bill:

- The Bill allows abortion after 24 weeks only in cases where a Medical Board diagnoses substantial foetal abnormality.
- This implies that for a case requiring abortion due to rape, that exceeds 24-weeks, the only recourse remains through a Writ Petition.
- The Bill does not specify the categories of women who may terminate pregnancies between 20-24 weeks and leaves it to be prescribed through Rules.
- The Act (and the Bill) require an abortion to be performed only by doctors with specialization in gynaecology or obstetrics.
- As there is a 75% shortage of such doctors in community health centres in rural areas, pregnant women may continue to find it difficult to access facilities for safe abortions.

Key Issues and Analysis:

- ◆ There are differing opinions with regard to allowing abortions. One opinion is that terminating a pregnancy is the choice of the pregnant woman and a part of her Reproductive Rights.

- The other is that the state has an obligation to protect life, and hence should provide for the protection of the foetus.
- Across the world, countries set varying conditions and time limits for allowing abortions, based on foetal health, and risk to the pregnant woman.
- Several Writ Petitions have been filed by women seeking permission to abort pregnancies beyond 20-weeks due to foetal abnormalities or rape.

4. Targeted Public Distribution System (TPDS)

Why in News?

- The Government of Andhra Pradesh has informed that it has seized 435.80 MTs of Rice worth Rs. 1,08,95,000/- which was intended for the Public Distribution System (PDS) but was being Exported Illegally.

Highlights:

- Steps taken by the Dept. of Food & Public Distribution to bring transparency and efficiency in the functioning of TPDS:
- The Department in association with all States/UTs had implemented a scheme on 'End-to-End Computerization of TPDS Operations', which inter-alia comprised:
- Digitization of ration cards/beneficiaries' data
- Installation of electronic Point of Sale (ePoS) devices at all Fair Price Shops (FPSs)
- This was implemented for the transparent distribution of food grains to all beneficiaries under the NFSA.
- As part of these activities, 100% digitization of NFSA ration cards has been achieved in all States/UTs.
- Aadhaar seeding of almost 91% ration cards at the national level has been achieved so far.
- Besides, almost 92% of the total 5.4 Lakh FPSs in the country are distributing food grains through ePoS devices.
- At the national level, more than 70% of the monthly allocated food grains to States/UTs are being distributed to NFSA beneficiaries after their biometric authentication on ePoS devices.

5. DNA Technology Bill, 2019

Why in News?

- The Parliamentary Standing Committee has recommended the government to mitigate the concerns raised over the DNA Technology (Use and Application) Regulation Bill, 2019.

Highlights:

- The bill aims to establish a database of certain category of persons such as victims of crimes, missing persons and children, unidentified bodies, as well as offenders, suspects and undertrials in cases.
- Such a data base, would help trace repeat offenders of heinous crimes such as rape and murder through DNA profiling.
- The bill seeks to establish a National DNA Data Bank and Regional DNA Data banks to store and maintain the DNA profiles, to use and access to information, its retention and expunction.
- The bill proposes for a DNA Regulatory Board that would advise the Centre and state governments on issues such as setting up of DNA laboratories and databanks.
- Laying down of guidelines, standards and procedures for the same.
- It seeks to address concerns related to quality, accuracy, security of data and other related matters that may arise in the use of DNA Technology.

Concerns over bill by the Parliamentary Panel:

- Cautions the risk with a national databank, that a crime scene could also hold DNA of someone who was nowhere near it at the time.
- An enabling ecosystem must be created soon to ensure that DNA profiling is done in a consistent manner with spirit of various Supreme Court judgments and with the Constitution.
- It does not negate the need for a legislation, especially when DNA technology is already in use.
- The bill could be misused to target segments of society based on religion, caste or political views.
- The Bill could prove problematic particularly for marginalised communities, including Dalits, Adivasis and religious and gender minorities.
- The bodily material like hair may have been transported to the crime scene inadvertently by a variety of ways and that these DNA profiles could find their way into the 'crime scene index'.

- The Bill would lead to violations of the right to privacy.
- If there is a conviction, only the DNA profile of the convict could be included in the data bank.
- The Department of Biotechnology has argued that nearly 60 countries have enacted similar Legislation, and that all important matters related to privacy, confidentiality and data Protection have been taken into Account.

6. Medical board on Abortion Unfeasible, Says Study

Why in News?

- According to the new study, 82% posts of doctors that decide on termination of pregnancy beyond 24 weeks as proposed in the Medical Termination of Pregnancy (MTP) Amendment Bill, 2020 are Lying Vacant.

Highlights:

- The shortfall in these posts hovered between 71% to 81.8% between 2015-2019.
- In 2019, there was a shortfall of 81.8%.
- Northeast states of Sikkim, Mizoram and Manipur showed total absence of obstetricians and gynaecologists, and a near total absence of paediatricians.
- Arunachal Pradesh and Meghalaya had a 100% shortage of paediatricians.
- It indicated a severe lack of doctors across India leading to setting up of Boards unfeasible.

Termination of Pregnancy:

- Proposes requirement of opinion of one registered medical practitioner (RMP) for termination of pregnancy up to 20 weeks of gestation.
- Proposes for the requirement of opinion of two RMPs for termination of pregnancy of 20 to 24 weeks. The termination of pregnancies up to 24 weeks will only apply to specific categories of women, as may be prescribed by the central government (i.e, for survivors of rape, and other vulnerable women)
- Seeks to relax the contraceptive-failure condition for “any woman or her partner” from the present provision for “only married woman or her husband”, allowing them to medically terminate the pregnancy.

Medical Board:

- The upper limit of termination of pregnancy will not apply in cases where such termination is necessary due to the diagnosis of substantial foetal abnormalities.
- These abnormalities will be diagnosed by a Medical Board.

- Under the Bill, every state government is required to constitute such a Medical Board.
- Medical Boards will consist of: gynaecologist, paediatrician, radiologist or sonologist, and any other number of members, as may be notified by the State Government.

Protection of Privacy of a Woman:

- No registered medical practitioner will be allowed to reveal the name and other particulars of a woman whose pregnancy has been terminated, except to a person authorised by any law.

Issues:

- There are differing opinions with regard to allowing abortions.
- The only recourse is Writ Petition for a case requiring abortion due to rape, that exceeds 24-weeks.
- It does not specify the categories of women who may terminate pregnancies between 20-24 weeks and leaves it to be prescribed through Rules.
- It requires abortion to be performed only by doctors with specialisation in gynaecology or obstetrics. The proposed medical board should be scrapped because third party (medical board) should not take decisions on termination of pregnancy. Abortion is a decision best left to a woman and her service provider.
- Pregnant women lack autonomy in making the decision to terminate their pregnancy, and have to bear additional mental stress of getting a doctor's approval.
- In Bill, the increase in upper gestational limit to 24 weeks for abortion is envisaged only for, vulnerable women including survivors of rape. This would not apply in cases of substantial foetal abnormalities diagnosed by the Medical Board.
- This suggest that women do not have a sovereign right over their bodies to secure an abortion, unless they are Vulnerable Women.

7. FSSAI Caps Transfats in Foods

Why in News?

- The FSSAI has Amended its rules to put a cap on trans fatty acids (TFAs) in food products just weeks after it tightened the norms for Oils and Fats.

Highlights:

- Food products in which edible oils and fats are used as an ingredient shall not contain industrial Trans fatty acids more than 2% by mass of the total oils/fats present in the product, on and from 1st January 2022.

- In December, the FSSAI had capped TFAs in oils and fats to 3% by 2021, and 2% by 2022 from the current levels of 5%.
- The 2% cap is considered to be the elimination of trans fatty acids, which is to be achieved by 2022.

What are Trans Fats?

- Trans fatty acids are created in an industrial process that adds hydrogen to liquid vegetable oils to make them more solid, increase the shelf life of food items and for use as an adulterant as they are cheap.
- They are present in baked, fried and processed foods as well as adulterated ghee which becomes solid at room temperature.
- They are the most harmful form of fats as they clog arteries and cause hypertension, heart attacks and other Cardiovascular Diseases.

Why Need such Regulation?

- As per the World Health Organisation (WHO), approximately 5.4 lakh deaths take place each year globally because of intake of industrially-produced trans-fatty acids.
- The WHO has called for the elimination of industrially-produced trans-fatty acids from the global food supply by 2023.
- The latest FSSAI rules signal the completion of the process of regulating trans fats in India.
- The move will make a big difference in the health harm caused by this unwanted Ingredient. This allows FSSAI and the State-level food safety machinery to focus on implementation and enforcement of the WHO Recommendations.

8. Pradhan Mantri Urja Ganga Project

Why in News?

- The PM dedicated to the nation the 348 km Dobhi – Durgapur Natural Gas Pipeline section, which is part of the Pradhan Mantri Urja Ganga project.

Pradhan Mantri Urja Ganga Project:

- It is a gas pipeline project that aims to provide cooking gas to people.
- It was launched in 2016 in Varanasi and later extended to people in the states of Bihar, West Bengal, Odisha and Jharkhand.
- The government is taking the initiative to connect the eastern states with the national gas grid.

- The total length of the pipeline under the Pradhan Mantri Urja Ganga Project is approximately 3,384 km, out of which 766 km of pipeline is in Odisha state and the balance 2,618 km is in the states of Uttar Pradesh, Bihar, Jharkhand, West Bengal & Assam. The project will not just supply CNG to automobiles and cooking gas to household kitchens in cities along the route, but also to industries to meet their feedstock or fuel requirement. The project is being implemented by GAIL.

9. Contours of Twitter-Government Faceoff

Why in News?

- The issues involved in the recent government directive to Twitter for the suspension of users' accounts connected to the farmers' protests.

What is the Faceoff About:

- Recently, Indian government issued direction to Twitter, ordering it to shut down user accounts connected with farmers' protests.
- The government has to exercise powers under Section 69A of the Information Technology Act to block user accounts critical of the farm bills.
- The accounts which were sought to be censored are back online.
- This is due to Twitter's evident refusal to comply with the directions after a constitutional appraisal. It has, as per Press Statements, cited the doctrine of proportionality in its defence.

Concerns with the Directive

- This direction presents a clear breach of fundamental rights but also reveals a complex relationship between the government and large platforms on the understanding of the Constitution of India.
- The specific legal order issued is secret.
- This brings into focus the condition of secrecy that is threshold objection to multiple strands of our fundamental rights.
- It conflicts against the rights of the users who are denied reasons for the censorship.
- Secrecy also undermines the public's right to receive information, which is a core component of the fundamental freedom to speech and expression.
- This is an anti-democratic practice that results in an unchecked growth of irrational censorship but also leads to speculation that fractures trust.

- The other glaring deficiency is the complete absence of any prior show-cause notice to the actual users of these accounts by the government.
- This is contrary to the principles of natural justice.
- This again goes back to the vagueness and the design faults in the process of how directions under Section 69A are issued.

Constitutionality of Section 69A of IT Act:

- The secrecy clause represents a failure on the part of the Union executive, which framed the process for blocking websites in 2009.
- The Supreme Court also failed to substantively examine the clause.
- This is despite the opportunity offered by its celebrated judgment *Shreya Singhal v. Union of India*, when it struck down Section 66A of the IT Act as unconstitutional.
- At the same time, the court stated in *Shreya Singhal*, that an aggrieved party could approach a court for remedy if their website or user account was blocked under Section 69A.
- More recently, the court, when adjudicating the constitutional permissibility of the telecommunications shutdown in Jammu and Kashmir by its judgment in *Anuradha Bhasin v. Union of India* directed pro-active publication of all orders for internet shutdowns.
- After this, a decent argument may be made that directions for blocking now need to be made public.
- However, several state governments are actively refusing compliance on the publication of orders on internet shutdowns.

10. Unani Day 2021

Why in News?

- World Unani Day is observed on February 11 Annually.

Unani Day:

- It is celebrated on the birth anniversary of great Unani scholar and social reformer Hakim Ajmal Khan (1868 – 1927). He was a Unani medical educationist and founder of scientific research in the Unani system of medicine.
- The day is marked to spread awareness about health care delivery through the Unani System of Medicine.

- Unani is a preventive and curative philosophy that has been used in India for many years. Today, India is one of the leading countries as far as the practice of Unani medicine is concerned.
- The first Unani Day was celebrated in 2017 at the Central Research Institute of Unani Medicine (CRIUM), Hyderabad.

Unani:

- The Unani system of medicine was originated in Greece, however, its present form was saved by the Arabs.
- Unani medicine is also known as Unani Tibb, Arabian medicine, or Islamic medicine.
- It is a healing philosophy that takes from ancient Greek medicine. In Arab, Unani means ‘Greek.’
- It assumes the four main elements – Fire, Water, Air and Earth which corresponds to four humours – Phlegm, Black bile, Blood, and Yellow bile respectively.
- Unani was introduced in India by the Arabs and Persians.

11. Urban Local Bodies Reforms

Why in News?

- Goa becomes the 6th State to complete Urban Local Bodies (ULB) reforms.

Highlights:

- Goa has become the 6th State in the country to successfully undertake Urban Local Bodies (ULB) reforms stipulated by the Department of Expenditure, Ministry of Finance.
- Thus, the State has become eligible to mobilise additional financial resources of Rs. 223 crore through Open Market Borrowings.
- Goa has joined five other States namely, Andhra Pradesh, Madhya Pradesh, Manipur, Rajasthan and Telangana, who have completed ULB reforms.

Objectives/Need for reforms:

- Reforms in the Urban Local Bodies and the urban utilities reforms are aimed at financial strengthening of ULBs in the states and to enable them to provide better public health and sanitation services. Economically rejuvenated ULBs will also be able to create good civic infrastructure.
- The reforms stipulated by the Department of Expenditure to achieve these objectives are:

- **The State will notify –**

- ✓ Floor rates of property tax in ULBs which are in consonance with the prevailing circle rates (i.e. guideline rates for property transactions)
- ✓ Floor rates of user charges in respect of the provision of water-supply, drainage and sewerage which reflect current costs/past inflation.
- ✓ The state will put in place a system of periodic increase in floor rates of property tax/user charges in line with price increases.

Background:

- To meet the challenges posed by the pandemic, GOI had enhanced the borrowing limit of the states by 2 percent of their GSDP.
- Half of this special dispensation was linked to undertaking citizen centric reforms by the states.
- The four citizen centric areas for reforms identified were:
 - ✓ Implementation of One Nation One Ration Card System (done by 13 states)
 - ✓ Ease of doing business reform (done by 12 states)
 - ✓ Urban Local body/utility reforms (done by 6 states)
 - ✓ Power sector reforms (done by 2 state)

12. Rashtriya Sanskriti Mahotsav

Why in News?

- The 11th edition of the Rashtriya Sanskriti Mahotsav would be inaugurated on 14th February.

Rashtriya Sanskriti Mahotsav:

- It is the flagship festival of the Ministry of Culture.
- It has been conducted since 2015 with the active participation of Seven Zonal Culture Centres.
- The festivals have been playing a pivotal role to take the vibrant culture of India out to the masses instead of confining it to auditoria and galleries.
- It showcases folk and tribal art, dance, music, cuisines & culture of one state in other states reinforcing the cherished goal of “Ek Bharat Shreshtha Bharat” and at the same time provides an effective platform to the artists and artisans to support their livelihood.
- The 11th edition is being organised in West Bengal, in Cooch Behar, Darjeeling and Murshidabad.

- The festivals are organised under the Ek Bharat Shreshtha Bharat initiative.

Ek Bharat Shreshtha Bharat (EBSB) initiative:

- This initiative was launched in October 2016 to promote engagement amongst the people of different States/UTs so as to enhance mutual understanding and bonding between people of diverse cultures, thereby securing stronger unity and integrity of India.

Stated objectives of the EBSB Initiative:

- To celebrate the Unity in Diversity of our nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our country.
- To promote the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States.
- To showcase the rich heritage and culture, customs and traditions of either State for enabling people to understand and appreciate the diversity that is India, thus fostering a sense of common identity.
- To establish long-term engagements.
- To create an environment that promotes learning between States by sharing best practices and Experiences.

13. National Creche Scheme

Why in News?

- The Union Minister of Women and Child Development have given information about the National Creche Scheme to the Lok Sabha.

National Creche Scheme:

- The Ministry of WCD implements the NCS for the children of working mothers as a Centrally Sponsored Scheme through States/ UTs with effect from 01.01.2017.
- It aims to provide daycare facilities to children (age group of 6 months to 6 years) of working mothers.
- The Scheme provides an integrated package of the following services:
 - ✓ Daycare facilities including sleeping facilities.
 - ✓ Early stimulation for children below 3 years and pre-school education for 3 to 6 years old children
 - ✓ Supplementary nutrition (to be locally sourced)

- ✓ Growth monitoring
- ✓ Health check-up and immunization

14. Finance Commission Dips into States' share for Centre's Expenditure

Why in News?

- Report of the fifteenth Finance Commission (XVFC) were laid before the Parliament with the recommendations and their implications for the federalism in India.

Major Recommendations Accepted by the Government:

- The finance minister announced the acceptance of its recommendation of retaining the share of states in central taxes at 42 per cent.
- She also stated that on its recommendation revenue deficit grants of Rs 1.18 lakh crore to the states have been provided for in the budget.
- Some of the recommendations, however, have far-reaching implications on government finances, both of the Centre and the states.
- Keeping in view the extant strategic requirements for national defence in a global context, XVFC has, in its approach, recalibrated the relative shares of the Union and the states in gross revenues receipts.

Issues with the Recalibration for National Defence:

- Recalibration enables the Union to set aside resources for special funding on defence.
- The states have been made to pay Rs 7,000 crore to bridge [the] Centre's gap between projected budgetary requirements and budget allocation for defence and internal security defence.
- But this is an expenditure that the Centre is obliged to fund.
- For the first time, a finance commission has carved out resources meant for distributable statutory grants and dipped into the states' revenue share, as against the tax share, in order to finance the Centre's exclusive expenditure obligation.
- What has been done is not in line with the system envisaged in the Constitution.
- This move will eventually put the fiscal federal system under systemic strain.
- In operational terms, too, this move is a significant departure.
- So far, the Centre has been used to pre-empting resources from the kitty to be distributed among the states but only to finance expenditures in areas earmarked for states.

- This was done through the centrally-sponsored schemes, but at least the states' money was being used in the states, even if on a discretionary rather than a criteria basis.
- Now, with this move of earmarking and financing of funds for sectors, it is the states' money that is being used to finance the Centre's expenditure.
- This is certainly not cooperative federalism.

Changes in Horizontal Distribution: More Weightage to Efficiency and Performance:

- In horizontal distribution, the criteria used by successive finance commissions for devolving taxes across states have always been linked to need – based on equity, tempered by efficiency.
- From 92.5 per cent of funds to a state being devolved based on need and equity, the XVFC has reduced these two components to 75 per cent.
- The remaining 25 per cent are to be devolved on considerations of efficiency and performance.
- This is the lowest weightage for equity, making the XVFC transfers potentially the least progressive ever.

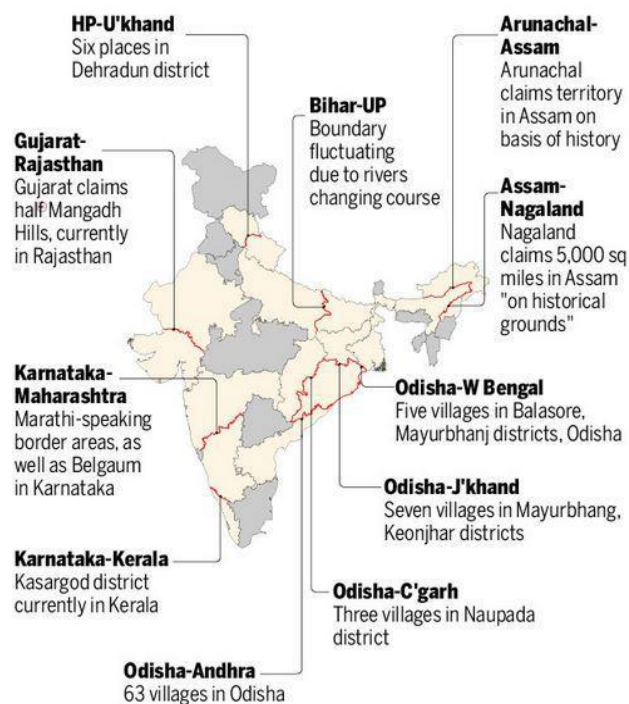
Structural changes not taken into Account:

- The Finance Commission has not even made any serious effort to review the existing scheme of transfers in light of the changed federal landscape.
- The existing criteria for the devolution have evolved in, and for, a production-based tax system.
- The XVFC should have reformulated the distributional criteria for a consumption-based tax system [GST].
- The structural change from production to consumption will make a significant difference to distribution as well as the need, nature and distribution of equalising grants.
- This is the same manner in which the revenue deficit grants have been carried forward.
- Ideally, the “gap-filling” approach should have been redesigned in light of the compensation law providing a minimum-guaranteed revenue of 14 per cent to every state.

15. Andhra-Odisha Boundary Dispute

Why in News?

- Andhra Pradesh recently held panchayat elections in three villages in the Kotia cluster, which is at the centre of a dispute between Andhra Pradesh and Odisha.



Andhra-Odisha Boundary Dispute:

- Prior to April 1, 1936, villages under Kotia panchayat were part of Jeypore Estate.
- In the Constitution of Orrisa Order, 1936, published in the Gazette of India on March 19 that year, the GoI demarcated Odisha from the erstwhile Madras Presidency.
- In 1942, the Madras government contested the boundary and ordered re-demarcation of the two states. When the state of Andhra Pradesh was created in 1955, the villages were not surveyed by the state Government Either.

Details of the villages:

- These villages, with a population of nearly 5,000, are located on a remote hilltop on the inter-state border and are inhabited by Kondh tribals.
- The region, once a Maoist hotbed which still reports sporadic incidents of violence, is also rich in mineral resources like gold, platinum, manganese, bauxite, graphite and limestone.

What is the Judicial Reaction?

- In the early 1980s, Odisha filed a case in the Supreme Court demanding right and possession of jurisdiction over the 21 villages.
- In 2006 the court ruled that disputes belonging to the state boundaries are not within the jurisdiction of the Supreme Court.
- The matter can only be resolved by Parliament and passed a permanent injunction on the Disputed Area.

16. Sandes launched by NIC

Why in News?

- The National Informatics Centre has recently launched an instant messaging platform called Sandes on the lines of WhatsApp.

Need for the Platform:

- The government felt the need to build a platform to ensure secure communication between its employees as they worked from home.
- After security scares, the Ministry of Home Affairs issued an advisory to all government employees to avoid using platforms like Zoom for official communication.
- This was after the Computer Emergency Response Team (Cert-In) had also posted an advisory against Zoom over safety and Privacy Concerns.

Sandes:

- It could be initially used by both central and state government officials for intra and inter-organisation communication.
- It is now open for the common public.
- It has an interface similar to many other apps currently available in the market.
- There is no option to transfer the chat history between two platforms but it can be backed up to a users' email.
- It uses a valid mobile number or Email id to register the user for the first time.
- It also offers features such as group making, broadcast message, message forwarding and emojis.
- It allows a user to mark a message as confidential and will allow the recipient to be made aware the message should not be shared with others.
- Limitation: The app does not allow the user to change their email id or registered phone number.
- Significance: It is a part of the government strategy to push for use of India-made software so as to build an ecosystem of indigenously developed products.

National Informatics Centre (NIC):

- It was established in 1976 and provide Information Communication Technology (ICT) and eGovernance support to the Government and bridge the digital divide.
- It facilitates electronic delivery of services to the government (G2G), business (G2B), citizen (G2C) and government employee (G2E).

- The following major activities are being undertaken:
 - ✓ Setting up of ICT Infrastructure
 - ✓ Implementation of National and State Level e-Governance Projects/Products
 - ✓ Consultancy to the Government departments
 - ✓ Research & Development

17. Combating Vaccine Hesitancy

Why in News?

- Reluctance to take the vaccine has several implications. The misinformation around the vaccines needs to be fought through Several Measures.

Understanding Vaccine Hesitancy:

- According to the World Health Organization, vaccine hesitancy is defined as a reluctance or refusal to vaccinate despite the availability of vaccine services.
- To date, two vaccines have been approved for inoculation in India: Pune-based Serum Institute's Covishield and Hyderabad-based Bharat Biotech's Covaxin.
- An adequate supply of vaccines is in place at least for the first phase, but the trickier part is to persuade the population for vaccination.
- Like Western nations, vaccine hesitancy has been a cause of concern in the past in India as well.
- Social media has seen a rising number of self-proclaimed experts who have been making unsubstantiated claims.
- The debates around hesitancy for COVID-19 vaccines include concerns over safety, efficacy, and side effects due to the record-breaking timelines of the vaccines, competition among Several Companies, Misinformation, and religious taboos.

Need to Adopt Libertarian Paternalism:

- It is suggested that we adopt the idea of libertarian paternalism, which says it is possible and legitimate to steer people's behaviour towards vaccination while still respecting their freedom of choice.
- Vaccine hesitancy has a different manifestation in India, unlike in the West.
- According to the World Economic Forum/Ipsos global survey, COVID-19 vaccination intent in India, at 87%, exceeds the global 15-country average of 73%.

Way Forward:

- Instead of anti-vaxxers, the target audience must be the swing population i.e., people who are sceptical but can be persuaded through scientific facts and proper communication.
- The second measure is to pause before you share any ‘news’ from social media.
- It becomes crucial to inculcate the habit of inquisitive temper to fact-check any news related to COVID-19 vaccines.
- The third measure is to use the celebrity effect — the ability of prominent personalities to influence others to take vaccines.
- Celebrities can add glamour and an element of credibility to mass vaccinations both on the Ground and on Social Media.

18. Mission ‘Lal Lakir’

Why in News?

- The Punjab state cabinet has approved the Implementation of Mission ‘Lal Lakir’.

Mission ‘Lal Lakir’:

- ‘Lal Lakir’ refers to land that is part of the village ‘abaadi’ (habitation) and is used for non-agriculture purposes only.
- The mission is aimed at facilitating villagers to monetize property rights and availing benefits provided by government departments, institutions and banks in all villages across the state.
- As no record of rights is available for such properties within the ‘Lal Lakir’, the same cannot currently be monetized as per the real value of the property and no mortgages can be created on such properties.
- There are households within the ‘Lal Lakir’, which do not own property other than the areas within the ‘Lal Lakir’, and are thus at a Disadvantage.

An extension to SVAMITVA:

- Under the mission, the right of record of properties within ‘Lal Lakir’ in the villages of the state will be prepared with the cooperation of the government of India under the SVAMITVA scheme.
- SVAMITVA stands for Survey of Villages and Mapping with Improvised Technology in Village Areas.
- This will enable mapping the land, households, habitation and all other areas falling within ‘Lal Lakir’.

- It will go a long way in improving the living standard of villagers and boosting their self-esteem.

SVAMITVA:

- SVAMITVA stands for Survey of Villages and Mapping with Improvised Technology in Village Areas.
- Under the scheme, the latest surveying technology such as drones will be used for measuring the inhabited land in villages and rural areas.
- The mapping and survey will be conducted in collaboration with the Survey of India, State Revenue Department and State Panchayati Raj Department under the Ministry of Panchayati Raj.
- The drones will draw the digital map of every property falling in the geographical limit of each Indian village.
- Property Cards will be prepared and given to the respective owners.

19. Why does India need Conclusive Land Titling?

Why in News?

- The Centre wants to reform the country's land markets through a fundamental legal and procedural shift in how land titles are Awarded.

Land Ownership in India:

- In India, land ownership is determined through various records such as sale deeds that are registered, property tax documents, government survey records, etc.
- Land ownership is broadly defined by access to a land title. Land Title is a document that determines the ownership of land or immovable property.
- Having a clear land title protects the rights of the titleholder against other claims made by anyone else to the Property.

What is the News?

- In 2020, even as laws for farm reform and labour code reform were being enacted, the government's think tank, NITI Aayog, took steps to initiate land reforms.
- A Model Bill on Conclusive Land Titling was sent to States and Union Territories last June seeking their comments.
- In September, after many States failed to send in their feedback, the Centre warned that their agreement would be Presumed.

What is Conclusive Land Titling?

- In a conclusive titling system, the government provides guaranteed titles and compensation in case of any ownership disputes.
- Achieving this will require shifting to a system of registered property titles (as opposed to sale deeds) as the primary evidence of ownership, and having clear and updated land records.

How does the Current System Work?

- India currently follows a system of presumptive land titling.
- This means that land records are maintained, with information on possession, which is determined through details of past transactions.
- Ownership, then, is established on the basis of current possession. Registration of land is actually a registration of transactions, such as sale deeds, records of inheritance, mortgage and lease.
- Holding registration papers does not actually involve the government or the legal framework guaranteeing the ownership title of the land.

What will change in the New System?

- On the other hand, under a conclusive land titling system, land records designate actual ownership.
- The title is granted by the government, which takes the responsibility for accuracy.
- Once a title is granted, any other claimant will have to settle disputes with the government, not the titleholder.

Why is Conclusive Land Titling Needed?

- The main advantage is that a conclusive system will drastically lower litigation related to land. According to a 2007 World Bank study on 'Land Policies for growth and poverty reduction', land-related disputes accounted for two-thirds of all pending court cases in India.
- A NITI Aayog study on strengthening arbitration estimated that disputes on land or real estate take an average time of 20 years in the courts to be resolved.

A Move for EODB:

- Right now, because land titles are based on transactions, people have to keep the entire chain of transaction records, and a dispute on any link in that chain causes ambiguity in Ownership.

- Once conclusive titling is in place, investors who want to purchase land for business activities will be able to do so without facing the constant risk that their owners may be questioned and their entire investment may go to waste.
- Land disputes and unclear titling also create hurdles for infrastructure development and housing construction, leading to costly delays and inefficiency.

Multiple Benefits:

- In cities, urban local bodies depend on property taxes that can be levied properly only if there is clear ownership data available.
- In rural areas, the need is even more acute. Access to agricultural credit is dependent on the ability to use the land as collateral.
- Without being able to prove their ownership of land and access formal credit from banks, small and marginal farmers are often left at the mercy of unscrupulous moneylenders.

What does the Model Bill Propose?

- The Bill circulated by the NITI Aayog in 2020 calls for Land Authorities to be set up by each State government, which will appoint a Title Registration Officer (TRO),
- TRO will prepare and publish a draft list of land titles based on existing records and documents.
- This will be considered a valid notice to all potential claimants interested in the property, who will have to file their claims or objections within a set period of time.
- If disputing claims are received, the TRO will verify all the relevant documents and refer the case to a Land Dispute Resolution Officer (LDRO) for resolution.

Major Hurdles:

- The biggest challenge is that land records have not been updated for decades, especially in rural and semi-urban areas.
- Land records are often in the name of the grandparents of the current owner, with no proof of inheritance.
- Unless they are based on updated records, conclusive land titles could create even more problems.
- Comprehensive village-level surveys with community involvement are a necessary precursor to the land Titling Process.
- Relying on current records or even satellite imagery will not provide the same accuracy as actual, on-the-ground, Local Surveys.

20. Demand for Greater Tripaland

Why in News?

- Tripura royal scion Pradyot Kishore Manikya has recently announced his political demand for a new state called 'Greater Tripaland'.

Greater Tripaland:

- 'Greater Tripaland' is essentially an extension of the ruling tribal partner Indigenous Peoples Front of Tripura – IPFT's demand of Tripaland, which sought a separate state for tribals of Tripura.
- The new demand seeks to include every tribal person living in an indigenous area or village outside the Tripura Tribal Areas Autonomous District Council (TTAADC) under the proposed model.
- However, the idea doesn't restrict to simply the Tripura tribal council areas but seeks to include 'Tivrasa' of Tripuris spread across different states of India like Assam, Mizoram etc. as well.
- It seeks to include even those living in Bandarban, Chittagong, Khagrachari and other bordering areas of neighbouring Bangladesh.

21. City Innovation Exchange (CiX)

Why in News?

- The City Innovation Exchange (CiX) platform was launched by the Ministry of Housing and Urban Affairs.

City Innovation Exchange (CiX):

- The CiX will connect cities to innovators across the national ecosystem to design innovative solutions for their pressing challenges.
- The platform will ease the discovery, design & validation of solutions through a robust, transparent and user-centric process that will reduce barriers for innovators and cities to discover fitting solutions.
- Built on the concept of 'open innovation', the platform will help in the flow of ideas 'outside in and inside out, enhancing the skills and capacity required to deliver smart urban governance.
- Through interaction with Academia and Businesses/Startups, the platform will benefit cities in the transfer of ideas from 'labs' to the Real Environment.

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- Similarly, by helping urban governments interact with citizens, the platform will ensure the adoption of tested solutions that will be Impactful and Sustainable.

Benefits of CiX:

- The CiX platform will be a significant addition to the growing innovation ecosystem of India and focuses on fostering innovative practices in cities.
- CiX, through an ‘open innovation’ process, engages with innovators to design-test-deliver on solutions to pressing urban challenges.
- This initiative is among the ongoing efforts to realize PM’s vision of New and AtmaNirbhar Bharat, by making cities more self-reliant and enabled to meet the needs of and provide services to their citizens.
- The platform in due time will help our cities in adopting solutions that will enhance the quality of life for their residents and significantly improve the Ease of Doing Business.



3. SCIENCE & TECHNOLOGY

1. Type-II Supernova and the Role of Neutrinos

Why in News?

- Many stars, towards the end of their lifetimes, form supernovas – massive explosions that send their outer layers shooting into the surrounding space.
- Most of the energy of the supernova is carried away by neutrinos – tiny particles with no charge and which interact weakly with matter.
- Researching the mechanisms of the so-called Type II supernovas, a team from IIT Guwahati has come up with new insights into the part played by neutrinos in this dramatic death of Massive Stars.

What are Neutrinos?

- Proton, neutron, and electron are tiny particles that makeup atoms.
- The neutrino is also a tiny elementary particle, but it is not part of the atom.
- Neutrino has a very tiny mass, no charge and spins half.
- It interacts very weakly with other matter particles.
- Neutrinos come from the sun (solar neutrinos) and other stars, cosmic rays that come from beyond the solar system, and from the Big Bang from which our Universe originated.
- They can also be Produced in the lab.

Their Types:

- Neutrinos come in three ‘flavours’, another name for ‘types’, and each flavour is associated with a light Elementary Particle. For instance, the electron-neutrino is associated with the electron; the muon-neutrino with the muon and the tau-neutrino with the Tau Particle.

What is Supernova?

- All the stars burn nuclear fuel in their cores to produce energy.
- The heat generates internal pressure which pushes outwards and prevents the star from collapsing inward due to the action of gravity on its own mass.
- But when the star ages and runs out of fuel to burn, it starts to cool inside.
- This causes a lowering of its internal pressure and therefore the force of gravity wins; the star starts to collapse inwards.
- This builds up shock waves because it happens very suddenly, and the shock wave sends the outer material of the star flying. This is what is perceived as a supernova. This happens in very massive stars.

The Type-II Supernova:

- In stars that are more than eight times as massive as the Sun, the supernova is accompanied by a collapsing of the inner material of the dying star – this is also known as core-collapse Supernova or Type II Supernova.

Role of Neutrinos:

- The collapsing core may form a black hole or a neutron star, according to its mass.
- As they spew out of the raging supernova, the neutrinos can change from one flavour to another in a process known as neutrino oscillations.
- Due to the high density and energy of the supernova, it generates neutrino oscillations happening simultaneously over different energies (unlike normal neutrino oscillation), termed collective neutrino oscillation.
- The oscillation result may dramatically change when one allows the evolution with the angular asymmetry, the oscillations can happen at a nanosecond time scale, termed fast oscillation.

2. Hope: UAE's First Mission to Mars

Why in News?

- The first Arab interplanetary mission is expected to reach Mars' orbit on February 9 in what is considered the most critical part of the journey to unravel the secrets of weather on the Red Planet.

Hope Mission:

- The Emirates Mars Mission called “Hope” was announced in 2015 with the aim of creating mankind's first integrated model of the Red planet's atmosphere.
- Hope weighs over 1500 kg and will carry scientific instruments mounted on one side of the spacecraft, including the Emirates exploration Imager (EXI), which is a high-resolution camera among others.
- The spacecraft will orbit Mars to study the Martian atmosphere and its interaction with outer space and solar winds. Hope will collect data on Martian climate dynamics, which should help scientists understand why Mars' atmosphere is decaying into space.

Objectives of the Mission:

- Once it launches, Hope will orbit Mars for around 200 days, after which it will enter the Red planet's orbit by 2021, coinciding with the 50th anniversary of the founding of UAE.

- The mission is being executed by the Mohammed bin Rashid Space Centre, UAE's space agency.
- It will help answer key questions about the global Martian atmosphere and the loss of hydrogen and oxygen gases into space over the span of one Martian year.

3. Govt liberalized Geospatial Data Policy

Why in News?

- In sweeping changes to the country's mapping policy, the government has announced liberalisation of norms governing the acquisition and production of Geospatial Data.
- The Ministry of Science and Technology has released new Guidelines for the Geo-spatial sector in India.
- It Deregulated the existing protocol and liberalizes the sector to a more competitive field.

Geo-Spatial Data:

- Geospatial data is data about objects, events, or Phenomena that have a location on the surface of the Earth. The location may be static in the short-term, like the location of a road, an earthquake event, malnutrition among children, or dynamic like a moving vehicle or pedestrian, the spread of an Infectious Disease.
- Geospatial data combines location information, attribute information, and often also temporal information or the time at which the location and attributes exist.
- Geo-spatial data usually involves information of public interest such as roads, localities, rail lines, water bodies, and public amenities.
- The past decade has seen an increase in the use of geospatial data in daily life with various apps such as food delivery apps like Swiggy or Zomato, e-commerce like Amazon or even weather apps.

What is the Present Policy on Geospatial Data?

- There are strict restrictions on the collection, storage, use, sale, dissemination of geospatial data and mapping under the current regime.
- The policy had not been renewed in decades and has been driven by internal as well as external security concerns.
- Private companies need to navigate a system of permissions from different departments of the government as well as the defence and Home Ministries, to be able to collect, create or Disseminate Geospatial Data.

Why has the Government Deregulated Geospatial Data?

- This system of acquiring licenses or permission, and the red tape involved, can take months, delaying projects, especially those that are in mission mode – for both Indian companies as well as government agencies.
- The deregulation eliminates the requirement of permissions as well as scrutiny, even for security concerns.
- Indian companies now can self-attest, conforming to government guidelines without actually having to be monitored by a government agency- these guidelines, therefore, place a great deal of trust in Indian Entities.
- There is also a huge lack of data in the country which impedes planning for infrastructure, development and businesses which are data-based.
- The mapping of the entire country that too with high accuracy, by the Indian government alone could take decades.
- The government, therefore, felt an urgent need to incentivise the geospatial sector for Indian companies and increased investment from private players in the sector.
- Large amounts of geospatial data are also available on global platforms, which makes the regulation of data that is freely available in other countries, untenable.

What Next?

- While for decades, geospatial data has been a priority for strategic reasons and for internal and External Security Concerns.
- This priority has seen a shift in the past 15 years – geospatial data has now become imperative for the government in planning for infrastructure, development, social development as well as the economy.
- More and more sectors such as agriculture, environment protection, power, water, transportation, communication, health (tracking of diseases, patients, hospitals etc) are relying heavily on this data.
- There has also been a global push for open access to geospatial as it affects the lives of ordinary citizens.

Expected Impacts

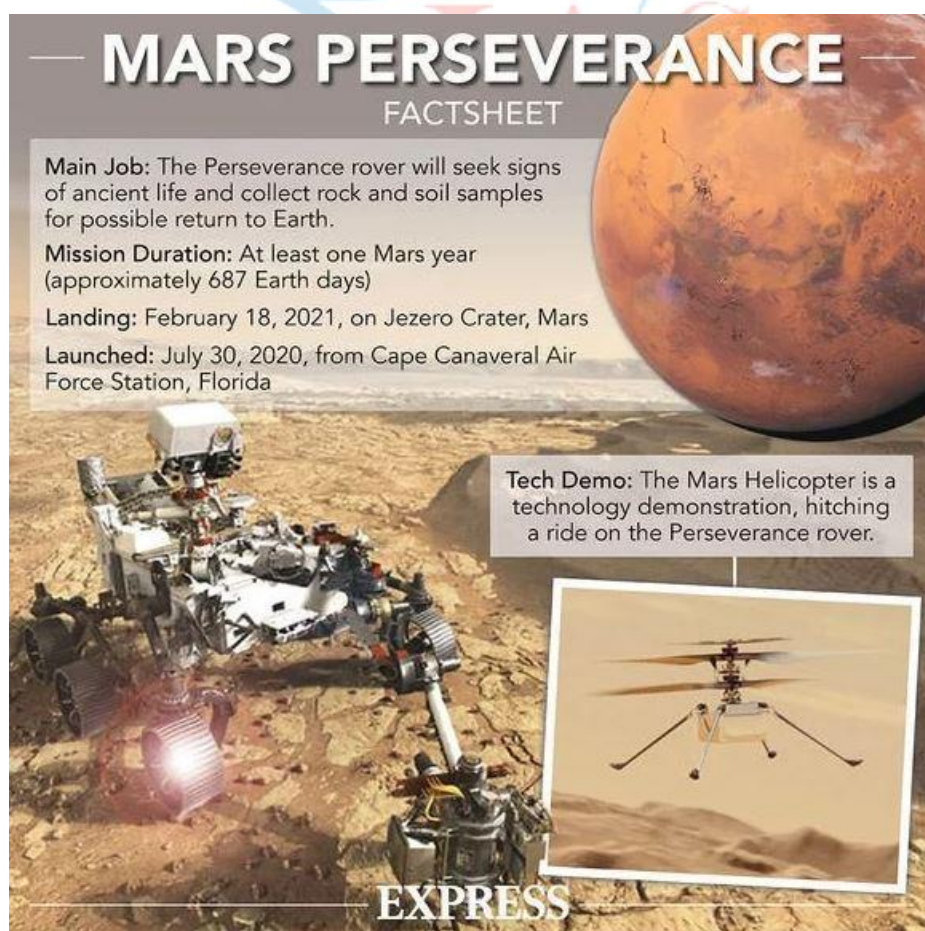
- By liberalizing the system, the government will ensure more players in the field, the competitiveness of Indian companies in the global market, and more accurate data available to both the government to formulate plans and administer, but also for individual Indians.

- Startups and businesses can now also use this data in setting up their concerns, especially in the sector of e-commerce or geospatial based apps – which in turn will increase employment in these sectors.
- Indian companies will be able to develop indigenous apps, for example, an Indian version of Google maps.
- There is also likely to be an increase in public-private partnerships with the opening of this sector with data collection companies working with the Indian government on various Sectoral Projects.
- The Government also expects an increase in investment in the geospatial sector by companies, and also an increase in export of data to foreign companies and countries, which in turn will Boost the Economy.

4. NASA's Perseverance rover makes historic Mars landing

Why in News?

- NASA's rover Perseverance, the most advanced astrobiology laboratory ever sent to another world has landed safely on the floor of Jezero Crater on Mars.



Perseverance Rover:

- The Perseverance rover weighs less than 2,300 pounds and is managed by NASA's Jet Propulsion Lab.
- It is a part of the mission named 'Mars 2020'.
- The rover's mission will be to search for signs of past microbial life. It will also collect samples of Martian rocks and dust, according to the release.
- All of NASA's previous Mars rovers — including the Sojourner (1997), Spirit and Opportunity (2004) and Curiosity (exploring Mars since 2012) — were named in this way.

Objectives of the Mission

- Looking for habitability: identify past environments capable of supporting microbial life.
- Seeking bio-signatures: seek signs of possible past microbial life in those habitable environments, particularly in special rocks known to preserve signs over time.
- Caching samples: collect core rock and regolith ("soil") samples and store them on the Martian surface.
- Preparing for humans: test oxygen production from the Martian Atmosphere.

Major components:

(a) Looking for Underground Water:

- Perseverance will carry the Radar Imager for Mars' Subsurface Experiment (RIMFAX).
- The instrument will look for subsurface water on Mars – which, if found, will greatly help the case for a human mission or the cause of a human settlement on Mars.

(b) Testing a Helicopter:

- The Mars Helicopter is a small drone. It is a technology demonstration experiment: to test whether the helicopter can fly in the sparse atmosphere on Mars.
- The low density of the Martian atmosphere makes the odds of actually flying a helicopter or an aircraft on Mars very low.

(c) Producing oxygen on Mars

- Perseverance will have an instrument – MOXIE, or Mars Oxygen In-Situ Resource Utilization Experiment – that will use 300 watts of power to produce about 10 grams of oxygen using atmospheric carbon dioxide.
- Should this experiment be successful, MOXIE can be scaled up by a factor of 100 to provide the two very critical needs of humans: oxygen for breathing, and rocket fuel for the trip back to Earth.

5. Non-Alcoholic Fatty Liver Diseases (NAFLD)

Why in News?

- The Union Govt has integrated the Non-alcoholic fatty liver disease (NAFLD) in the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke.

NAFLD:

- NAFLD is the abnormal accumulation of fat in the liver in the absence of secondary causes of fatty liver, such as harmful alcohol use, viral hepatitis, or medications.
- According to doctors, it is a serious health concern as it encompasses a spectrum of liver abnormalities.
- It can cause non-alcoholic fatty liver (NAFL, simple fatty liver disease) to more advanced ones like non-alcoholic steatohepatitis (NASH), cirrhosis and even liver cancer.

Why Such a Move?

- NAFLD is emerging as an important cause of liver disease in India.
- Epidemiological studies suggest the prevalence of NAFLD is around 9% to 32% of the general population in India with a higher prevalence in those with overweight or obesity and those with diabetes or prediabetes.
- Researchers have found NAFLD in 40% to 80 % of people who have type 2 diabetes and in 30% to 90% of people who are obese.
- Studies also suggest that people with NAFLD have a greater chance of developing cardiovascular disease.
- Cardiovascular disease is the most common cause of death in NAFLD.

4. ECONOMY

1. India International Silk Fair

Why in News?

- Union Textiles Minister inaugurates 8th India International Silk Fair on a virtual portal.

India International Silk Fair:

- Considered to be India's biggest silk fair, the India International Silk Fair is the Sourcing Fair for silk and silk blend products organised by the Indian Silk Export Promotion Council under the aegis of the Ministry of Textiles and sponsored by the Department of Commerce.

Indian Silk Export Promotion Council:

- The Indian Silk Export Promotion Council (ISEPC) was set up in 1983 as a company not for profit under the Companies Act duly sponsored by the Government of India in the Ministry of Textiles.
- ISEPC works closely with the Government of India on policy formulation concerning the silk sector and provides specialized services to the entrepreneurs enlarging global business opportunities for the Silk Industry in India.

Main Activities:

- Explore markets and identify items offering export potential by conducting market surveys.
- Establish contacts with prospective buyers to generate their interest in Indian Silk products.
- Sponsor trade delegation, study teams and sales teams to various markets abroad.
- Organize Buyer Seller Meets for its member exporters.
- Organize Silk fairs and exhibitions in India.
- Participate in trade fairs and exhibitions abroad.
- Resolve trade disputes.
- Launch generic promotion of silk products from India.
- Organize Workshops/Seminars on various trade and policy-related issues.
- ISEPC is based in New Delhi.

Background:

- India has a long history of silk production and is the 2nd-largest producer of Silk.

- India is the only country in the world which produces all the four major varieties of silk i.e. Mulberry, Eri, Tassar, and Muga.
- It also has large varieties of products to offer i.e. garments, fabrics and sarees, made-ups, carpets, hi-fashion silk apparels, gift items, scarves, stoles, home furnishing, curtains, etc.
- India has around 11 Geographical Indications (GI) such as Pochampally Ikat, Chanderpaul Silk, Mysore Silk, Kanchipuram Silk, Muga Silk, Salem Silk, Arni Silk, Champa Silk, Bhagalpur Silk, Banaras Brocade and Sarees, etc.

2. Kerala Infrastructure Investment Fund Board (KIIFB)

GS 3: Economy

Why in News?

- Recently, the Kerala Assembly passed a resolution against the findings of the constitutional body Comptroller and Auditor-General (CAG).
- The findings were about the borrowings made by the Kerala Infrastructure Investment Fund Board (KIIFB).

Kerala Infrastructure Investment Fund Board (KIIFB)

- In 1999, the KIIFB was constituted by the Kerala Government for Providing Financial assistance to public sector undertakings for investments in Infrastructure Projects.
- In 2016, KIIFB was announced to be converted into a fund mobiliser for Infrastructure Projects.
- It is expected to mobilise Rs 30,000 crore by the end of 2020.
- It was the first Indian agency to access Overseas debt market (London Stock Exchange) by debuting Masala bonds in 2019.
- In 2018, it had launched Pravasi Chitty.
- It is a scheme targeting a huge inflow of funds from Keralites living abroad who it hoped would invest in infrastructure projects at home.

KIIFB Controversy:

- The government gave Rs 2,498 crore as seed capital to the KIIFB, which wanted to use innovative methods of raising finance authorised by SEBI and RBI.
- The projects only worth Rs 7000 crore have been completed so far by KIIFB despite the claim that projects worth Rs 50,000 crore would be implemented during the 2016-2021.

Findings of CAG Report:

- Off-budget borrowings of the KIIFB are unconstitutional as they are not in accordance with Article 293(1) and not accounted for in the disclosure statements in the Budget documents.
- The borrowings of the state government are governed by Article 293(1) of the Constitution which allowing the states to borrow money freely within India upon security of the Consolidated Fund of the State.
- The limits on such borrowings can be regulated under Article 293(3).
- Since, KIIFB has no source of income, the KIIFB's loans have to be repaid from the government's own resources and are direct liability on the government.
- Creating liabilities, without disclosing them in the Budget, raises questions both of transparency, and of inter-generational equity.

Government's Stand:

- Kerala government is providing contingent liabilities i.e., the Government is providing a guarantee for principal and interest for the loans received by the KIIFB in case of default by the KIIFB.
- The Government believes that the KIIFB can repay its liabilities using the petroleum cess and vehicle tax share received every year and moved a resolution rejecting all critical remarks against the KIIFB in the CAG report.

3. Privatisation of Government Entities

Why in News?

- The government has announced that two public sector banks and one general insurance Company (name not disclosed) will be Privatised.
- LIC will be listed on the stock markets in the financial year 2021-22 as part of the consolidation in the Banking and Insurance Sectors.
- Rs 20,000 will be given for Recapitalisation of PSU banks.

What is Privatisation?

- When the Government bring down the stake in the Public Sector Undertakings (PSUs) below 51% or sell the entire stake to private ownership, it is called as privatisation.
- It leads to the transfer of ownership, property or business from the government to the private sector.

- The Government ceases to be the owner of the entity or business.
- It will help the Government to meet the Disinvestment target and reduce the fiscal Constraints.

Criticism of Privatisation:

- Private players in the Financial Sector are Prone to failure
- Risk of failure of big private bank is more than the Public Sector Bank.
- When private banks make profits, it goes to shareholders but when they make losses, it gets socialised and asks the government to make good the deposits either through insurance or taxpayer bailout.
- The privatized banks will focus on maximizing their benefit and it will put an adverse effect on the middle class and poor people of the society.

Advantages of Private Banks:

- More Efficient
- Strict Against Loans and Frauds
- Less Competitive
- Follow the concept of Lower Risk

What is General Insurance?

- Insurance contracts that do not come under the ambit of life insurance are called general insurance.
- The different forms of general insurance are fire, marine, motor, accident, and other miscellaneous non-life insurance.
- There are four PSUs in India in the General insurance sector:
 - ✓ New India Assurance
 - ✓ United India Insurance (UII)
 - ✓ National Insurance Company (NIC)
 - ✓ Oriental Insurance Company (OIC)

4. Foreign Contribution (Regulation) Act rules

Why in News?

- Recently, The Ministry of Home Affairs (MHA) has laid down a charter for banks to oversight on funds received by Non-Governmental Organizations (NGOs).

- The charter defined foreign contribution as the “donations received in Indian rupees” by NGOs and associations from “any foreign source located in India or outside India at the time of such donation”.

Foreign Contribution (Regulation) Act (FCRA) Rules:

- The FCRA regulates foreign donations and ensures that such contributions do not adversely affect internal security.
- It was enacted first in 1976 and amended in 2010 and 2020, to adopt new measures to Regulate Foreign Donations.

Applicability:

- To all associations, groups and NGOs which intend to receive foreign donation.
- Through the Finance Act, 2017, political parties can receive funds from the Indian subsidiary of a Foreign Company or a Foreign Company in which an Indian holds 50% or more shares.

Who Cannot Receive Foreign Donations?

- Members of the legislature, government officials, judges, and media persons.
- **Registration:**
 - ❖ Registration under FCRA is mandatory for all NGOs which intend to receive Foreign Donation.
 - ❖ Validity of Registration: 5 years (can be renewed)
- **Suspension or cancellation of registration:**
 - ❖ The registration can be suspended initially for 180 days on receiving any adverse input.
 - ❖ Until a decision is taken-
 - ❖ The association cannot receive any fresh donation and cannot utilise more than 25% of the amount available in the designated bank account without permission of the MHA.
 - ❖ The MHA can cancel the registration of an organisation which will not be eligible for registration or grant of ‘prior permission’ for three years from the date of cancellation.
- **Utility of Receiving Funds:**
 - ❖ For social, educational, religious, economic, and cultural purposes.

What is 'Prior Permission' Category?

- 'Prior Permission' category is the other way for receiving foreign contributions by applying to MHA.
- It is granted for receipt of a specific amount from a specific donor for carrying out specific activities or projects.
- The association applying for prior permission should be registered under statutes such as:
 - ✓ The Societies Registration Act, 1860
 - ✓ The Indian Trusts Act, 1882
 - ✓ Section 25 of the Companies Act, 1956
- A letter of Commitment from the foreign donor specifying the amount and purpose is also required.

Foreign Contribution (Regulation) Amendment Act, 2020:

- The FCRA rules are amended to enhance transparency and accountability in the receipt and utilisation of foreign contributions.
- The act made Aadhaar, a mandatory identification document for all the office-bearers of an NGOs.
- It includes public servant and corporation owned or controlled by the government in the eligibility list to receive foreign donations.
- It provides for reduction in administrative expenses of any NGO receiving foreign funding, from 50% to 20% of annual funds to ensure spending on their main objectives.
- It enables the centre to allow an NGO or association to surrender its FCRA certificate.

5. One-Person Companies (OPCs)

Why in News?

- In her Budget speech, the Union Finance Minister had announced measures to ease norms on setting up one-person companies (OPCs).

OPC:

- As the name suggests, a one-person company is a company that can be formed by just one person as a shareholder.
- These companies can be contrasted with private companies, which require a minimum of two members to Get Going.
- However, for all Practical Purposes, these are like Private Companies.

- It is not as if there was no scope for an individual with aspirations in business prior to the introduction of OPC as a Concept.
- As an individual, a person could get into the business through a sole proprietorship mode, and this is a path that is Still Available.

Why do we need such Companies?

- A single-person company and sole proprietorship differ significantly in how they are perceived in the eyes of law.
- For the former, the person and the company are considered separate legal entities. In a sole proprietorship, the owner and the business are considered the same.
- This has an important implication when it comes to the liability of the individual member or owner. In a one-person company, the sole owner's liability is limited to that person's investment.
- In a sole proprietorship set-up, however, the owner has unlimited liability as they are not considered different legal entities.
- Some see the proposal as a move to encourage corporatization of small businesses. It is useful for entrepreneurs to have this option while deciding to start a business.

Is this a New Idea?

- Such a concept already exists in many countries. In India, the concept was introduced in the Companies Act of 2013.
- Its introduction was based on the suggestions of the J. Irani Committee Report on Company Law, which submitted its recommendations in 2005.
- Pointing out that there was a need for a framework for small enterprises, it said small companies would contribute significantly to the Indian economy.
- But because of their size, they could not be burdened with the same level of compliance requirements as large public-listed companies.

Features of OPCs:

- The law on one-person companies that took shape, as a result, exempted such companies from many procedural requirements, and, in some cases, provided relaxations.
- For instance, such a company does not need to conduct an annual general meeting, which is a requirement for Other Companies.
- A one-person company also does not require signatures of both its company secretary and director on its annual returns. One is Enough.

- There was, however, criticism that some rules governing a one-person company were restrictive in nature. This year's Budget has dealt with some of these concerns.

How many OPCs does India have?

- According to data compiled by the Monthly Information Bulletin on Corporate Sector, there were 34,235 OPCs out of a total number of about 1.3 million active companies in India (Dec 2020).
- Data also show that more than half of the OPCs are in Business Services.

6. Major Port Authorities Bill, 2020

Why in News?

- Rajya Sabha has passed the Major Ports Authorities Bill 2020 with 88 votes for and 44 against it. The Bill was passed in Lok Sabha in September last year.

Highlights:

- The Bill provides for the regulation of major ports and will replace the Major Port Trusts Act of 1963, and a board of Major Port Authority for each major port will replace the current port trusts. The Bill will apply to the major ports of Chennai, Cochin, Jawaharlal Nehru Port, Kandla, Kolkata, Mumbai, New Mangalore, Mormugao, Paradip, VO Chidambaranar and Vishakhapatnam.

Boards to Replace Trusts:

- Under the 1963 Act, all major ports are managed by the respective Board of Port Trusts that have members appointed by the central government.
- The Bill provides for the creation of a Board of Major Port Authority for each major port.
- These Boards will replace the existing Port Trusts.
- It will have a member each from the state governments, the Railways Ministry, the defence ministry, and the customs department.
- The Bill allows the Board to use its property, assets and funds as deemed fit for the development of the major port.

Board has Financial Powers:

- Under the 1963 Act, the Board had to seek the prior sanction of the Centre to raise any loan.
- Under the new Bill, to meet its capital and working expenditure requirements, the Board may raise loans from any scheduled bank or financial institution within India, or any financial institution outside India.

- However, for loans above 50% of its capital reserves, the Board will require prior sanction of the Central Government.

The Board will Fix Rates:

- At present, the Tariff Authority for Major Ports fixes the scale of rates for assets and services available at ports.
- Under the bill, which now awaits President's assent to become a law, the Board or committees appointed by the Board will determine these rates for services that will be performed at ports.
- The services would include the access to and usage of the port assets, and different classes of goods and vessels, among others.

Punishments:

- Under the 1963 Act, there are various penalties for contravening provisions of the Act.
- The penalty for setting up any structures on the harbours without permission, for example, may extend up to Rs 10,000, and the penalty for evading rates may extend up to 10 times the rates.
- Under the new Bill, any person contravening any provision of the Bill or any rules or regulations will be punished with a fine of up to Rs one lakh.

Opposition Criticism:

- Opposition parties had opposed the legislation terming it the move to privatize ports.
- They said that this Bill is nothing but a retraction of the Singapore model.
- When there were hue and cry that there cannot be the privatization of ports, it adopted a policy of so-called corporatization. Thereafter, it ultimately privatized its ports.
- So, corporatization is the first step. The next in the offing is privatization said the Opposition.

What did the Govt Say?

- The Government has brought in a provision that will allow ports to take their own decisions. To change tariffs, the ports have to now approach the ministry.
- The port sector in the last six years has doubled the profit. Profit has increased, liabilities have come down. For modernization, 300 projects are ongoing.
- This Bill is not to privatize any port, but it is to ensure that our ports can properly compete with private ports.

7. Farakka 'lock' and Hilsa Fish

Why in News?

- It has been reported that an old project to facilitate the movement of Hilsa upstream along the Ganga to its spawning grounds of yore may come to fruition this year.
- Back in February 2019, the government had unveiled a project to redesign the navigation lock at the Farakka Barrage at a cost of Rs 360 crore to create a “fish pass” for the Hilsa.

Hilsa Fish:

- In scientific parlance, the Hilsa (*Tenualosa ilisha*) is an anadromous fish.
- It lives most of its life in the ocean, but during the rainy season, the Hilsa moves towards the estuary, where the rivers of India and Bangladesh meet the Bay of Bengal.
- A large part of the shoal travels upstream in the Padma and the Ganga — some are known to move towards the Godavari, and there are records of Hilsa migration to the Cauvery.
- Culinary lore has it that the fish that travel the farthest upstream have the best combination of the flavours of the sea and the river.

Obstructions created by Farakka Barrage:

- Historical records also show that until the 1970s, the Hilsa would swim the Ganga upstream to Allahabad — and even to Agra.
- But the Farakka Barrage, which became operational on the Ganga in 1975, disrupted the westward movement of the Hilsa.
- The barrage had a navigation lock that stopped the fish from swimming upstream beyond Farakka.
- In Buxar on the border of Bihar and Uttar Pradesh, the last recorded catch of the Hilsa was made 32 years ago.
- The role of the Farakka Barrage in disrupting the Hilsa’s journey is well documented and has been discussed in Parliament as well.
- On August 4, 2016, then Union Water Resources Minister told Lok Sabha about plans to create “fish ladders” to help the fish navigate the obstacle posed by the barrage.

8. Mahabahu-Brahmaputra

Why in News?

- PM will launch the ‘Mahabahu-Brahmaputra’, lay the foundation stone of Dhubri Phulbari Bridge and perform Bhumi Pujan for construction of Majuli Bridge Assam.

Mahabahu-Brahmaputra:

- The program is aimed at providing seamless connectivity to the Eastern parts of India and includes various development activities for the people living around River Brahmaputra and River Barak.
- It will consist of the Ro-Pax vessel operations between Neamati-Majuli Island, North Guwahati-South Guwahati and Dhubri-Hatsingimari.
- The Ro-Pax services will help in reducing the travel time by providing connectivity between banks and thus reducing the distance to be travelled by road.
- PANI (Portal for Asset and Navigation Information) will act as a one-stop solution for providing information about river Navigation and Infrastructure.

Dhubri Phulbari Bridge:

- PM will lay the foundation stone for the four-lane bridge over the Brahmaputra between Dhubri (on North Bank) and Phulbari (on South Bank).
- The proposed Bridge will be located on NH-127B, originating from Srirampur on NH-27 (East-West Corridor), and terminating at Nongstoin on NH-106 in the State of Meghalaya.
- It will connect Dhubri in Assam to Phulbari, Tura, Rongram and Rongjeng in Meghalaya.
- It will reduce the distance of 205 Km to be travelled by Road to 19 Km, which is the total length of the bridge.

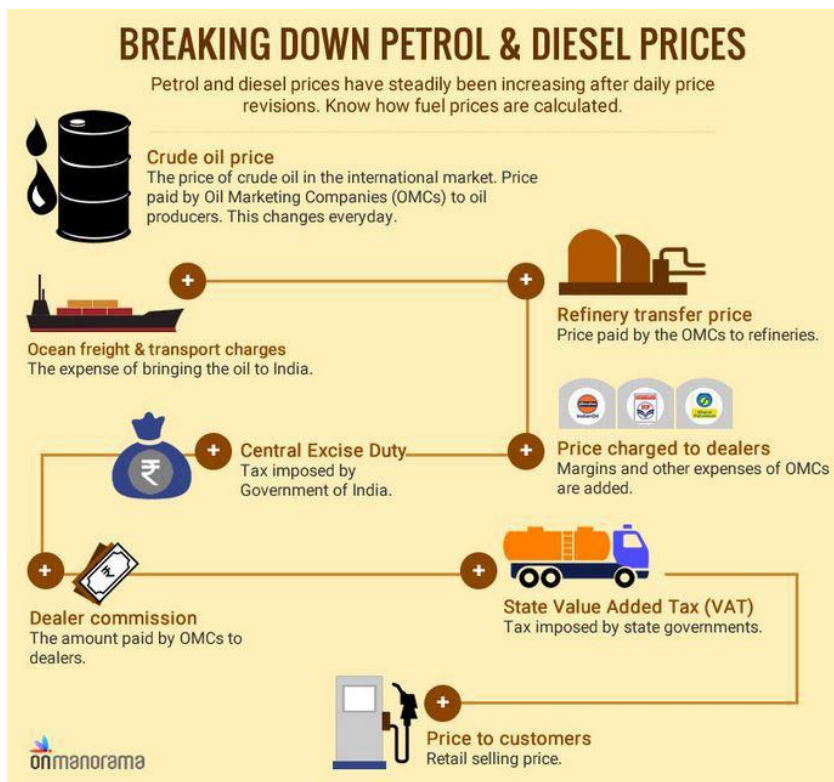
Majuli Bridge:

- PM will perform Bhumi Pujan for the two-lane Bridge on the Brahmaputra between Majuli (North Bank) and Jorhat (South Bank).
- The bridge will be located on NH-715K and will connect Neematighat (on Jorhat side) and Kamalabari (on Majuli side).
- The Construction of the bridge has been a long demand of the people of Majuli who for generations have been dependent on the ferry services to connect with the mainland of Assam.

9. Why are Petrol, Diesel Prices Rising?

Why in News?

- Diesel and petrol prices have hit record highs across the country.



Govt Explanation:

- The government reasons that global crude oil prices have risen by more than 50 per cent to over \$63.3 per barrel since October, forcing oil retailers to increase pump prices.
- That, however, is only partly true.
- Indian consumers are already paying much higher than what they were paying last January, even though crude prices are yet to reach levels of early last year.

Fuel Price Dynamics in India:

- Retail petrol and diesel prices are in theory decontrolled — or linked to global crude oil prices.
- It means that if crude prices fall retails prices should come down too, and vice versa.
- But this does not happen in practice, largely because oil price decontrol is a one-way street in India. When global crude oil prices fall and prices slide, the government slaps fresh taxes and levies to ensure that it rakes in extra revenues.
- The consumer should have ideally benefited by way of lower pump prices, is forced to either shell out what she's already paying or spend even more for every litre of fuel.

- The Main Beneficiary in this subversion of price Decontrol is the Government.

Why Crude Oil Prices are Rising Now?

- Prices collapsed in April 2020 after the pandemic spread around the world, and demand Fell Away.
- But as Economies have reduced travel Restrictions and factory output has picked up, global Demand has Improved, and prices have been Recovering.
- The controlled production of crude amid rising demand has been another key factor in boosting oil prices, with Saudi Arabia Voluntarily Cutting its Daily Output.

What is the Impact of Taxes on Retail Prices of Auto Fuels?

- The central government hiked the central excise duty on petrol to Rs 32.98 per litre during the course of last year from Rs 19.98 per litre at the beginning of 2020.
- It increased the excise duty on diesel to Rs 31.83 per litre from Rs 15.83 over the same period to boost revenues as economic activity fell due to the pandemic.
- A number of states have also hiked sales tax on petrol and diesel to shore up their Revenues.

How Much Tax do We Pay Now?

- Currently, state and central taxes amount to around 180 per cent of the base price of petrol and 141 per cent of the base price of diesel in Delhi.
- How will these hikes impact inflation?
- Experts note that the impact of rising fuel inflation has been counterbalanced by declining food inflation, but that consumers with greater expenditure on travel are feeling the pinch of higher prices.
- Rising fuel inflation may pinch consumers who have to travel further for work and have access to affordable cereals etc.
- The urban population would be more impacted by rising fuel prices than the rural population — however, a weak monsoon may lead to rural India being hit as farmers are forced to rely more on diesel-powered irrigation.

10. India Energy Outlook Report, 2021

Why in News?

- The International Energy Agency (IEA) has recently released the India Energy Outlook 2021 report.

Highlights of the India Energy Outlook Report:

(1) Energy consumption

- ✓ India at present is the fourth-largest global energy consumer behind China, the United States and the European Union.
- ✓ It will overtake the European Union as the world's third-largest energy consumer by 2030.
- ✓ It will account for the biggest share of energy demand growth over the next two decades.

(2) Energy demand

- ✓ India accounts for nearly one-quarter of global energy demand growth from 2019-40 — the largest for any country.
- ✓ Its share in the growth in renewable energy is the second-largest in the world, after China.
- ✓ A five-fold increase in per capita car ownership will result in India leading the oil demand growth in the world.
- ✓ Also, it will become the fastest-growing market for natural gas, with demand more than tripling by 2040.

(3) Industrial consumption

- ✓ By 2040, India is set to account for almost 20 per cent of global growth in industrial value-added, and to lead global growth in industrial final energy consumption, especially in steelmaking.
- ✓ The nation accounts for nearly one-third of global industrial energy demand growth to 2040.

(4) Dependence on fossil fuels

- ✓ To meet its energy needs, India will be more reliant on fossil fuel imports as its domestic oil and gas production stagnates.
- ✓ India's oil demand is seen rising by rising by 74 per cent to 8.7 million barrels per day by 2040 under the existing policies scenario.
- ✓ The natural gas requirement is projected to more than triple to 201 billion cubic meters and coal demand is seen rising to 772 million tonnes in 2040 from the current 590.

(5) Coal trade

- ✓ India currently accounts for 16 per cent of the global coal trade.
- ✓ Many global coal suppliers were counting on growth in India to underpin planned export-oriented Mining Investments.

(6) Per-capita emission

- ✓ On a per-capita basis, India's energy use and emissions are less than half the world average, as are other key indicators such as vehicle ownership, steel and cement output.
- ✓ India will soon become the world's most populous country, adding the equivalent of a city the size of Los Angeles to its urban population each year.

International Energy Agency:

- The IEA is a Paris-based autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis.
- It was initially dedicated to responding to physical disruptions in the supply of oil, as well as serving as an information source on statistics about the international oil market and other energy sectors.
- At the end of July 2009, IEA member countries held a combined stockpile of almost 4.3 billion barrels of oil.
- They are required to maintain total oil stock levels equivalent to at least 90 days of the previous year's net imports.
- The IEA acts as a policy adviser to its member states but also works with non-member countries, especially China, India, and Russia.
- The Agency's mandate has broadened to focus on the "3Es" of effectual energy policy: energy security, economic development, and environmental protection.

11. Bitcoin

Why in News?

- The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 seeks to ban cryptocurrencies. Banning cryptocurrencies would have several implications for India.

Soaring value of Bitcoin:

- Recently, Tesla announced that it will soon accept cryptocurrency as legitimate payment for its cars.
- Mastercard followed by announcing that it will incorporate 'select cryptocurrencies' on its global payment network.
- BNY Mellon, incidentally the US's oldest bank, announced holding and transferring digital currencies for asset management clients.
- JP Morgan and Goldman Sachs announced executive positions to look at cryptocurrencies.

- All of this resulted in a soaring value of Bitcoin, and its younger sibling, Ethereum.

India's Governments Stand on Cryptocurrencies:

- India's Government sought to ban cryptocurrency through a proposed legislation, the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021.
- The Bill also provides to also set up a legal structure for an "official digital currency".
- The Bill promises to "allow for certain exceptions to promote the underlying technology of cryptocurrency (blockchain) and its uses."
- The way the technology is built, an ownerless, consensus-driven, distributed ledger like a blockchain needs cryptocurrency to grease its wheels.
- India tried to ban cryptocurrency once before, in 2018, before it was reversed by the Supreme Court.

Implications of Banning Cryptocurrencies:

- The banning will kill Innovation.
- India has more than 30,000 blockchain innovators and practitioners.
- These innovators will now be looking at moving out to friendlier regimes like the US, Switzerland, Singapore and Estonia.
- International tech companies will freeze blockchain and crypto-exchange investments in India and the step will undermine India's reputation as a technology hub.
- India is the second-largest Bitcoin trading nation in Asia, and all those trades will move to overseas exchanges.
- China has large crypto trading and mining operations, and an Indian ban on Bitcoin will leave that space open for it.

12. Pakistan to Remain on FATF 'Greylist'

Why in News?

- The Financial Action Task Force (FATF) has decided to retain Pakistan on the "greylist" till the next review of its performance.

FATF:

- FATF is an intergovernmental organization founded in 1989 on the initiative of the G7 to develop policies to combat money laundering.
- The FATF Secretariat is housed at the OECD headquarters in Paris.
- It holds three Plenary meetings in the course of each of its 12-month rotating presidencies.

- As of 2019, FATF consisted of 37 Member Jurisdictions.
- India became an Observer at FATF in 2006. Since then, it had been working towards full-fledged membership. On June 25, 2010, India was taken in as the 34th country member of FATF.

What is the Role of FATF?

- The rise of the global economy and international trade has given rise to financial crimes such as money laundering.
- The FATF makes recommendations for combating financial crime, reviews members' policies and procedures, and seeks to increase acceptance of anti-money laundering regulations across the globe.
- Because money launderers and others alter their techniques to avoid apprehension, the FATF updates its Recommendations Every Few Years.

What is the Black List and the Grey List?

- Black List: The blacklist, now called the "Call for action" was the common shorthand description for the FATF list of "Non-Cooperative Countries or Territories" (NCCTs).
- Grey List: Countries that are considered safe haven for supporting terror funding and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

Consequences of Being in the FATF Grey List:

- Economic sanctions from IMF, World Bank, ADB
- Problem in getting loans from IMF, World Bank, ADB and other countries
- Reduction in international trade
- International boycott

Pakistan and FATF:

- Pakistan, which continues to remain on the "grey list" of FATF, had earlier been given the deadline till the June to ensure compliance with the 27-point action plan against terror funding networks.
- It has been under the FATF's scanner since June 2018, when it was put on the Grey List for terror financing and money laundering risks.
- FATF and its partners such as the Asia Pacific Group (APG) are reviewing Pakistan's processes, systems, and weaknesses on the basis of a standard matrix for anti-money laundering (AML) and combating the Financing of Terrorism (CFT) Regime.

5. GEOGRAPHY & ENVIRONMENT

1. The first rocket to run on biofuel has been launched

Why in News?

- Recently, Stardust 1.0 has been launched from USA, which became the first commercial space launch powered by biofuel.

Stardust 1.0:

- Stardust 1.0 is a launch vehicle to launch small satellites called cubesats into space.
- It is 20 feet tall and has a mass of around 250 kg.
- The rocket can carry a maximum payload mass of 8 kg.
- It is powered by bio-derived fuels.
- It is relatively cheaper than traditional rocket fuels and less toxic for the environment.
- The rocket is manufactured by an aerospace company called blueshift.

Biofuels:

- Biofuel is any fuel that is derived from biomass i.e., plant or algae material or animal waste.
- These biomasses can be converted directly into liquid fuels that can be used as transportation fuels.
- It is a renewable source of energy as feed stocks can be replenished readily.
- It is a cost-effective and environmentally benign alternative to petroleum and other fossil Fuels.

Types of Biofuel:

- **First Generation Biofuels:** Produced from sugar, starch, vegetable oil, or animal fats using conventional technology.
- **Examples:** Bio alcohols, Biodiesel, Vegetable oil, Bio ethers, Biogas, Syngas.
- **Second Generation Biofuels:** Produced from non-food crops, such as cellulosic biofuels and waste biomass (stalks of wheat and corn, and wood).
- **Examples:** Biohydrogen, bio methanol.
- **Third Generation Biofuels:** Produced from micro-organisms like algae.

National Policy on Biofuels, 2018:

- It envisages a strategic role for biofuels in the Indian Energy basket.
- Aim is to achieve energy security of the country with a target of reducing import dependence i.e. usage of fossil fuels by 10% from 2014-15 levels by the year 2022.

- First Generation Ethanol Blended Petrol (EBP) Programme, 2003
- EBP programme was started to empower Oil Marketing Companies to procure ethanol from domestic sources.
- Nodal ministry: Ministry of Petroleum and Natural Gas.
- Objective: Sale of 5% ethanol blended Petrol.
- **Aim:**
 - ✓ Reducing import dependency
 - ✓ Conserving foreign exchange
 - ✓ Reducing Carbon Emissions
 - ✓ Provide boost to Agriculture Sector

2. World Wetlands Day

Why in News?

- World Wetlands Day is observed on 1 February Every Year.

World Wetlands Day:

- 2 February each year is celebrated 'World Wetlands Day' to raise global awareness about the vital role of wetlands for people and our planet.
- This day also marks the date of the adoption of the Convention on Wetlands (Ramsar Convention) on 2 February 1971, in the Iranian city of Ramsar on the shores of the Caspian Sea.
- The annual celebration of the Day started in 1997.
- The theme for World Wetlands Day 2021 is 'Wetlands and Water'.
- The 2021 campaign highlights the contribution of wetlands to the quantity and quality of freshwater on our planet. Water and wetlands are connected in an inseparable co-existence that is vital to life, our wellbeing and the health of our planet.
- 2021 also marks the 50th anniversary of the adoption of the Ramsar Convention.

Wetlands:

- Wetlands are land areas that are saturated or flooded with water either permanently or seasonally.
- Inland wetlands include marshes, ponds, lakes, fens, rivers, floodplains, and swamps. Coastal wetlands include saltwater marshes, estuaries, mangroves, lagoons and even coral reefs.

- Fishponds, rice paddies, and saltpans are human-made wetlands.

Wetlands in India:

- India has nearly 4.6% of its land as wetlands, covering an area of 15.26 million hectares.
- There are 42 sites designated as Wetlands of International Importance (Ramsar Sites), with a surface area of 1.08 million hectares in India. Get the list of Ramsar sites in India here.

Centre for Wetland Conservation and Management (CWCM):

- On the occasion of World Wetlands Day 2021, the MoS for Environment announced the establishment of a Centre for Wetland Conservation and Management (CWCM), as a part of the National Centre for Sustainable Coastal Management (NCSCM), Chennai, an institution under the Ministry.
- The Centre will help in building partnership and networks with relevant national and international agencies.
- WCM would serve as a knowledge hub and enable exchange between State/UT Wetland Authorities, wetland users, managers, researchers, policy-makers and practitioners.

3. State to seek Ramsar Certification for Sultanpur National Park

Why in News?

- The Haryana forest department is recently planning to recommend the Sultanpur National Park in Gurugram and the Bhindawas Wildlife Sanctuary in Jhajjar district for declaration as Ramsar sites.

Highlights:

- Both the sites are protected under the MoEFCC's Wetland Rules (2017).
- According to Wetlands International, the quality of the habitat in both Bhindawas and Sultanpur has Been Declining.

Sultanpur National Park:

- It is located at Sultanpur village, Haryana.
- It is named after Chauhan Rajput Raja Sultan Singh Chauhan.
- It was declared a Bird Sanctuary in 1972.
- It was upgraded to a National Park in 1991.

Fauna:

- Blue bull, Indian Fox and Black Buck.

Avian Species:

- Nearly 370 species migrate to India due to seasonal changes, including 175 long-distance migration species through Central air Asian Flyway route.
- Resident birds: White-throated kingfisher, Indian spot-billed duck, painted stork, black-necked stork, white ibis, black-headed ibis, Eurasian collared dove, spotted owlet, etc.
- Migratory birds: Siberian crane, greater flamingo, Eurasian teal, spot-billed pelican, Eurasian wigeon, black-tailed godwit, spotted redshank etc.

Bhindawas Wildlife Sanctuary:

- It is located in Jhajjar district, Haryana.
- It is situated along the Sahibi River.
- It is a man-made wetland which attracts several migratory birds in the winter season.
- It shares its border with Khaparwas Wildlife Sanctuary.

Ramsar Convention:

- It is an intergovernmental treaty which was agreed upon in 1971 at Ramsar, Iran.
- Aim: Conserve the worldwide loss of wetlands and to conserve, through wise use and management through international cooperation, policy making, capacity building and technology transfer.
- Wetlands can be included on the list because of their ecological, botanical, zoological, limnological or hydrological importance.
- It came into force in the year 1975, upon receipt by UNESCO.
- It is the convention on wetlands of international importance.
- It is the first modern treaty between nations aimed at conserving natural resources.
- There are 171 contracting parties to the Convention.
- India signed the Ramsar Convention on 1 February 1982.
- With 175 Ramsar sites, the United Kingdom has the largest number of such sites in the world.
- These sites are maintained in Montreux Record to track any major ecological changes that might affect any of the wetland sites positively or negatively.

Ramsar Wetlands:

- It includes a wide variety of natural and human-made habitat types.
- Like swamps, marshes, billabongs, lakes, salt marshes, mudflats, mangroves, coral reefs, fens, peat bogs, or bodies of water - whether natural or artificial, permanent or temporary.

- Water within these areas can be static or flowing, fresh, brackish or saline, and can include underground wetlands, inland rivers and coastal or marine water to a depth of six metres at low tide.

4. Research on Various Aspects of Medicinal Plants

Why in News?

- The National Medicinal Plants Bard (NMPB), Ministry of AYUSH under ‘Conservation, Development and Sustainable Management of Medicinal Plants’ scheme, is supporting research & development projects on various aspects of Medicinal Plants.

Conservation, Development and Sustainable Management of Medicinal Plants

Scheme:

- The activities proposed to be undertaken in the scheme will also help the country to meet its international obligations in the field of medicinal plant’s biodiversity and promoting bilateral/international cooperation.
- NMPB is engaging in various conservation activities by developing sustainable way through this central sector scheme.
- The efforts of the NMPB need to be considerably upscaled to tackle the whole range of issues impacting the sustained availability of quality herbs.
- The main objectives of the scheme are as follows:
- In-situ conservation:
 - ✓ In-situ conservation deals with the on-site conservation of the wild genetic resources/genetic diversity in natural habitat.
 - ✓ In India, the conservation of forest areas preserves through Protected Areas like National Parks, Wildlife sanctuaries and Biosphere reserve.
- Ex-situ conservation:
 - ✓ Ex-situ conservation dealing with the off-site conservation of the wild genetic resources / genetic diversity.
 - ✓ It includes the collection, preservation and maintenance of selected genetic resources from wild.
- Engage the Eco-Task Force mechanism for reversing habitat degradation of medicinal plants. Conservation & development of eco-systems with medicinal plants bio-diversity.
- Promote R&D in all aspects of medicinal plants, development of agro-techniques, post-harvest management, storage and processing, developing molecular characterization tools etc. and promotion of IT.

- Enhance community mobilization and facilitate sustainable livelihood systems based on medicinal plants for farmers, collectors and other stake holders especially in forest fringe areas. Ensure Quality Assurance - Maintain Good Quality Gene Pool Sources of medicinal plants and aromatic plants having medicinal applications.
- Mapping, upgrading, modernizing of Medicinal Plants supply chain and creating/optimizing market linkages and value addition.
- Quality standardization, Good Collection Practices and Good Agricultural Practices for Medicinal Plants.
- Information, Education and Communication - through seminars, trainings and exposure visits promote capacity building and human resource development through appropriate inter-state and international exposure.
- Promote publication of documents, monographs, technical bulletins, documentaries, brochures, posters, other publicity materials, etc.

5. Karlapat Wildlife Sanctuary

Why in News?

- Six elephants die of Hemorrhagic Septicemia in Odisha's Karlapat Wildlife Sanctuary.

Hemorrhagic Septicemia:

- Hemorrhagic septicemia is a bacterial disease that mainly affects cattle and water buffalo.
- It is an important cause of livestock mortality in tropical regions of Asia, Africa and the Middle East.
- The clinical signs usually progress rapidly from fever and depression to death, within hours to a few days.
- Young animals are mainly affected in endemic regions, and outbreaks are particularly common during rainy weather, when the organism can spread readily.
- Because the disease course is so short, few animals can be treated in time, and recovery is rare.

Karlapat Wildlife Sanctuary:

- Karlapat Wildlife Sanctuary is located in Kalahandi district of Odisha.
- It lies within the Eastern Highlands moist deciduous forests ecoregion.
- Flora: Mixed deciduous forests; scrublands
- Fauna: Tiger, Leopard, Sambar, Nilgai, Barking deer, Mouse deer.

6. Laschamp Excursion

Why in News?

- The world experienced a few centuries of apocalyptic conditions 42,000 years ago, triggered by a reversal of the Earth's magnetic poles combined with changes in the Sun's behaviour. This event is called as Laschamps Excursion.

Laschamp Excursion:

- The Laschamp event was a geomagnetic excursion (a short reversal of the Earth's magnetic field). It occurred 41,400 years ago, during the end of the Last Glacial Period.
- This event is named after the village where it was discovered in the French Massif Central.
- It led to series of catastrophic events like the ozone layer was destroyed, electrical storms raged across the tropics, solar winds generated spectacular light shows (auroras), Arctic air poured across North America, ice sheets and glaciers surged and weather patterns shifted violently.
- During these events, life on earth was exposed to intense ultraviolet light, Neanderthals and giant animals known as megafauna went extinct, while modern humans sought protection in caves.

The Adams Event:

- This last major geomagnetic reversal triggered a series of dramatic events that have far-reaching consequences for our planet.
- Because of the coincidence of seemingly random cosmic events and the extreme environmental changes found around the world 42,000 years ago, researchers have called this period the "Adams Event".

7. Mawsynram: Wettest place on Earth sees a decreasing trend in rainfall

Why in News?

- A recent study that looked at the rainfall pattern in the past 119 years found a decreasing trend at Cherrapunji and nearby areas.

Mawsynram:

- Mawsynram is a town in the East Khasi Hills district of Meghalaya state in northeastern India, 60.9 kilometres from Shillong.
- Mawsynram receives the highest rainfall in India.
- It is reportedly the wettest place on Earth, with an average annual rainfall of 11,872mm but that claim is disputed.

- According to the Guinness Book of World Records, Mawsynram received 26,000 millimetres (1,000 in) of rainfall in 1985.

Why it Rains highest in Mawsynram?

- Because of the uneven relief of India due to the presence of a number of hill ranges, the monsoon is not able to shed its moisture evenly over India.
- Windward sides receive more rainfall and leeward sides receive less rainfall.
- Mawsynram lies in the funnel-shaped depression caused by the Khasi range in Meghalaya.
- The Bay of Bengal branch of monsoons is trapped in it and causes heavy rainfall.

Decreasing Rainfall Trends:

- The Research Analysed daily rain Gauge Measurements during 1901–2019 and noted that the changes in the Indian Ocean temperature have a huge effect on the rainfall in the region.
- There was a reduction in the vegetation area in northeast India in the past two decades, implying that Human Influence also plays an important role in the changing rainfall patterns.
- The traditional way of cultivation known as Jhum cultivation or shifting cultivation is now decreased and being replaced by other methods.
- Also, previous studies have noted there is sizable deforestation in the region.

8. Carbon Watch: India's First App to Assess one's Carbon Footprint

Why in News?

- Chandigarh became the first state or UT in India to launch Carbon Watch, a mobile application to assess the carbon footprint of an individual.

Carbon Footprint:

- A carbon footprint is the total greenhouse gas (GHG) emissions caused by an individual, event, organization, service, or product, expressed as carbon dioxide equivalent.
- It corresponds to the whole amount of greenhouse gases (GHG) produced to, directly and indirectly; support a person's lifestyle and activities.
- Carbon footprints are usually measured in equivalent tons of CO₂, during the period of a year, and they can be associated with an individual, an organization, a product or an event, among others.
- The GHGs whose sum results in a carbon footprint can come from the production and consumption of fossil fuels, food, manufactured goods, materials, roads or transportation.

How does the App Carbon Watch work?

- As a person downloads the application, they will need to fill details in four parts — Water, Energy, Waste Generation and Transport (Vehicular movement).
- In the category of Water, the person will be required to inform about the consumption of water.
- In the Energy category, the details regarding the electricity units consumed every month at the house, monthly bill etc and usage of solar energy will have to be furnished.
- In the Waste category, the individual will need to inform about the waste generated on their part and their family.
- In the transport section, the individual will have to inform about the mode of transport used by four-wheeler, two-wheeler or bicycle.



6. INTERNATIONAL RELATIONS

1. Iran Rules Out Changes to Nuclear Deal

Why in News?

- Iranian President Hassan Rouhani ruled out changes to Iran's nuclear accord with world powers and dismissed calls to broaden the terms of the deal and include regional countries.
- The election of Joe Biden, who supports a US return to the agreement, has spurred some expectations of renewed diplomacy.
- But Rouhani's refusal puts this possibility at the end.

Iranian Nuclear Agreement:

- The Iran nuclear agreement, formally known as the Joint Comprehensive Plan of Action (JCPOA), is a landmark accord reached between Iran and several world powers, including the US, in July 2015.
- Under its terms, Iran agreed to dismantle much of its nuclear program and open its facilities to more extensive international inspections in exchange for billions of dollars' worth of Sanctions Relief.

What were the Goals of JCPOA?

- The P5+1 wanted to unwind Iran's nuclear program to the point that if Tehran decided to pursue a nuclear weapon, it would take at least one year, giving world powers time to respond.
- Heading into the JCPOA negotiations, U.S. intelligence officials estimated that, in the absence of an agreement, Iran could produce enough nuclear material for a weapon in a few months.

Who are the Participants?

- The JCPOA, which went into effect in January 2016, imposes restrictions on Iran's civilian nuclear enrichment program.
- At the heart of negotiations with Iran were the five permanent members of the UN Security Council (China, France, Russia, the UK, and the US) and Germany—collectively known as the P5+1.
- The European Union also took part.
- Prior to the JCPOA, the P5+1 had been negotiating with Iran for years, offering its government various incentives to halt Uranium Enrichment.

Disruptions After Trump:

- The deal has been in Jeopardy since President Donald J. Trump withdrew the US from it in 2018.
- In response to the U.S. departure, as well as to deadly attacks on prominent Iranians in 2020, including one by the United States, Iran has resumed some of its nuclear activities.

Why isn't the Deal Yet Enforced?

- In April 2020, the United States announced its intention to keep back sanctions.
- The other P5 members objected to the move, saying the US could not unilaterally implement the mechanism because it left the nuclear deal in 2018.
- Meanwhile, the wide range of U.S. sanctions unrelated to the nuclear program has added to the Damage.

Iran's Current Nuclear Activity:

- Iran since Trump's decisions started exceeding agreed-upon limits to its stockpile of low-enriched uranium.
- It began enriching uranium to higher concentrations (though still far short of the purity required for weapons).
- It also began developing new centrifuges to accelerate uranium enrichment; resuming heavy water production at its Arak facility.

2. New Disengagement Agreement in Eastern Ladakh

Why in News?

- In the first major breakthrough in talks China's Defence Ministry that PLA and Indian troops on the southern and northern shores of Pangong Tso began synchronized and Organized Disengagement.

New plan in eastern Ladakh:

- As of now, the disengagement process seems restricted to the north and south banks of Pangong Tso.
- The process has started with the pulling back of certain columns of tanks from the south bank region by both sides.
- At the moment, there is no pullback of troops from the friction points and the heights they are positioned on.
- That will happen in a phased and verified manner.

Disengagement from Pangong Tso:

- China will pull its troops on the north bank towards the east of Finger 8.
- Similarly, India will also position its forces at its permanent base near Finger 3.
- Similar action will be taken by both the parties in the south bank area as well.
- Both sides have also agreed that the area between Finger 3 and Finger 8 will become a no-patrolling zone temporarily, till both sides reach an agreement through military and diplomatic discussions to Restore Patrolling.
- Further, all the Construction done by both sides on the north and south banks of the lake since April 2020 will be Removed.

Why is this Area Important?

- The north and south banks of Pangong Tso are two of the most significant and sensitive regions when it comes to the current standoff that began in May 2020.
- What makes the areas around the shores of the lake so sensitive and important is that clashes here marked the beginning of the standoff.
- It is one of the areas where the Chinese troops had come around 8 km deep west of India's perception of the Line of Actual Control.
- China had positioned its troops on the ridgeline connecting Fingers 3 and 4, while according to India the LAC passes through Finger 8.

India is at an Advantage:

- Further, it is in the south bank of the lake that Indian forces in an action in late August had gained a strategic advantage by occupying certain peaks, outwitting the Chinese.
- Indian troops had positioned themselves on heights of Magar Hill, Mukhpari, Gurung Hill, Rezang La and Rechin La, which were unoccupied by either side earlier.
- Since then, the Chinese side had been particularly sensitive as these positions allowed India to not only dominate Spanggur Gap.
- It is a two-km wide valley that can be used to launch an offensive, as China had done in 1962, they also allow India a direct view of China's Moldo Garrison.

Why has this taken so long?

- Since September, China has insisted that India first pull its troops back from the south bank of Pangong Tso, and the Chushul sub-sector.
- However, India has been demanding that any disengagement process should include the entire region, and troops should go back to their April 2020 positions.

- However, it seems that for now, both sides have agreed to first disengage from the Pangong Tso area only.

Principles of Disengagement:

- In military and diplomatic discussions with China India expects a solution to The issue on the basis of three principles:
- LAC should be accepted and respected by both parties.
- Neither party should attempt to change the status quo unilaterally.
- All Agreements should be Fully Adhered to by Both Parties.

Does this mean that the standoff is Resolved?

- There are still some outstanding issues that remain regarding deployment and patrolling on LAC.
- The Pangong Tso region is just one of the friction areas. There are other friction points, all north of the Pangong Tso, where the troops have been face-to-face since last year.
- The situation in Depsang Plains continues to be a concern.
- Both sides agree that complete disengagement under bilateral agreements and protocols should be done as soon as possible.
- After the talks so far, China is also aware of our resolve to protect the sovereignty of the country.

Need for Confidence Building

- Two of the main stumbling blocks in finding a permanent resolution are lack of trust and no clarity on intent.
- Any permanent resolution will include first, disengagement of troops from the frontlines from all friction points.
- Then de-escalation will entail sending the troops from the depth areas to their original bases.
- Both sides have around 50,000 troops in the region, along with additional tanks, artillery and air defence assets.

3. China Denies Entry to WHO experts

Why in News?

- China, which was the epicentre of the COVID-19 pandemic, has denied permission to the World Health Organisation (WHO) team to investigate.

Highlights:

- The WHO team was scheduled to reach Wuhan and investigate the origin and Transmission of the Virus.
- China's decision to deny permit at the eleventh hour has not gone down well with the Global Body.

WHO Response:

- WHO Director-General has expressed his disappointment with the conduct of China.
- WHO has underlined the importance of the mission and how important it is to conduct an investigation by the Global Body.
- Several observers termed this Chinese move as a betrayal considering how the WHO had guarded China during rising tensions about China's involvement in the spread of the pandemic.
- The WHO chief had earlier said good words about how China had responded to the outbreak, praised the Chinese leadership for their efforts and commitment. Thus, this move by China has come as a Surprise to the WHO.

China's Views:

- China stood by its decision to delay the visit; Chinese Government sources said that tracing of the origin of the virus is no simple task.
- China hid behind the excuse that they had to undertake certain procedures and make certain arrangements that would ensure that the work of the international expert team in China is done without hiccups.
- China in recent months has been playing a different tune. The authorities have suggested they will have superintendence over the extent of access given to the international experts and the local scientists have gone on to say that the studies pertaining to the origin of the virus will have to go under critical examination by them before it is made public or taken up for further studies.
- The State media in China has increasingly backed a narrative suggesting the virus came to China from elsewhere, while some scientists in China have put forth studies indicating that the virus was circulating in other countries, such as Italy, before it made its presence felt in China.

4. China's Treatment of Uighurs

Why in News?

- Canada's House of Commons has voted to declare that China is committing genocide against more than 1 million Uighurs in the western Xinjiang Region.

Uighurs?

- There are about 12 million Uighurs, mostly Muslim, living in north-western China in the region of Xinjiang, officially known as the Xinjiang Uyghur Autonomous Region (XUAR).
- The Uighurs speak their own language, similar to Turkish, and see themselves as culturally and ethnically close to Central Asian nations.
- They make up less than half of the Xinjiang population.
- In recent decades, there's been a mass migration of Han Chinese (China's ethnic majority) to Xinjiang, and the Uighurs feel their culture and livelihoods are under threat.
- In the early 20th Century, the Uighurs briefly declared independence, but the region was brought under complete control of mainland China's new Communist government in 1949.

Xinjiang:

- Xinjiang lies in the north-west of China and is the country's biggest region.
- Like Tibet, it is autonomous, meaning – in theory – it has some powers of self-governance. But in practice, both face major restrictions by the central government.
- It is a mostly desert region, producing about a fifth of the world's cotton.
- It is also rich in oil and natural gas and because of its proximity to Central Asia and Europe is seen by Beijing as an Important Trade Link.

What was the Build-up to the Crackdown?

- Anti-Han and separatist sentiment rose in Xinjiang from the 1990s, flaring into violence on occasion. In 2009 some 200 people died in clashes in Xinjiang, which the Chinese blamed on Uighurs who want their own state.
- Xinjiang is now covered by a pervasive network of surveillance, including police, checkpoints, and cameras that scan everything from number plates to individual faces.
- According to Human Rights Watch, police are also using a mobile app to monitor peoples' behaviour, such as how much electricity they are using and how often they use their front door.
- Since 2017 when President Xi Jinping issued an order saying all religions in China should be Chinese in orientation, there have been further crackdowns.

What does China say?

- China says the crackdown is necessary to prevent terrorism and root out Islamist Extremism and the Camps are an effective tool for re-educating inmates in its fight against Terrorism.
- It insists that Uighur militants are waging a violent campaign for an independent state by Plotting Bombings, Sabotage and Civic Unrest.
- China has Dismissed claims it is trying to reduce the Uighur population through mass sterilizations as “baseless”, and says allegations of forced labour are “completely Fabricated”.



7. INTERNAL SECURITY & DISASTER MANAGEMENT

1. The problem of ageing dams in India

Why in News?

- Ageing dams threaten India's water security, affect farmers' income and increases the frequency of flooding.

Some Facts about the Issue of Ageing Dams:

- India is ranked third in the world in terms of building large dams.
- Of the over 5,200 large dams built so far, about 1,100 large dams have already reached 50 years of age and some are older than 120 years.
- The number of such dams will increase to 4,400 by 2050.
- This means that 80% of the nation's large dams face the prospect of becoming obsolete as they will be 50 years to over 150 years old.
- The situation with hundreds of thousands of medium and minor dams is even more precarious as their shelf life is even lower than that of large dams.

Impact on the Storage Capacity

- As dams age, soil replaces the water in the reservoirs technically known as silt or sediment.
- Therefore, the storage capacity cannot be claimed to be the same as it was in the 1900s and 1950s.
- To make matters worse, studies show that the design of many of our reservoirs is flawed.
- Almost every scholarly study on reservoir sedimentation shows that Indian reservoirs are designed with a poor understanding of sedimentation science.
- The designs underestimate the rate of siltation and overestimate live storage capacity created.
- Therefore, the storage space in Indian reservoirs is receding at a rate faster than anticipated.

Consequences:

- When soil replaces the water in reservoirs, supply gets choked.
- The net sown water area either shrinks in size or depends on rains or groundwater, which is over-exploited.
- Crop yield gets affected severely and disrupts the farmer's income.
- The farmer's income may get reduced as water is one of the crucial factors for crop yield along with credit, crop insurance and Investment.

- It is important to note that no plan on climate change adaptation will succeed with sediment-packed dams.
- The flawed siltation rates demonstrated by a number of scholarly studies reinforce the argument that the designed flood cushion within several reservoirs across many river basins may have already depleted substantially due to which floods have become more Frequent Downstream of Dams.

2. Smart Walls' for Indian Borders

Why in News?

- The new US President has stopped the construction of the much-publicized “border wall” between the U.S. and Mexico.
- The Mexico–US barrier also known as the border wall is a series of vertical barriers along the border intended to reduce illegal immigration to the US.
- Biden’s decision was confirmed, however, that an alternative has been offered — a ‘smart’ wall that replaces the physical and armed patrolling with advanced surveillance tech is the proposed future of border security now.

Smart Wall:

- The ‘smart wall’ technology could solve border security issues without the need for a physical barrier.
- The wall would use sensors, radars, and surveillance technology to detect and track border break-ins, and technology capable of performing the most difficult tasks dedicated to border security.
- The complete system of a virtual wall would consist of a radar satellite, computer-equipped border-control vehicles, control sensors and underground sensors.
- Along with surveillance towers and cameras, thermal imaging would be used, which would help in the detection of objects.
- The system would even be capable of distinguishing between animals, humans, and vehicles, and then sending updates to handheld mobile devices of the patrol agents.

Not a New Concept:

- The concept is not new and the novelty of it cannot be directly associated with Biden.
- Interestingly, the U.S.-Mexico border wall proposed by Donald Trump envisaged this concept.

- A Technology firm was sought to be hired by the Trump administration, and it was indicated that artificial intelligence shall be used at a novel scale to complement the steel barrier (border wall).

Feasibility for India

- A question that now arises is whether such a project can be undertaken to secure Indian borders.
- India has been struggling with the problem of terrorists and smugglers infiltrating into the country and efforts are ongoing to secure our borders and curb cross-border infiltration.
- Therefore, it is Proposed that it is high time we start envisaging the use of technology to help India Secure its borders.

Various Challenges:

- A critical factor that must be considered to enable the usage of such a system along Indian borders is that the terrain in the region is rugged, and, furthermore, not even clearly defined.
- Hence, erecting fences, walls or any physical structures is extremely difficult.
- A “smart” wall, however, makes use of systems that would be designed in such a way that they can operate even in rugged areas.
- Imperatively, in the US various other benefits, such as cost-effectiveness, less damage to the environment, fewer land seizures, and speedier deployment are being noted.
- This gives the concept an edge over Traditional Borders.

Benefits that Indian Can Reap:

- Notably, such a system, even if not feasible for our long boundaries, may still be deployed to enhance critical security establishments of the country and complement the already-existing physical fencing and walls.
- This can no doubt secure the Major Infiltration Areas.

Way Forward:

- The attack on the Pathankot Airbase highlighted that often, it may become difficult to secure establishments due to their vast size.
- Further, it is imperative for Indian armed forces to be well-equipped and simultaneously have the latest technological advantage over its enemies.
- Experts must explore this idea to effectively counter the problem of cross-border infiltration.

- Is it unfathomable to deploy a security system that clubs technology with traditional set-ups due to terrain and other problematic factors? This is a question for Digital India to Answer.

3. Controversial Hashtags on Twitter and their Regulation

Why in News?

- The Centre has issued notice to Twitter after the micro-blogging site restored more than 250 accounts that had been suspended earlier on the government's 'legal demand'.

Highlights:

- Twitter was asked to block accounts and controversial hashtags that spoke of an impending 'genocide' of farmers for allegedly promoting misinformation about the protests, adversely affecting public order.
- Twitter reinstated the accounts and tweets on its own and later refused to go back on the Decision, Contending that it found no Violation of its policy.

Are Platforms Required to Comply with Legal Demands?

- Cooperation between technology services companies and law enforcement agencies is now deemed a vital part of fighting cybercrime and various other crimes that are committed using computer resources.
- These cover hacking, digital impersonation and theft of data.
- The potential of the misuse has led to law enforcement officials constantly seeking to curb the ill-effects of using the medium.
- Therefore, most nations have framed laws mandating cooperation by Internet service providers or web hosting service providers and other intermediaries to cooperate with law and order authorities in Certain Circumstances.

What does the Law in India cover?

- In India, the Information Technology Act, 2000, as amended from time to time, governs all activities related to the use of computer resources.
- It covers all 'intermediaries' who play a role in the use of computer resources and electronic records.
- The term 'intermediaries' includes providers of telecom service, network service, Internet service and web hosting, besides search engines, online payment and auction sites, online marketplaces and cyber cafes.

- It includes any person who, on behalf of another, “receives, stores or transmits” any electronic record. Social media platforms would fall under this definition.

What are the Centre’s powers, vis-a-vis intermediaries?

- Section 69 of the Act confers on the Central and State governments the power to issue directions “to intercept, monitor or decrypt...any information generated, transmitted, received or stored in any computer resource”.
- The grounds on which these powers may be exercised are:
 - ✓ in the interest of the sovereignty or integrity of India, defence of India, the security of the state,
 - ✓ friendly relations with foreign states,
 - ✓ public order, or for preventing incitement to the commission of any cognizable offence relating to these, or
 - ✓ for investigating any offence

How does the Government Block Websites and Networks?

- Section 69A, for similar reasons and grounds, enables the Centre to ask any agency of the government, or any intermediary, to block access.
- Any such request for blocking access must be based on reasons given in writing.
- Procedures and safeguards have been incorporated in the rules framed for the purpose.

Obligations of Intermediaries Under Indian Law:

- Intermediaries are required to preserve and retain specified information in a manner and format prescribed by the Centre for a specified duration.
- Contravention of this provision may attract a prison term that may go up to three years, besides a fine.
- When a direction is given for monitoring, the intermediary and any person in charge of a computer resource should extend technical assistance in the form of giving access or securing access to the resource involved.
- Failure to extend such assistance may entail a prison term of up to seven years, besides a fine. Failure to comply with a direction to block access to the public on a government’s written request also attracts a prison term of up to seven years, besides a fine.

Is the liability of the intermediary absolute?

- Section 79 of the Act makes it clear that “an intermediary shall not be liable for any third-party information, data, or communication link made available or hosted by him”.

- This protects Intermediaries such as Internet and data service providers and those hosting websites from being made liable for content that users may post or generate.
- However, the exemption from liability does not apply if there is evidence that the intermediary abetted or induced the commission of the unlawful act involved.
- Judicial intervention in this regard
- In Shreya Singhal Case (2015), the Supreme Court read down the provision to mean that the intermediaries ought to act only upon receiving actual knowledge that a court order has been passed.
- This was because the court felt that intermediaries such as Google or Facebook may receive millions of requests, and it may not be possible for them to judge which of these were legitimate.
- The role of the intermediaries has been spelt out in separate rules framed for the purpose in 2011.

Legislative Efforts:

- In 2018, the Centre favoured coming up with fresh updates to the existing rules on intermediaries' responsibilities, but the draft courted controversy.
- This was because one of the proposed changes was that intermediaries should help identify originators of offensive content.
- This led to misgivings that this could aid privacy violations and online surveillance.
- Also, tech companies that use end-to-end encryption argued that they could not open a backdoor for identifying originators, as it would be a breach of promise to their subscribers.

4. Role of Dams in Uttarakhand Floods

Why in News?

- The use of explosives has repeatedly been questioned for dam construction, and the construction of other infrastructure projects, such as roads, in the fragile Himalayan State.
- The article explains the link between the disasters in the Uttarakhand and the construction of dams.

How Dams Exacerbate Disasters:

- Other than this, deforestation takes place when dams are constructed.
- The construction material that is supposed to be dumped on separate land is often dumped into the Rivers.

The Chopra Committee Report after Kedarnath Flood:

- The Chopra Committee report of 2014 brings more clarity on how dams exacerbate a disaster such as floods.
- Its report mentions how dams exacerbated the 2013 deluge, mainly as riverbeds were already raised from the disposed muck at the dam construction sites.
- The report presents evidence to prove that dams are not only damaged in floods, they also cause immense damage in downstream areas.
- This is because as floodwaters damage a barrage, they increase the destructive capacity of the water that flows downstream of the barrage.
- In an affidavit submitted on December 5, 2014 in the Supreme Court, the Union Ministry of Environment, Forest and Climate Change acknowledged the adverse impact of dams in the 2013 floods.

Impact of Climate Change and Threat of Earthquakes:

- Himalayan glaciers are receding and disintegrating as a result of climate change, and the snow cover in the Himalayas is also thinning.
- Research shows an increase in number and volume of glacial lakes as a result of increased temperatures.
- For dams, this means rapid increase or decrease in the reservoir water level.
- It also means that the projections on the life of a dam reservoir may not stand due to erratic events, such as floods, that could rapidly fill a reservoir with muck and boulders brought along with the floods.
- In terms of earthquake risk, Uttarakhand lies in Seismic Zone-IV (severe intensity) and Seismic Zone-V (very severe intensity).
- Ignoring this, many dams have been constructed in zones that are under high risk of witnessing Severe Earthquakes.

5. Flash floods and their mitigation

Why in News?

- A flash flood is a rapid flooding of low-lying areas: washes, rivers, dry lakes and depressions.
- It may be caused by heavy rain associated with a severe thunderstorm, hurricane, tropical storm, or meltwater from ice or snow flowing over ice sheets or snowfields.

Chamoli Example:

- Flash flood incident in Uttarakhand is another warning of the dangers that a Himalayan state like Uttarakhand faces from natural processes like landslides, snow avalanches cloudbursts or lake bursts.
- As we saw in 2013 in the same state, such processes can trigger much bigger disasters and cause massive destruction.
- But it is possible to work towards minimising the threat of such incidents and reduce their impact.

Role of Glacial Lakes:

- There are over 1,000 glaciers in Uttarakhand. Almost all of them are receding. Most of the glaciers also have debris cover.
- When glaciers retreat due to rising temperatures, the snow melts but the debris remains. This debris aids in the Formation of lakes.

Cause: Retreat of Glaciers:

- Glaciers have reduced considerably in mass and surface area since the little ice age period.
- This has led to the formation of a large number of glacial lakes all across the Himalayas.
- Many of these high-altitude lakes are potentially dangerous, because of their potential to cause flash floods in the Event of a Breach.

How big is the Threat?

- Over the years, the frequency of formation of these lakes has increased.
- But despite that, there are not many GLOF (glacial lake outburst flood) events happening in Uttarakhand.
- Not as many as in Sikkim, for example. This is because Uttarakhand has very steep slopes, and the water manages to find a way out.

What Should be Done?

(a) Coherent research

- There are a lot more glaciologists and others who are working in the area and generating data.
- Multiple scientific groups and institutions are involved. But there is no coherent output. Lots of data are being generated but not being put to good use.
- There has to be one agency dedicated to the job.

(b) Monitoring

- The first step in tackling the threat from these glacial lakes is to start monitoring them and the glaciers more actively and regularly.
- There is a need to monitor every glacier. Glaciers in one basin do not have remarkably different properties.
- Relying only on satellites and remote sensing is not going to be enough.
- What is required is a consolidated state of glaciers in India, with the ability to zoom in on any of them and track the changes happening year by year.

(c) Planning

- Construction-related activities in the state might not have a direct link to Chamoli incident, but these are not entirely benign.
- The Himalayas are very young mountain systems, and extremely fragile and a minor change in orientation of the rocks can be enough to trigger landslides.
- It is important to include glaciers in any environment impact assessment for major projects such as the construction of dams.
- The entire catchment areas should be made part of the impact assessment.

(d) Mitigation

- If we monitor the glaciers regularly, it would enable us to identify the lakes that need mitigation solutions.
- Several structural and geotechnical measures can be applied, and there are successful examples where the threat from these lakes has been reduced.
- It is possible to construct channels for the gradual and regulated discharge of water from these lakes, which will reduce the pressure on them, and minimise the chances of a breach.
- At the same time, it also reduces the volume of water that goes into the flash flood. Also, alarm systems can be set up at the lakes that will warn the community downstream whenever an overflow happens.

Way Forward:

- It is not possible to completely prevent these kinds of incidents. But their potential to cause destruction can certainly be minimized.
- Scientists can find a way to let the lake waters slowly drain at the nearby river at a regulated rate so that there is no flooding, and the pressure on the lake does not become unbearable.
- Such solutions can be applied in Uttarakhand, and some work is being done.

6. Australia vs Facebook Row

Why in News?

- The social media giant Facebook is locked in a battle with Australia over legislation that would require FB, Google to pay for news outlets.

Row over the News on Social Media:

- Australia had proposed a law called the News Media and Digital Platforms Mandatory Bargaining Code Bill 2020.
- It seeks to mandate a bargaining code that aims to force Google and Facebook to compensate media companies for using their content.

Response from the 'Giants':

- Google had threatened to make its search engine unavailable in Australia in response to the legislation, which would create a panel to make pricing decisions on the news.
- Facebook responded by blocking users from accessing and sharing Australian news.

Why Countries are Bringing Such Legislation?

- Australia has launched a global diplomatic offensive to support its proposed law to force Internet giants Facebook and Google to pay media companies.
- Google accounts for 53% of Australian online advertising revenue and Facebook for 23%.
- The legislation sets a precedent in regulating social media across geographies and is being closely watched the world over.

What is Happening in Other Countries?

- Australia's proposed law would be the first of its kind, but other governments also are pressuring Google, Facebook and other internet companies to pay news outlets and other Publishers for the Material.

- In Europe, Google had to negotiate with French publishers after a court last year upheld an order saying such agreements were required by a 2019 EU copyright directive.
- France is the first government to enforce the rules, but the decision suggests Google, Facebook and other companies will face similar requirements in other parts of the 27-nation trade bloc.

The 'Doubted' Reluctance:

- Last year, Facebook announced it would pay US news organizations including The Wall Street Journal, The Washington Post and USA Today for headlines.
- In Spain, Google shut down its news website after a 2014 law required it to pay publishers.

Why does this Matter?

- Developments in Australia and Europe suggest the financial balance between multibillion-dollar internet companies and news organizations might be shifting.
- Australia is responding to complaints by news reports, magazine articles and other content that appears on their websites or is shared by users.
- The government acted after its competition regulator tried and failed to negotiate a voluntary payment plan with Google. The proposed law would create a panel to make binding decisions on the price of news reports to help give individual publishers more negotiating leverage with global internet companies.

Not Losing out Revenue Gain:

- Google's agreement means a new revenue stream for news outfits, but whether that translates into more coverage for readers, viewers and listeners is unclear.
- The union for Australian journalists is calling on media companies to make sure online revenue goes into newsgathering.

7. Intermediary Guidelines and Digital Media Ethics Code, 2021

Why in News?

- For the first time, the union government, under the ambit of the IT (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021, has brought in detailed guidelines for digital content on both digital media and Over The Top (OTT) platforms.

Guidelines Related to Social Media:

- Due Diligence To Be Followed By Intermediaries: The Rules prescribe due diligence that must be followed by intermediaries, including social media intermediaries.

- In case, due diligence is not followed by the intermediary, safe harbour provisions will not apply to them.
- **Grievance Redressal Mechanism:** The Rules seek to empower the users by mandating the intermediaries, including social media intermediaries, to establish a grievance redressal mechanism for receiving resolving complaints from the users or victims.
- **Ensuring Online Safety and Dignity of Users, Especially Women Users:** Intermediaries shall remove or disable access within 24 hours of receipt of complaints of contents that erodes individual privacy and dignity.

Additional Due Diligence to Be Followed by Significant Social Media Intermediary:

- Appoint a Chief Compliance Officer who shall be responsible for ensuring compliance with the Act and Rules. Such a person should be a resident of India.
- Appoint a Nodal Contact Person for 24×7 coordination with law enforcement agencies. Such a person shall be a resident in India.
- Appoint a Resident Grievance Officer who shall perform the functions mentioned under the Grievance Redressal Mechanism. Such a person shall be a resident in India.
- Publish a monthly compliance report mentioning the details of complaints received and action taken on the complaints.
- Significant social media intermediaries providing services primarily in the nature of messaging shall enable identification of the first originator of the information.

Digital Media Ethics Code Relating to Digital Media and OTT Platforms

- This Code of Ethics prescribes the guidelines to be followed by OTT platforms and online news and digital media entities.

Self-Classification of Content:

- The OTT platforms, called the publishers of online curated content in the rules, would self-classify the content into five age-based categories– U (Universal), U/A 7+, U/A 13+, U/A 16+, and A (Adult).
- Platforms would be required to implement parental locks for content classified as U/A 13+ or higher and reliable age verification mechanisms for content classified as “A”.
- The publisher of online curated content shall prominently display the classification rating specific to each content or programme together with a content descriptor.

Norms for News:

- Publishers of news on digital media would be required to observe Norms of Journalistic Conduct of the Press Council of India and the Programme Code under the Cable Television Networks Regulation Act.
- (c) Self-regulation by the Publisher
- Publisher shall appoint a Grievance Redressal Officer based in India who shall be responsible for the redressal of grievances received by it.
- The officer shall take a decision on every grievance received it within 15 days.

Self-Regulatory Body:

- There may be one or more self-regulatory bodies of publishers. Such a body shall be headed by a retired judge of the Supreme Court, a High Court or independent eminent person and have not more than six members.
- Such a body will have to register with the Ministry of Information and Broadcasting.
- This body will oversee the adherence by the publisher to the Code of Ethics and address grievances that have not to be resolved by the publisher within 15 days.

Oversight Mechanism

- Ministry of Information and Broadcasting shall formulate an Oversight Mechanism.
- It shall publish a charter for self-regulating bodies, including Codes of Practices.
- It shall establish an Inter-Departmental Committee for Hearing Grievances.