ASTRA

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JULY 2021

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Why in news?

- Recently, due to Covid-19-Pandemic an app called chendavia is gaining popularity among the students of kalbeliya dance.

About the dance

- Kabeliya is a tribe from Rajasthan, India, there is also a dance of the same name.
- Their traditional occupation is catching snakes and trading snake venom. Hence, the dance movements and the costumes of their community bear a resemblance to that of the serpents
- The dance is an integral part of their culture and performed by men and women.
- Kalbelia dance and songs are now in UNESCO's representative list of the Intangible Cultural Heritage of Humanity from the year 2010.
- Kalbelia dance is one of the most sensuous dance among all Rajasthani dances.

Convention for the Safeguarding of the Intangible Heritage

- The Convention of the Safeguarding of the Intangible Cultural Heritage was adopted by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** in 2003 and entered into force in 2006.

The Purpose of the Convention

- to safeguard the expressions of intangible cultural heritage that are endangered by the processes of globalization;
- to ensure respect for the intangible cultural heritage of the communities, groups and individuals;
- to raise awareness at the local, national and international levels of the importance of the intangible cultural heritage.

Publications

- The Committee to the Convention publishes three lists of intangible cultural heritage:
- Representative List of the Intangible Cultural Heritage of Humanity
- List of Intangible Cultural Heritage in Need of Urgent Safeguarding
- Register of good safeguarding practices

List of the Intangible Cultural Heritage of Humanity

- UNESCO established it's Lists of Intangible Cultural Heritage with the aim of ensuring better protection of important intangible cultural heritages worldwide and the awareness of their significance.
- The list was established in 2008 when the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage took effect.

	13 ICH traditions recognised by UNESCO		
1.	Tradition of Vedic chanting, 2008	8.	Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2.	Ramlila, the traditional performance of the Ramayana, 2008	9.	Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3.	Kutiyattam, Sanskrit theatre, 2008	10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India ,2014
4.	Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11.	Yoga, 2016
5.	Mudiyettu, ritual theatre and dance drama of Kerala, 2010	12.	Nowruz, 2016
6.	Kalbelia folk songs and dances of Rajasthan, 2010	13.	Kumbh Mela, 2017
7.	Chhau dance, 2010		

Why in news?
- Recently, the consignments of Geographical Indications (GI) certified Madurai Malli and other traditional flowers were exported to USA and Dubai from Tamil Nadu.

About Madurai Malli
- It is a jasmine flower which is known for its powerful, mysteriously attractive and seductive fragrance.
- It is called as Madurai Malli because of its place of origin namely Madurai which is a province of Tamil Nadu.
- It is a very old traditional flower and has a botanical name of Jasminium.
- The Jasmine City or Madurai is also known as Malligai Managar.
- The ideal season for growth of Madurai Malli is warm summer and bright sunny days.
- The soil requirement for Madurai Malli varies from sandy loamy soil to even clayey soil.
- It was granted the status of Geographical Indications (GI) under GI Act 1999 in 2013.

What is Geographical Indication (GI) Status?
- It is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- A sign must identify a product as originating in a given place in order to function as a GI.
- The TRIPS prescribes minimum standards of protection of GIs and additional protection for wines and spirits.
- India has taken legislative measures by enacting the Geographical Indications of Goods (Registration and Protection) Act, 1999.
  - It defines Geographical Indications as an indication which identifies such goods as agricultural goods, natural goods or manufactured goods as originating, or manufactured in the territory of a country, or a region or locality in that territory.
- An application for the registration of a GI is to be made to the Registrar of Geographical Indications in the form prescribed under the Gi Act, 1999.
- A Geographical Indication is registered for a period of 10 years and the registration may be renewed from time to time for a period of 10 years at a time.

Why in news?
- Prime Minister has expressed deep grief over the passing away of Kashi Annapurna Temple Mahant Shri Rameshwar Puriji.

About
- It is one of the most famous Hindu temples in the holy city of Varanasi.
- This temple has great religious importance in Hinduism and is dedicated to the goddess Annapurna.
- Annapurna is the Hindu goddess for nourishment and is a form of the goddess Parvati.
- The current Annapurna Mandir was constructed in the 18th century by Maratha PeshwaBajirao I.
- The temple is constructed in Nagara architecture.
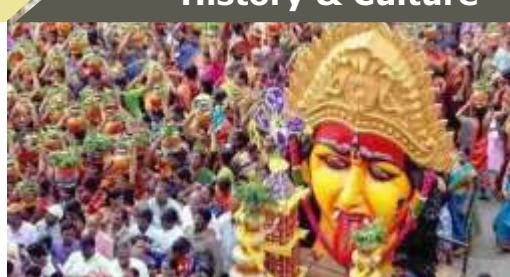
Why in news?
- 'Bonalu' festivities to begin in Telangana.

About the festival
- **'Bonalu'** is a traditional folk festival celebrated every year in the Telugu month of Ashadham (falling in June/July), in the twin cities of Hyderabad and Secunderabad, and some other parts of Telangana state.

- The Bonalu festival involves devotees offering the traditional 'bonam' (derived from Bhojanam, meaning meals) to the goddess Mahankali at 25 temples.
- The origin of this festival can be traced back to the 18th Century in the erstwhile Hyderabad State.
- Other major festivals of Telangana: Bathukamma Festival and SammakkaSarakkaJatara.

NATIONAL ARCHIVES OF INDIA
History & Culture

Why in news?
- Culture Minister G. Kishan Reddy said the National Archives' records related to freedom fighters would be digitised within a year as a part of the commemoration of 75 years of Independence next year.

About
- The National Archives of India (NAI) is a repository of the non-current records of the Government of India and holds them in trust for the use of administrators and scholars.
- It was originally established as the Imperial Record Department in 1891, in Calcutta, the capital of British India.
- In 1911 the Department was transferred to the new capital, New Delhi.
- It functions as an attached Office of the Department of Culture under the Ministry of Culture.
- In 1998 it was declared as the "Museum of the National Archives" and opened to the general public.
- This museum provides a representative overview of the multifarious holdings of the National Archives, and promotes a common man's interest in archival holdings.

JAGANNATH TEMPLE
History & Culture

Why in the news?
- The Shree Jagannath Temple Administration (SJTA) has recently announced that the devotees don't require to produce COVID-19 negative report for getting entry into the 12th-century shrine in Puri from January 21.

About Jagannath Puri Temple:
- **Shree Jagannath Puri Temple** is one of the most impressing monuments of the State of Odisha.
- The temple **built in the 12th Century AD by King Anatavarman Chodaganga Deva** of the Eastern Ganga Dynasty.
- 'Jagannath Puri' temple is called **Yamanika Tirtha** where, according to the Hindu beliefs, the power of Yama, the god of death has been nullified in Puri due to the presence of Lord Jagannath, popularly known as Lord Krishna.
- It is one of the **Dhammas (Holiest of the holy place) out of four Dhamas i.e. Puri, Dwarika, Badrinath & Rameswar, in India**.
- 'This temple was called the **White Pagoda** and **is a part of Char Dham pilgrimages** (**Badrinath, Dwaraka, Puri, Rameswaram**).

Architectural features of the temple-
- The entire temple complex **is enclosed within two concentric walls**, the **Kuruma Bheda (Inner wall) and the Meghnad Pachira (Wall)**.
- There are four gates to the temple- Eastern **Singhdwara** which is the main gate with two crouching lions, Southern **Ashwadwara**, Western **Vyaghra Dwar**a and Northern **Hastidwara**. There is a carving of each form at each gate.
- The main entrance to the temple is through Singhadwara located on the Eastern Front of the temple with three other entrances along with the four cardinal directions.
- **The Nilachakra** or **the Blue wheel** perched on top of the temple is made of **eight metals or asta dhatu.**
- The **Aruna stambha**- the **33 ft monolith structure pillar in front of the Singhadwar** or the main entrance of the temple was originally located at the **Sun Temple, Konark**.

Festivals associated-
- **Devasnana Purnima :** The annual bathing ritual, where the holy trinity has brought out from their sanctum on seated in a raised platform and bathed with purified water drawn from a well within the temple premises.
- **Chariot Festival :** This happens during the month of June/July. During the festival, the Lord comes out to the street to greet his devotees, people irrespective of caste, creed & colour can seek his blessings.

PRASHAD SCHEME

Why in news?
- Recently, the Prime Minister has inaugurated various development projects in Varanasi which includes Tourist Facilitation Centre under the Project "Development of Varanasi under PRASHAD Scheme – Phase II" and operation of Cruise Boat from Assi Ghat to Raj Ghat.

About PRASHAD Scheme
- It is a National Mission on Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive (PRASHAD).
- It is a Central Sector Scheme fully financed by the Government of India.
- It is launched by the Ministry of Tourism in the year 2014-15 with the objective of integrated development of identified pilgrimage and heritage destinations.
- It is aimed at infrastructure development such as entry points (Road, Rail and Water Transport), last mile connectivity, basic tourism facilities etc.
- A Central Sanctioning and Monitoring Committee is set up for sanctioning of the projects submitted by the Mission Directorate.

Objective of PRASHAD Scheme
- Rejuvenation and spiritual augmentation of important national/ global pilgrimage destinations;
- Enhance tourism attractiveness of identified pilgrimage destinations and heritage cities under integrated tourism development of heritage city in planned, prioritized and sustainable manner;
- Position pilgrimage and heritage tourism as a major engine for its direct and multiplier effects of economic growth and employment generation;
- Follow community-based development through 'Pro-Poor' tourism concept and 'responsible tourism' initiatives;
- Creating awareness among the local communities about the importance of tourism for them in terms of increase in sources of income, improved living standards and overall development of the area; and
- Enable convergence of state and central government schemes as well as private sector developments for integrated site/ destination development

Selection Criteria for Pilgrimage Site under PRASHAD Scheme
- Pilgrimage footfall: The tourism footfall to any particular pilgrimage destination gives an idea about number of tourists visiting that particular destination and its importance on national pilgrimage map.
- Cultural, historical & heritage importance of the places: These factors should be deployed for selection of destinations under the program.
- Status on existing level of development: Existing level of development shall encompass the state and center initiatives for development of physical and social infrastructure in pilgrimage footprint of destinations to be considered under PRASHAD.
- Resident population of the destination: Population is directly proportionate to the area under the local government and carrying capacity of destination to handle the influx of pilgrims.
- Credibility of Implementation: It can be evaluated through the UC pendency of state/ UT governments and its implementing agencies for project sanctioned by ministry of tourism.
- Parity for pan India development in selection of destinations: The final list of destination shall be prepared by prioritizing destinations from the states which are not covered in the existing list of destinations.

KADAMBINI GANGULY

Why in news?

- On 18 July 2021, Google celebrated Ganguly's 160th birthday with a doodle on its homepage in India.

About Kadambini Ganguly

- **Kadambini Ganguly (1861 – 1923)** was **one of the first Indian female doctors** who practiced with a degree in Western medicine, along side other pioneering women such as Anandibai Joshi.
- Ganguly was the **first woman to gain admission to Calcutta Medical College** in 1884, subsequently trained in Scotland, and established a successful medical practice in India.
- Kadambini became the first woman to pass the University of Calcutta entrance examination.
- It was partly in recognition of her efforts that Bethune College first introduced FA (First Arts), and then graduation courses in 1883.
- **She and Chandramukhi Basu became the first graduates** from Bethune College, and in the process became the first female graduates in the country and in the entire British Empire.

HISTORIC URBAN LANDSCAPE PROJECT

Why in the news?

- In Madhya Pradesh, Gwalior and Orchha cities have been selected by UNESCO under **Historic Urban Landscape Project',** which was started in the year 2011, for the inclusive and well-planned development of fast-growing historical cities while preserving the culture and heritage.

Highlights

- UNESCO's Historic Urban Landscape project for the cities of Orchha and Gwalior was launched through video conferencing by Chief Minister of Madhya Pradesh Shivraj Singh Chouhan.
- Six cities of South Asia, including Indian cities of Varanasi and Ajmer are already involved in this project. Gwalior and Orchha have been included as the 7th and 8th cities of South Asia.
- UNESCO will prepare the management and development of these cities.
- This project will help in boosting the tourism of the state of Madhya Pradesh. Along with this additional employment opportunities will be created.
- These cities will be jointly developed by UNESCO, the Government of India and the state of Madhya Pradesh by putting primary focus on their cultural and historical improvement.
- By implementing this project of UNESCO, full care of the history, culture, traditions, nature as well as heritage of the cities will be sustainably developed.

About Historic Urban Landscape Project

- This project of UNESCO was started in the year 2011 with the primary aim of well-planned and all inclusive development of the fast-growing historical cities around the world, while keeping in mind to preserve the heritage and the culture.

CHANDRA SHEKHAR AZAD

Why in the news?

- Prime Minister, Shri NarendraModi has paid tributes to ChandraShekhar Azad on his Jayanti.

About Azad

- Chandra Shekhar Azad was an Indian revolutionary **who reorganised the Hindustan Republican Association (HRA) under its new name of Hindustan Socialist Republican Association (HSRA).**
- **Political Ideology**: Liberalism, Socialism, and Anarchism
- HRA was a revolutionary organization established in 1924 by SachindraNathSanyal, Narendra Mohan Sen and

PratulGanguly. It was an offshoot of AnushilanSamiti. **Members:**Bhagat Singh, Chandra Shekhar Azad, Sukhdev, Ram Prasad Bismil, Roshan Singh, Ashfaqulla Khan, RajendraLahiri.

- HSRA was established in 1928 at Feroz Shah Kotla in New Delhi by Chandra Shekhar Azad, Ashfaqulla Khan, Bhagat Singh, SukhdevThapar and Jogesh Chandra Chatterjee.
- In December 1921, Mahatma Gandhi launched the **non-cooperation movement**. Azad **took part in the movement** and he was arrested by the British. When Azad was produced before a judge, he gave his name as "Azad" which means "free" in Urdu.
- He was involved in
  - Kakori Train Robbery of 1925,
  - the shooting of J. P. Saunders at Lahore in 1928 to avenge the killing of LalaLajpatRai, and,
  - attempt to blow up the Viceroy of India's train in 1929.
- He used to fondly recite a Hindustani couplet, his only poetic composition: 'Dushmankigoliyonka hum saamnakarenge. Azad hi raheinhain, azad hi rahenge'.

Why in the news:
- **Kesariya Stupa** is a Buddhist stupa in Kesariya located at a distance of 110 kilometres from Patna, Bihar.
- **It is regarded as the tallest** and the largest Buddhist stupa in the world.

Origin of Kesariya Stupa:
- **The original Kesariya stupa** probably dates to the time of Ashoka (circa 250 BCE) as the remains of a capital of a Pillar of Ashoka were discovered there.
- **The current stupa** dates to the Gupta Dynasty between 200 AD and 750 AD and may have been associated with the 4th century ruler Raja Chakravarti.
- **The local people** call Kesariya stupa as "Devala", meaning "house of god".

Significance of the stupa
- Two great foreign travelers, **Faxian (Fahien) and Xuan Zang (Hsuan Tsang)** had visited this place in ancient times and have left interesting and informative accounts of their travels.
- **The discovery of gold coins** bearing the seal of the famous emperor Kanishka of the Kushan dynasty goes on to further establish the ancient heritage of Kesaria.
- **Archeological Survey of India(ASI)** has declared Kesariya Stupa as a protected monument of national importance.

Why in news?

- The global cryosphere shrank by about 87,000 square kilometers per year on average, between 1979 and 2016 as a result of climate change.

About crypsphere

- The cryosphere is an all-encompassing term for those portions of Earth's surface where water is in solid form, including <u>sea ice, lake ice, river ice, snow cover, glaciers, ice caps, ice sheets, and frozen ground (which includes permafrost).</u>
- The cryosphere plays a significant role in the global climate and in climate model response to global changes.
- The term deglaciation describes the retreat of cryospheric features.
- The cryosphere holds almost **three-quarters of Earth's fresh water**, and in some mountainous regions, dwindling glaciers threaten drinking water supplies.

Why in the news?

- The Naitwar Mori Hydro Electric Project has been completed.

About the project

- Naitwar Mori Hydro Electric Project is located on the Tons River in Mori, Uttarkashi district of Uttarakhand.
- The Tons River is a major tributary of the Yamuna River in the Ganga basin
- It has the potential to generate 265.5 million units of electricity every year.
- The State of Uttarakhand will get 12% free Power as a Royalty.

Context

- Union Minister for Road Transport and Highways instructed to open one side of the 1.6-km-long Kuthiran Tunnel in Kerala.

About Kuthiran Tunnel:

- **The Kuthiran Tunnel** is the first road tunnel in Kerala. It is located at Kuthiran in the Thrissur district of Kerala.
- **The tunnel is 1.6 km long** and runs through the Peechi-Vazhani wildlife sanctuary. It is a twin-tube tunnel with three lanes in each tube.
- **The objective of this road tunnel** is to improve connectivity between important ports and towns while protecting wildlife.
- **The tunnel is also a part** of the Mannuthy-Wadakkanchery stretch of the National Highway in Kerala.
- **About Peechi-Vazhani Wildlife Sanctuary:**
- **Peechi-Vazhani** Wildlife Sanctuary is a wildlife sanctuary headquartered in Peechi, Thrissur District of Kerala. It is the second-oldest sanctuary in Kerala.
- **The sanctuary** was established in 1958. It consists of Palappilly- Nelliyampathy forests including the area of Chimmony Wildlife sanctuary.

Context

- Border Roads Organisation (BRO) has restored connectivity at Yarlung-Lamang road in Arunachal Pradesh.

About

- The road under **Project Brahmank of BRO** was inaugurated on June 17, 2021. The strategically important road is crucial for the Armed Forces personnel posted in forward areas as well as the villages.

TAAL VOLCANO | **Geography**

Why in news?

- Recently, the Philippines increased the alert level on Taal Volcano to level 3 on a five-level scale after a Phreatomagmatic Eruption (PE) occurred that generated a dark grayish plume, one kilometer high.

About

- Taal Volcano is the second most active volcano in the Philippines, with 33 recorded historical eruptions.
- The Volcano is a large caldera filled by Taal Lake on Luzon Island in the Philippines (Batanga Province).
- Taal is classified as a – complex volcano.
- A complex volcano, also called a compound volcano, is the one that consists of two or more vents (points of eruption). Examples - Vesuvius, besides Taal.
- Taal has 47 craters and 4 maars.
- Maars are volcanic craters caused by an eruption occurring when old groundwater is in contact with hot rock or magma.

The Macolod Corridor

- Taal is a part of the **Macolod Corridor – a 40-kilometer-wide zone of active volcanic activity in Luzon.**

Why is Philippines prone to volcanoes?

- There are 53 active volcanoes in the Philippines.
- The Philippines lies between the Pacific and Eurasian Plates and this makes it highly vulnerable to typhoons, floods, landslides, volcanic eruptions and earthquakes.
- Philippines lies in the Pacific Ring of Fire.

Why is in the news?
- Conservation plan chalked out after 150 vultures spotted in **Bihar's Valmiki Tiger Reserve.**

Why vultures are important to protect nature?
- Human race has encountered many viruses like COVID-19, our rich biodiversity plays a huge role in keeping the germs at check.
- Of the many organisms, **vultures, as carcass feeders**, play a significant role. The scavenger birds **hold the key for a natural mechanism of infection control.**
- Vultures are the scavengers who do the **work of cleaning up, and keeping the ecosystem healthy.** The beauty is, **despite feeding on infected carcass, vultures do not get infected.**
- The acids in their stomach are potent enough to kill the pathogen. Thus, the **chain of infection is broken.** It invisibly controls the spread of harmful pathogens causing deadly anthrax, cholera, foot and mouth disease, rabies and distemper.
- The birds also **prevent the contamination of water sources**, especially in the wild.
- When animals die near watering hole, there is an imminent danger of contamination resulting in a quick spread of infections and mass death.
- But vultures devour the carcasses in totality thereby preventing a tragic mishap.

About Vultures:
- It is one of the 22 species of large carrion-eating birds that live predominantly in the tropics and subtropics.
- They act an important function as nature's garbage collectors and help to keep the environment clean of waste.
- India is home to 9 species of Vulture namely the Oriental white-backed, Long-billed, Slender-billed, Himalayan, Red-headed, Egyptian, Bearded, Cinereous and the Eurasian Griffon.
- Oriental white-backed, Slender-billed, Long-billed and Red-headed are Critically Endangered.
- The Egyptian vulture is Endangered.

Vultures in India

Out of 23 species of vultures in the world, nine are found in India. These include:
- White rumped vulture (Critically Endangered)
- Slender billed vulture (Critically Endangered)
- Long billed vulture (Critically Endangered)
- Red headed vulture (Critically Endangered)
- Egyptian vulture (Endangered)
- Himalayan Griffon (Near Threatened)
- Cinereous vulture (Near Threatened)
- Bearded vulture (Near Threatened)
- Griffon Vulture (Least Concern).

Conservation Efforts:
- The Action Plan for Vulture Conservation was launched in 2006 By MoEFCC. Under this, the veterinary use of Diclofenac was banned which resulted in checking the vulture population decline by 2011.
- The conservation efforts of India are primarily are focussed on the Critically Endangered and Endangered species of vultures.
- The Vulture Conservation Breeding Programme has been established by the Central Zoo Authority (CZA) and Bombay Natural History Society (BNHS).
- Presently, there are nine Vulture Conservation and Breeding Centres (VCBC) in India. Three of them are directly administered by the Bombay Natural History Society (BNHS).

Action Plan for Vulture Conservation 2020-2025.
- National Board for Wildlife(NBWL) has approved an Action Plan for Vulture Conservation 2020-2025.

Key Highlights of the Plan:
- <u>Vulture Conservation Centre:</u> Uttar Pradesh, Tripura, Maharashtra, Karnataka and Tamil Nadu will get a vulture conservation and breeding centre each.
- <u>Vulture Safe zone:</u> Establishment of at least one vulture-safe zone in each state for the conservation of the remnant populations in that state.
- <u>Rescue Centres:</u> Establishment of four rescue centres, in Pinjore (Haryana), Bhopal (Madhya Pradesh), Guwahati (Assam) and Hyderabad (Telangana). There are currently no dedicated rescue centres for treating vultures.
- <u>Toxic Drugs:</u> A system to automatically remove a drug from veterinary use if it is found to be toxic to vultures with the help of the Drugs Controller General of India.
- <u>Vultures Census:</u> Coordinated nation-wide vulture counting involving forest departments, the Bombay Natural History Society, research institutes, nonprofits and members of the public. This would be for getting a more accurate estimate of the size of vulture populations in the country.
- <u>Database on Threats to Vulture:</u> A database on emerging threats to vulture conservation including collision and electrocution, unintentional poisoning.

HARIT DHARA   Environment

Why in the news?
- An Indian Council of Agricultural Research (ICAR) institute has developed an **anti-methanogenic feed supplement** 'Harit Dhara'.

About Methane pollution
- Methane's **global warming potential is 25 times that of carbon dioxide (CO2)** over 100 years, making it a more potent greenhouse gas.
- Methane is produced by animals **having rumen**, where the plant material they eat like cellulose, fibre, starch and sugars gets fermented or broken down by microorganisms prior to further digestion and nutrient absorption.
- Carbohydrate fermentation leads to production of CO2 and hydrogen that are used as substrates by archaea, the microbes in the rumen which produce methane.
- This gas is then released through these animals' flatulence, when they belch, or through their manure.
- **Tropical plants containing tannins** – bitter and astringent chemical compounds are known to suppress or remove protozoa from the rumen.
- Harit Dhara has been prepared using condensed and hydrolysable tannin-rich plant-based sources which acts by decreasing the population of protozoa microbes in the rumen.
- It also changes the composition of the volatile fatty acids that are the end-products of rumen fermentation (along with hydrogen and CO2).
- An average lactating cow or buffalo in India emits around 200 litres of methane per day.
- Feeding Harit Dhara not only **cuts down their methane emissions by 17-20%**, but also results in **higher milk production and body weight gain.**

Annual Report on Implementing the Plastic Garbage Rules   Environment

Why in the news?
- According to the Central Pollution Control Boards (CPCB) Annual Report on Implementing the Plastic Waste Management Rules, 2016, the plastic waste generated in 2018-19 was 3.3 million tones per year **(roughly 9,200 tones per day).**

About Marine Plastic
- Plastic is a synthetic organic polymer made from petroleum with properties ideally suited for a wide variety of

applications, including packaging, building and construction, household and sports equipment, vehicles, electronics and agriculture. Plastic is cheap, lightweight, strong and malleable.

- Over 300 million tons of plastic are produced every year, half of which is used to design single-use items such as shopping bags, cups and straws.
- Only 9% of plastic waste is recycled. Approximately 12% is burnt, while 79% has accumulated in landfills.
- According to the IUCN, at least 8 million tons of plastic end up in the oceans every year.

Sources of Marine Plastic
- The main sources of marine plastic are land-based, from urban and storm runoff, sewer overflows, beach visitors, inadequate waste disposal and management, industrial activities, construction and illegal dumping.
- Ocean-based plastic originates mainly from the fishing industry, nautical activities and aquaculture.
- Under the influence of solar UV radiation, wind, currents and other natural factors, plastic fragments into small particles, termed microplastics (particles smaller than 5 mm) or nanoplastics (particles smaller than 100 nm).
- In addition, microbeads, a type of microplastic, are very tiny pieces of manufactured polyethylene plastic that are added as exfoliants in health and beauty products, such as cleansers and toothpastes. These tiny particles easily pass through water filtration systems and end up in the ocean and lakes.

Concerns of Marine Plastic Waste
- Plastic waste blocks our sewers, threatening marine life and generating health risks for residents in landfills or the natural environment.
- The financial costs of marine plastic pollution are significant as well.
- According to a forecast made in March 2020, the direct harm to the blue economy of the Association of Southeast Asian Nations will be USD 2.1 billion per year.
- Enormous social costs accompany these economic costs. Residents of coastal regions suffer from the harmful health impacts of plastic pollution and waste brought in by the tides.
- Boats may become entangled in abandoned or discarded fishing nets or their engines may become blocked with plastic debris.
- It can create problems for industries such as Shipping, fisheries and aquaculture and maritime tourism which affect livelihood of the coastal community.

Steps Taken So Far:
- **GloLitter Partnerships Project:**
  - It is launched by the International maritime Organization IMO and the Food and Agriculture Organization of the United Nations (FAO) and . initial funding from the Government of Norway.
  - **Aim:** To prevent and reduce marine plastic litter from shipping and fisheries.
  - It will also assist developing countries in reducing marine litter, including plastic litter, from within the maritime transport and fisheries sectors, and to decrease the use of plastics in these industries.
  - Also assist in identifying opportunities to reuse and recycle plastics.
  - 30 countries including India have joined this global initiative to tackle marine litter.
  - World Environment Day, 2018hosted in India, the world leaders vowed to "Beat Plastic Pollution" & eliminate its use completely.
- **Specific to India:**
  - Plastic Waste Management Rules, 2016state that every local body has to be responsible for setting up infrastructure for segregation, collection, processing, and disposal of plastic waste.
  - Plastic Waste Management (Amendment) Rules 2018introduced the concept of Extended Producer Responsibility (EPR).
  - Ban on single use plastics in a bid to free India of single-use plastics by 2022.
- **Overcoming the menace**
  - **Designing a product:** Identifying plastic items that can be replaced with non-plastic, recyclable, or biodegradable materials is the first step.
  - Countries must embrace circular and sustainable economic practices throughout the plastics value chain to accomplish this.

- **Pricing:** Plastics are inexpensive which provide fewer economic incentives to employ recycled plastics. Balancing price structure with environmental health should be a priority.
- **Technologies and Innovation:** Developing tools and technology to assist governments in measuring and monitoring plastic garbage in cities.
- India should start projects like the 'Closing the loop' project of the United Nations Economics and Social Commission for Asia and the Pacific which assists cities in developing more inventive policy solutions to tackle the problem.
- **Promoting a plastic-free workplaces** All single-use goods can be replaced with reusable items or more sustainable single-use alternatives.
- **Producer responsibility: Extended responsibility** can be applied in the retail (packaging) sector, where producers are responsible for collecting and recycling products that they launch into the market.
- **Municipal and community actions:** Beach and river clean-ups, public awareness campaigns and disposable plastic bag bans and levies.
- **Multi-stakeholder collaboration:** Government ministries at the national and local levels must collaborate in the development, implementation and oversight of policies related to plastic waste management.

BLACK LEOPARD   Environment

Why is in the news?
- Recently, a rare Melanistic Leopard (commonly known as Black Panther) has been recorded in Navegaon-Nagzira Tiger Reserve (NNTR) of Maharashtra.

About Black Panther:
- A black panther is the melanistic colour variant of the leopard (Panthera pardus) and the jaguar (Panthera onca).
- Black panthers of both species have excess black pigments, but their typical **rosettes** are also present.
- They have been documented mostly in tropical forests, with black leopards in Kenya, India, Sri Lanka, Nepal, Thailand, Peninsular Malaysia and Java, and black jaguars in Mexico, Panama, Costa Rica and Paraguay.
- Melanism is caused by a recessive allele in the leopard, and by a dominant allele in the jaguar.
- **Protection Status:**
  - IUCN Red List: Vulnerable.
  - CITES: Appendix I.
  - Wildlife (Protection) Act, 1972: Schedule I.

Status of leopards in India, 2018
- Status of leopards in India, 2018, mentions that the country has 12,852 leopards.
- This study focused mostly on forested habitats where tigers are found, as it was a by-product of the all-India tiger estimate.
- Hence, other leopard habitats such as rocky outcrops, smaller dry forests, higher elevation habitats in the Himalayas, agricultural landscapes (coffee, tea, areca nut, sugarcane plantations) where leopards are known to be found in good numbers were not a part of this exercise.
- Similarly, much of Northeast India was excluded from the study.
- Hence, the area studied by itself does not represent a true pan-India leopard population, as vast stretches of leopard habitats have been excluded from the study.

Nawegaon-Nagzira Tiger Reserve (NNTR)
- It was notified as 46th tiger reserve of India on 12th December, 2013.
- Its 5th Tiger reserve of **Maharashtra.**

DETERGENT FOOTPRINT

Why in the news?

- Contamination and pollution of water are serious problems today.

Extent of detergent pollution

- Water pollution caused by detergents is now a big concern in the global context. The per capita detergent consumption in India is around 2.7 kilogram per year. It is around 10 kg in the United States of America.

Chemical compounds

- Nonylphenol, a hazardous chemical present in detergents, is known to enter water bodies and the food chains. It bio-accumulates and can pose serious environmental and health risks.
- A few more harmful components of detergents which are anthropogenic components such as herbicides, pesticides and heavy metal concentrations (like zinc, cadmium and lead)
- Many laundry detergents contain approximately 35 to 75 per cent phosphate salts.

Effects of detergent pollution

- This blocks out light and disrupting the growth of plants
- It has been detected in human breast milk, blood and urine, and is associated with reproductive and developmental effects in rodents.
- Detergents also contain oxygen-reducing substances (ie, a chemical compound that readily transfer oxygen atoms) that may cause severe damage to the fishes and other marine animals.
- Detergents are capable of destroying the external mucus layers that protect the fish from bacteria and parasites, causing severe damage to the gills. Mostly fish die when detergent concentrations are near 15 parts per million (ppm); however, detergent concentrations as low as 5 ppm will kill fish eggs
- The detergents contain suspected carcinogens, and ingredients that do not fully biodegrade.
- Phosphate tends to inhibit the biodegradation of organic substances. Non-biodegradable substances cannot be eliminated by public or private wastewater treatment.
- Turbidity also clogs the respiratory system of some species of fishes.
- Pathogens from these toxic water bodies cause diseases, some fatal, in human or animal hosts diseases.
- Drinking water contaminated with detergents can be hazardous to human health.
- Some phosphate-based detergents can also cause eutrophication. Phosphate-enrichment can cause the water body to become choked with algae and other plants.

KONDAPALLI RESERVE

Environment

Why is in the news?

- Tension mounted in Kondapalli reserve forests with the Telugu Desam Party (TDP) leaders planned to visit the forests, alleging illegal mining.

About the Kondapalli Reserve Forest

- It is a reserved forest in the Krishna district of the Indian state **of Andhra Pradesh.**
- It is under the protection of Andhra Pradesh Forest Department.
- **Tellaponiki softwood** is found in the forest, which is useful in making the **Kondapalli Toys.**

Reserve Forest

- Forest reserves are portions of state lands where **commercial harvesting of wood products is excluded to capture elements of biodiversity** that can be missing from sustainably harvested sites.
- A reserved forest is the forests accorded a certain degree of protection.
- The term was first introduced in the **Indian Forest Act, 1927 in British Raj**, to refer to certain forests granted protection under the British crown in British India.

- **Land rights** to forests declared to be Reserved forests are typically **acquired and owned** by the **Government of India.**
- Unlike national parks of India or wildlife sanctuaries of India, **reserved forests are declared by the respective state governments.**
- In Reserved forests, rights to **all activities** like hunting, grazing, etc. are **banned** unless specific orders are issued otherwise.
- The first Reserve Forest Of India was **Satpura National Park**.
- Protected forests are of two kinds - **demarcated protected forests and undemarcated protected forests**, based on whether the limits of the forest have been specified by a formal notification.
- **Process of earmarking the land as a forest**
- Under Section 4 of The Indian Forest Act, 1927, the **state government can   constitute any land a reserved forest by issuing a notification in the Official Gazette**,   declaring that it has been decided to constitute such land a reserved forest, and specifying, as nearly as possible, the situation and limits of such land
- The government **must also appoint a Forest Settlement Officer** (FSO) to   inquire into and determine the existence, nature and extent of any rights alleged to exist in favour of any person in or over any land comprised within such limits or in or over any forest-produce, and to deal with the same.
- The FSO will seek suggestions and objections from residents and others within 45 days of initiating the process.
- After taking into account the suggestions and objections, the process of turning the land into a reserved forest will be completed.

STANDARD OPERATING PROCEDURE (SOP) by Environment Ministry

Environment

Why is in the news?
- The Standard Operating Procedure (SOP) issued by the Ministry of Environment, Forests and Climate Change to deal with environmental violations.

About Standard Operating Procedure (SOP)
- It includes stiff penalties — including **shutting down projects and demolition of projects** that have failed to acquire environmental clearance.
- They result of **orders from the National Green Tribunal**, which earlier this year directed the ministry to put in place penalties and an SOP for green violations.
- It **gives powers to government agencies** such as the CPCB, state pollution control boards and state environment impact assessment authorities **to identify** such violations and take penal action against them.
- In 2017, the ministry had initiated a **six-month amnesty scheme on penalising green violations**, which was later extended.
- The SOPs refer to two categories of green violations —
  - **'Violations'** involving cases where construction work, including expansion of an existing project, has begun without the project proponent having acquired environmental clearance; and
  - **'Non-Compliance'** in which prior environmental clearance has been accorded to the project, but it is in violation of norms prescribed in the approval.
- According to the SOPs,
  - **projects that are not permissible for environmental clearance are to be demolished.**
  - projects which are permissible according to environmental law but which have not acquired the requisite clearance are to be shut down.
  - in cases of expansion of a project, including increase in volume of production, if environmental clearance has not been received, then the government agency can now force the project proponent to revert to the level of construction/manufacturing before the expansion.
  - permissibility of the project shall be examined from the perspective of whether such activity/project was at all eligible for grant of prior EC.
- In Violation cases, 1 per cent of the total project cost incurred up to the date of filing of the application will be levied.

- In cases where operations have **commenced without the required environmental clearance, 1 per cent of the total project cost and in addition 0.25 per cent of the total turnover** during the period of violation will be levied.

Significance of this move
- It is an **acknowledgment** by the ministry that **despite EIA rules** being in place for seven years, most projects seem to continue to **fall outside** the prescribed environmental norms and are therefore violators.
- It gives **– immense power to the ministry** in determining the violator and the offence.

Associated Concerns
- This will **institutionalize the violations** on the basis of the polluter pays norm.
- This is **not an amnesty scheme** but actually makes the process of **first violating and then paying a penalty** and getting away with the violation a routine affair, which is in **direct contradiction** to the premise of the EIA.
- This gives **scope for violators**, especially the big players, to negotiate with the ministry.
- These are very substantive changes and needed to have been included in the new EIA draft as an amendment with public discourse, which the ministry has circumvented by issuing it as an Office Memorandum.

FLY ASH   Environment

Why is in the news?
- NTPC Ltd has invited Expressions of Interest (EoI) for the sale of fly ash from the designated ports of the Middle East and other regions.

What is Fly ash?
- Fly ash is a **fine gray powder** consisting mostly of spherical, glassy particles that are produced as a byproduct in coal-fired power stations.
- Fly ash has pozzolanic properties, it **reacts with lime to form cementitious compounds**.
- It is commonly known as a **supplementary cementitious material**.
- Fly ash is also known as flue-ash or simply ash.

Environmental Concerns Associated with Fly Ash
- Fly ash is a major source of PM 2.5, fine, pollution particles, in summer it causes air pollution.
- It becomes air borne, and gets transported to a radius of 10 to 20 kms. It can settle on water and other surfaces. It can also contaminate water and soil systems.
- Fly ash contains heavy metals from coal, a large amount of PM 2.5 and black carbon (BC). Proper disposal of fly ash is still not happening in many places.
- The wet disposal of Fly ash results in leaching of toxic heavy metals in ground water system.

Utilization of Fly Ash
- Fly ash can be used as a replacement for some of the Portland cement contents of concrete. It is environmentally beneficial because it reduces the Portland cement, a major contributor of CO2, required in concrete.
- Fly ash is a proven resource material for many applications of construction industries and currently is being utilized in manufacturing of bricks/blocks/tiles.
- Central Government has made it mandatory for use of fly ash bricks in construction activities happening 500 km around thermal power plants.
- Fly ash is used as an agent for acidic soils, as soil conditioner. It improve some important physicochemical properties of the soil such as hydraulic conductivity, bulk density, porosity, water holding capacity, etc.

Fly Ash Management
- Indian coal has much more ash content than other countries quality-wise. Diverse approaches must be needed for fly ash management.
- It includes washing coal at its place of origin will prevent ash from coming to power plant.

- Promoting R&D for increasing efficiency of power plants will also help in reducing ash generation.
- Proper management of fly ash is important for environment and also for power plants as it occupies a   lot of land space.

Fly Ash Utilisation Policy in India
- Maharashtra has become the first state to adopt Fly Ash Utilization Policy, paving way for prosperity by generating "wealth from waste", and environment protection.
- The policy will create new employment opportunities in the power plant areas and also make available raw material for construction at low cost to help 'Housing for All' projects.
- The policy seeks 100% use of fly ash generated from thermal power plants and biogas plants for construction activities.
- The policy extends use of fly ash to 300 kms radius of power plant from earlier 100 kms radius of power plant.
- It will help in environment protection and save soil excavation.

CRYPTOGAMIC GARDEN   Environment

- India's first cryptogamic garden has been inaugurated in Uttarakhand's Dehradun district.

About the garden
- It is located in the Chakrata town of Dehradun.
- A garden at Deoban in Chakratahouses almost 76 different species of cryptogams, a primitive plant species found since the Jurassic era.
- Because of its low pollution levels and moist conditions which are conducive for the growth of these species, Deoban is chosen.
- Deoban also has pristine majestic forests of Deodar and Oak which create a natural habitat for cryptogamic species.

About Cryptogams-
- A cryptogam (scientific name Cryptogamae) is a plant or a plant-like organism that **reproduces by spores, without flowers or seeds**.
- "Cryptogamae" means "hidden reproduction", referring to the fact that no seed is produced.
- Other names, such as "thallophytes", "lower plants", and "spore plants" are also occasionally used.
- The best-known groups of cryptogams are **algae, lichens, mosses and ferns**, and also includes non-photosynthetic organisms traditionally classified as plants, such as **fungi, slime molds, and bacteria.**
- Algae comprises the most primitive organisms which are predominantly aquatic, both in marine as well as freshwater habitats.
- Ferns are the largest living group of primitive vascular plants while fungi is a kingdom of usually multicellular eukaryotic organisms that are heterotrophs.
- Bryophytes are the simplest and primitive land plants that occupy an intermediate position between algae and pteridophytes.
- Lichens are a complex life form that is a symbiotic partnership of two separate organisms, a fungus and an algae.
- Cryptogams are considered among the **best bioindicators,** as they grow only at places without pollution and with ample soil moisture.
- These species will just vanish even if there is the slightest deviation in the environmental indicators.
- Not all cryptogams are treated as part of the plant kingdom; the fungi, in particular, are regarded as a separate kingdom, more closely related to animals than plants, while blue-green algae are now regarded as a phylum of bacteria.

Why in the news?
- The Commission for Air Quality Management in National Capital Region and Adjoining Areas Bill, 2021 aims to replace earlier promulgated ordinance with same changes.

Functions of the newly proposed commission
- Coordination with state governments: The commission will coordinate with concerned state governments of Delhi, Haryana, Punjab, Rajasthan, and Uttar Pradesh as per provisions of the bill for taking actions taken by them.
- Pollution control: It includes planning and executing plans to prevent and control air pollution in the NCR.
  - It will also provide a framework for identification of air pollutants.
- Collecting Environment Compensation fees: The collection of such fees will be exclusively done by the commission.
- Identification of Violators: The commission will be in charge of identifying violators, monitoring factories and industries and any other polluting unit in the region.
  - Further, it will have the powers to shut down such units.
- Overruling directives of state government: The Commission will also have the powers to overrule directives issued by the state governments in the region that may be in violation of pollution norms.
- R&D on air pollution in NCR: The commission is mandated with conducting research and development through networking with technical institution.
- Preventive Measures: The commission has been mandated to take preventive measures such as increasing plantation and addressing stubble burning.
- It will have authority to issue directions on matters including inspections, or regulation which will be binding on the concerned person or authority.

Significance of the Bill
- Eases penalties norms: In contrast with penalties and jail terms as proposed in original ordinance, the bill has decriminalizes the act of stubble burning but kept alive the penalties in form of Environment Compensation fees.
- Ensuring uniform regulations across NCR: The power of the commission to overrule directives issued by the state governments in the region that may be in violation of pollution norms will ensure uniform application of law throughout National Capital Region across five states.

Why is in the news?
- Recently, the NTPC Renewable Energy Ltd has received the go-ahead from Ministry of New and Renewable Energy (MNRE) to set up India's largest solar park.

Key Highlights
- The current total installed generation capacity of NTPC stands at 66 GW.
  - NTPC, India's largest energy integrated company, aims to build 60 GW Renewable Energy Capacity by 2032.
- There are five operational solar power parks in India, of which Bhadla in Rajasthan (2.2 GW) and Pavgada in Karnataka (2.05 GW) are among the world's largest single location solar plants.
  - India's first solar power park of 0.75 GW was fully commissioned in 2019 in Rewa district of Madhya Pradesh.
- The ministry announced a solar power park scheme in 2014-15 when it targeted 20 GW of capacity under solar parks/ultra-mega solar power projects by 2020.

About India's Single Largest Solar Park
- It is a 4750 MW renewable energy park located at Rann of Kutch in Khavada, Gujarat.
- It will be India's largest solar park to be built by the largest power producer of the country.

- It has been approved under Mode 8 (Ultra Mega Renewable Energy Power Park) of Solar Park Scheme.
- It will be almost twice the capacity of the Bhadla solar park in Rajasthan, currently the largest single-location solar power project in the country.

About Solar Park Scheme
- The scheme for "Development of Solar Parks and Ultra-Mega Solar Power Projects"was rolled out in Dec' 2014.
- Under the scheme, the Ministry of New and Renewable Energy provides Central Financial Assistance to private project developers.
- It offers suitable developed land with all clearances, transmission system, water access, road connectivity, communication network, etc.
- It facilitates & speeds up installation of grid connected solar power projects for electricity generation on a large scale.
- All the States and Union Territories are eligible for getting benefit under the scheme.
- The Solar Energy Corporation of India Limited (SECI) is the designated authority for solar power park development.

KUTCH BUSTARD SANCTUARY   Environment

Why in the news?
- The Central government recently informed the Rajya Sabha that there were no Great Indian Bustards (GIB) in Kutch Bustard Sanctuary (KBS) in Gujarat as on January 1, 2021.

About Great Indian Bustard (GIB)
- GIBs are the **largest among the four bustard species** found in India – the other three being MacQueen's bustard, lesser florican and the Bengal florican.
- GIBs prefer **grasslands as their habitats.**
- Being **terrestrial birds**, they spend most of their time on the ground with occasional flights to go from one part of their habitat to the other.
- They feed on insects, lizards, grass seeds etc.
- GIBs are considered the **flagship bird species of grassland** and hence barometers of the health of grassland ecosystems.
- In February 2020, the Central government told at the 13th Conference of Parties to the United Nations Convention on Migratory Species of Wild Animals (CMS) that the GIB population in India had fallen to just 150.
- Maximum numbers of GIBs are found in Jaisalmer and the Indian Army controlled field firing range near Pokhran, **Rajasthan.**
- Other areas where they are found in less than 10 in number are Kutch district in **Gujarat**, Nagpur and Solapur districts in **Maharashtra**, Bellary and Koppal districts in **Karnataka** and Kurnool district and Amravati in **Andhra Pradesh.**
- **Pakistan** is also believed to host a few GIBs.
- The GIB lays one egg every 1-2 yrs and the success rate of these eggs is 40-50 % due to predators like foxes and dogs.
- The IUCN has categorised GIBs as **critically endangered.**

Protected areas
- Desert National Park Sanctuary in Rajasthan
- Rollapadu Wildlife Sanctuary in Andhra Pradesh
- Karera Wildlife Sanctuary in Madhya Pradesh

Threats
- Collision/electrocution with power transmission lines – due to their poor frontal vision, the bustards can't detect power lines in time and their weight make in-flight quick manoeuvres difficult.
- Irrigation and farming technology
- Mining
- Wind turbines and Solar farms (photovoltaic power stations)
- Plantation of exotic shrub/tree species in deserts and grasslands in the name of afforestation

Why in the news ?

- The government of Uttarakhand recently declared that it will begin valuation of its natural resources in the form of "Gross Environment Product" (GEP), similar to the Gross Domestic Product (GDP).

Gross Environment Product(GEP) & ecosystem services

- GEP is the measure of ecosystem services of any area.
- GEP measures the total annual value of goods and services delivered by ecosystems (forests, water bodies, oceans, and so on) to people in a certain region, such as at the district, state, and national levels.

GEP accounting methods

Categories	Goods and services (examples)
Material services	Food: grain, vegetable, fruits, meat, milk, egg, fish,
	Materials: wood, fiber, water, genes,
	Energy: bio-energy(fuelwood), hydro-power, wind energy,
	Others: tea, coffee, medicine herbs, seedling, ornament
Regulating services	Regulation services: water conservation, soil conservation, carbon sequestration, climate regulating, pollutant purification, pollination,
	Protecting services: sand storm prevention, flooding mitigation, pest control,
Cultural service	Aesthetic services: recreation and ecotourism
	Cultural value: knowledge, education, arts, spirit

- The term "ecosystem services" was coined in 1981 to attract academics towards this aspect.
- American ecological economist Robert Costanza contributed several publications defining and elaborating aspects of ecosystem services.
- According to him, ecosystem services are the benefits human populations derive, directly or indirectly, from ecosystem functions.The definition is still in the process of evolution.
- In 1997, a group of economists and ecologists led by Costanza showed that at global level the value of ES is about twice as much as the global GDP.
- The concept received attention and now is part of global knowledge.
- In this direction, the Millennium Ecosystem Assessment was called for by the United Nations Secretary, General Kofi Annan, in 2000.
- Ecosystems that can be measured include natural ecosystems such as forests, grassland, wetland, desert, freshwater and ocean, and artificial systems that are based on natural processes like farmland, pastures, aquaculture farms and urban green land, etc.

Concerns with GEP

- Is it a process of simple valuation of a state's ecological wealth, or to assess what part of the GDP it contributes.
- It is an attempt to claim a budget from the centre against ecosystem services the state provides to the rest of the country and / or it is a process of providing benefits to its own residents.

Why in the news ?
- Guindy National Park serves as the green lungs to a great metropolitan city in Tamil Nadu.

About Guindy National Park
- It is India's eighth-smallest national park.
- It is one of the last remnants of the tropical dry evergreen forests of the Coromandel Coast.
- A large portion of the area is under mixed dry deciduous scrub jungle.
- The near threatened blackbuck, considered the flagship species of the park, was introduced in 1924 by Lord Willingdon, who later served as the 22nd Governor- General and Viceroy of India.
- The ecosystem services provided by this protected area are sequestration of carbon dioxide, release of oxygen, conserving soil, preventing floods, mitigating climate change, improving water quality, generation of employment opportunities, revenue generation in addition to recreational, aesthetic and spiritual benefits.
- The park has a role in both ex-situ and in- situ conservation.

Why in the news?
- An automated technology for collection of toilet waste, developed by an Indian scientist, **can be used to maintain the toilet system of the Indian Railways.**

Automated Train Toilet Sewage Disposal System
- The automated system consists of three simple steps–
  - the septic tank (which is placed under the track, i.e., train line) top cover gets opened when a train approaches the septic tank place by using Radio Frequency Identification (RFID) sensor and reader placed at Engine and septic tank position respectively, sewerage material in toilet tanks is dropped into the septic tank when they are mutually synchronized, and finally the septic tank cover gets closed when the train departs away from it.
  - The collected sewerage material from train toilets is segregated such that human waste is stored in one tank, and other materials such as plastic materials, cloth materials, and so on are stored in another tank. The human waste is further processed separately to convert into usable material. The plastic and cloth materials are processed separately.
- This technology has been developed targeting the Indian Railways specifically with the aim of cost reduction and to obviate the necessity of time-consuming anaerobic bacteria generation.
- In contrast with Bio toilets which cost one lakh per unit, the new technology brings down the cost to Fifteen thousand rupees only.

Why is in the news?
- Recently, the National Research Centre on Yak (NRCY) at Dirang in Arunachal Pradeshhas tied up with the National Insurance Company Ltd. for insuring Himalayan Yak.

Key Highlights
- The high altitude yak, feeling the climate change heat across the Himalayan belt, will now be insured.
- The countrywide population trend shows that yak population has been decreasing at an alarming rate.
- The climate change and inexplicable changes in the weather pattern have been reported from the yak rearing areas throughout the country.
- The insurance policy would shield the yak owners against the risks posed by weather calamities, diseases, in-transit mishaps, surgical operations and strikes or riots.

- Under the insurance policy, the owners would have to get their yaks ear-tagged and provide a proper description in order to get their animals insured.

About Himalayan Yak
- It is a high-altitude bovine cousin of the cow grazes across the grasslands of the Tibetan Plateau.
- It is a long-haired bovine found throughout the Himalayan region of India.
- It is found throughout the Himalayan region of the Indian subcontinent, the Tibetan Plateau, Northern Myanmar, Yunnan, Sichuan and as far north as Mongolia and Siberia.
- It is a "flagship species" and indicates the health of the ecosystem within which it lives.
- It is a high-altitude animal, usually found 2,000-5,000 metres above sea level.
- It is superbly adapted to the climate of the area in which it lives, which includes conditions of "cold winter, low oxygen content, high solar radiation, and cyclical nutrition with short growing seasons.
- It is listed as 'Vulnerable' under the IUCN Red List of Threatened Species.

CHRYSILLAVOLUPE SPIDERS   Environment

Why is in the news?
- Rare Chrysillavolupe spiders discovered at Puttenahallilake.

About Chrysillavolupe Spiders
- The Chrysillavolupe was believed to be extinct for 150 years, until it was discovered at the Wayanad Wildlife Sanctuary (WWS) in 2018.
- The spider belongs to the family of jumping spiders (Salticidae) and scientifically named Chrysillavolupe.
- Male spiders are 5.44 mm long including stretched legs and 1.76 mm wide.
- They have a carapace in reddish orange colour with two iridescent blue stripes, stated PNLIT in the release.
- Females measure 2.61 mm long and 0.88 mm wide, and have a greyish carapace with grey eyebrows with all legs yellow in colour.

About Puttenahalli lake
- It is a small, restored freshwater lake located in Bangalore.
- The primary water sources are rain and surface water diverted to the lake through channels.
- The lake is currently maintained by PuttenahalliNeighbourhood Lake Improvement Trust (PNLIT) .
- The lake was on the brink of extinction, but due to the efforts of PNLIT, is now a haven for bird-watchers and on its way to being completely restored.

About The Wayanad Wildlife Sanctuary
- It is an animal sanctuary in **Wayanad, Kerala**, India.
- Wayanad Wildlife Sanctuary is the **second largest wildlife sanctuary in** Kerala.
- Established in 1973, the sanctuary is now an **integral part of the Nilgiri Biosphere Reserve**.
- It is bounded by protected area network of **Nagarhole and Bandipur of Karnataka in the northeast, and on the southeast by Mudumalai of Tamil Nadu.**
- It is part of the Deccan Plateau and the vegetation is predominantly of the south Indian moist deciduous teak forests.
- Wayanad district has the largest population of Adivasi in Kerala. Scheduled tribes here include Paniyas, Kurumas, Adiyans, Kurichiyas, Ooralis and Kattunaikkans.
- The sanctuary is part of the **Nilgiri Biosphere Reserve**, which is a UNESCO World Heritage Site.

Why is in the news?

- Recently, the Ministry of Micro, Small & Medium Enterprises (MSMEs) has announced a Project BOLD in order to boost tribals' lives and livelihoods.

Project BOLD

- It is a unique initiative of **Khadi** and **Village Industries Commission** (KVIC).
- It is named as "**Bamboo Oasis on Lands in Drought**" (BOLD).
- It is the first of its kind exercise in India which was launched from the tribal village Nichla Mandwa in Udaipur, Rajasthan.
- Under the project, 5000 saplings of special bamboo species i.e. Bambusa Tulda and Bambusa Polymorpha have been planted over 16 acres approx. of vacant arid Gram Panchayat land.

Significance of Project BOLD

- It seeks to create bamboo-based green patches in arid and semi-arid land zones.
- It is aligned with Prime Minister Shri Narendra Modi's call for reducing land degradation and preventing desertification in the country.
- It has been launched **as part of KVIC's "Khadi Bamboo Festival" to celebrate 75 years of independence "Azadi ka Amrit Mahotsav".**
- The green patches of bamboo in Gujarat, Leh-Ladakh region and Rajasthan will help in reducing the land degradation percentage of the country.
- It will benefit a large number of women and unemployed youths in the region by connecting them to skill development programs.
- It will create additional income for the local tribal population while it will also support the local bamboo-based industries and thus boost the rural economy.

Why in the news?

- The report, titled, "A future for all - the need for human-wildlife coexistence", by the World Wide Fund for Nature (WWF) and the UN Environment Programme (UNEP) has stated that conflict between humans and animals is one of the main threats to the long-term survival of some of the world's most iconic species.

Analysis

- **Key-highlights of the Report**
  - The report features contributions from 155 experts from 40 organisations based in 27 countries.
  - Globally, conflict-related killing affects more than 75 per cent of the world's wild cat species.
  - Besides, many other terrestrial and marine carnivorespecies such as polar bears and Mediterranean monk seals as well as large herbivores such as elephants are affected.
  - Global wildlife populations have fallen an average of 68 per cent since 1970.
  - India will be most-affected by human-wildlife conflict. This was because it had the world's second-largest human population as well as large populations of tigers, Asian elephants, one-horned rhinos, Asiatic lions and other species.

Why in the news?

- Government has spearheaded a consultative process for the creation of the **All India Judicial Service (AIJS)**.

Current Appointments

- **Currently, the appointments of District Judges and Subordinate Judiciary are done by the respective State governments. But in recent years, there has been an invigorated push for the creation of a unified pan-India judicial service for appointing them.**
- **AIJS has been pitched as a solution to judicial vacancies, lack of representation for the marginalised and the failure to attract the best talent.**

History of AIJS

- **The idea of AIJS was first mooted by the first Law Commission of India in 1958 in its 14th report.**
- **AIJS was also supported by the chief justice's conference of 1961, 1963, and 1965.**
- **The 42nd Amendment Act of 1976 made the provision for the creation of AIJS under article 312. But no such law has been made so far.**
- **Comprehensive guidelines for the creation of the AIJS were laid down by the Law Commission in its 116th report.**
- **Recent government at the centre has constantly been pushing for the creation of AIJS on the lines of All India Civil Services.**
- **NITI Aayog has also solicited for setting up of an All India Judicial Service (AIJS) for appointing and recruiting judges in lower courts through an all India judicial services examination in its document 'Strategy for New India@75'.**

Constitution and AIJS

- Articles 233 and 234 of the Constitution vested all powers of recruitment and appointment (judicial services of the state) with the State Public Service Commission and High Courts.
- Article 312 of the Constitution allows the Rajya Sabha to pass a resolution, by two-thirds majority, in order to kick-start the process of creating an all India judicial service for the posts of district judge.
- Once the resolution is passed, Parliament can amend Articles 233 and 234 through a simple law (passed by a simple majority), which will strip States of their appointment powers.
- This is unlike a constitutional amendment under Article 368 that would have required ratification by State legislatures.
- In other words, if Parliament decides to go ahead with the creation of the AIJS, State legislatures can do nothing to stop the process.
- The recruitment is to be made through an all India judicial services examination conducted by the UPSC in order to maintain "high standards" in the lower judiciary.

Benefits associated with AIJS

- **Accountability and transparency:** A career judicial service will make the judiciary more accountable, more professional, and arguably, also more equitable.
- **Infuses objectivity in recruitment:** Open competitive exams would bring objectivity in the recruitment process of the judiciary by reducing discretion of the selection panel.
- **Securing the best talent:** AIJS will ensure a transparent and efficient method of recruitment to attract the best talent in India's legal profession. Also the prospects of promotion to High Courts, for lower judiciary, at an early age would increase as they currently join at much later age than judges from the Bar.
- **Uniformity across the country:** Quality of adjudication and the dispensation of justice would attain uniformity across the country by ironing out state-level differences in laws, practices and standards.
- **Checks pendency of cases:** Streamlined and objective recruitment process would ensure regular stream of good quality judicial officers for vacant posts, which would reduce pendency of cases.
- **Representative Character:** AIJS will improve the judiciary's representative character by drafting in trained officers from deprived sections of society especially women and SC/STs.

- **Overall Efficiency:** A well-organized judicial service can attract talent from our law schools and young, well-informed judicial officers at the level of additional district judge will make a difference. As ADJs and district judges, they can help make the judicial system move faster and more efficiently.
- **Inclusion of vulnerable sections:** AIJS will necessarily increase representation of marginalized communities in the Indian judiciary .

Challenges Associated
- **Vernacular language problem**: Courts up to District and Sessions Judge transact their business in State language and AIJS officers would find difficult to acclimatize themselves with local language, thus hampering dispensation of justice..
- **Problem of local laws and indegeneous customs:** AIJS does not take into account the problem of local laws, practices and customs which vary widely across States, thus increasing the costs of training for judges selected through the mechanism.
- **Young age of the selected candidates:** one of the objections was whether a person who will clear the exam in the age of 24-25 would have enough experience to be in the position of a District Judge.
- **Dilute separation of power under Article 50 of Indian Constitution:** If the control over state judiciary is transferred to the Union government, through AIJS, by removing control of the High Court as provided under Article 235 currently, independence of judiciary would be undermined.
- **Violation of Federalism**: Under the envisaged AIJS, the fundamental power of the States to make rules and govern the appointment of district judges would rest with the union government. It will enhance power of the union government.
- **Issues with the subordinate judiciary:** Another aspect of concern is that the operationalization of the AIJS could **severely curtail the promotional avenues of the subordinate judiciary.**
- **Social issues**: Many states provide higher representation to the marginalised sections than compared to the provided by the central government. AIJS may not provide sufficient representation to bring these states on the same platform.
- The argument that the **centralisation of recruitment processes** through the UPSC automatically leads to a more efficient recruitment process is **flawed and not a guarantee of a solution.** For example, the Indian Administrative Service its recruitments are through the UPSC, reportedly has a vacancy rate of 22%.

DAM SAFETY — Polity & Governance

Why in the news?
- PANIC gripped people in the Cauvery basin area after a small wall at Krishnaraja Sagar Dam collapsed

About Dams in india
- In India, dams higher than 15 m or between 10 m and 15 m height that fulfil certain additional design conditions are called large dams.
- As of June 2019, India has 5,745 large dams (includes dams under construction). Of these, 5,675 large dams are operated by states, 40 by central public sector undertakings, and five by private agencies.
- Over 75% of these dams are more than 20 years old and about 220 dams are more than 100 years old.
- Most of these large dams are in Maharashtra (2394), Madhya Pradesh (906), and Gujarat (632).
- As a large amount of water may be stored in a dam☐s reservoir, its failure can cause large scale damage to life and property.
- Therefore, monitoring dam safety is essential.

Monitoring of Dams
- The **Central Dam Safety Organisation, under the Central Water Commission (CWC), provides technical assistance** to dam owners, and maintains data on dams.
- The **National Committee on Dam Safety devices dam safety policies and regulations.**
- Currently, 18 states and four dam owning organisations have their own Dam Safety Organisations.
- CWC provides that each dam owner should carry out pre and post monsoon inspections (covering site conditions, dam operations) every year.

- However, as per a CAG report on flood forecasting, from 2008 to 2016, of the 17 states studied, only two had carried out such inspections.
- A **CWC Committee on Dam Safety (1986) had recommended unified safety procedures** for all dams and suggested a legislative framework for dam safety.

Legal framework for monitoring of dams
- In 2007, Andhra Pradesh and West Bengal passed resolutions requesting Parliament to make a law on dam safety.
- Consequently, the Dam Safety Bill, 2010 was introduced in LokSabha under Article 252 (which allows Parliament to make laws on state subjects which will apply to those states that pass a resolution requiring such law).
- The 2010 Bill lapsed with the dissolution of the 15th LokSabha.
- The Dam Safety Bill, 2019 was introduced and passed by LokSabha in 2019.

Dam Safety Bill 2019

Provisions of the dam safety bill, 2019:
- **National Committee on Dam Safety:** The National Committee on Dam Safety will be constituted and will be chaired by the Chairperson, Central Water Commission. All other members will be nominated by the central government. Functions of the Committee include:
  - Formulating policies and regulations regarding dam safety standards and prevention of dam failures.
  - Analysing causes of major dam failures and suggesting changes in dam safety practices.
- **National Dam Safety Authority:** The National Dam Safety Authority will be headed by an officer, not below the rank of an Additional Secretary, who will be appointed by the central government. Functions of the Authority include:
  - Implementing the policies formulated by the National Committee on Dam Safety.
  - Resolving issues between State Dam Safety Organisations (SDSOs), or between a SDSO and any dam owner in that state.
  - Specifying regulations for inspection and investigation of dams.
  - Providing accreditation to agencies working on construction, design, and alteration of dams.
- **State Dam Safety Organisation:** State governments will establish State Dam Safety Organisations (SDSOs). All specified dams situated in a state will fall under the jurisdiction of that state's SDSO. Functions of the SDSOs include:
  - Keeping perpetual surveillance, inspecting, and monitoring the operation and maintenance of dams.
  - Keeping a database of all dams.
  - Recommending safety measures to owners of dams.
- **State Committee on Dam Safety:** The Bill provides for the constitution of State Committees on Dam Safety by state governments. Functions of the Committee include:
  - Reviewing the work of the SDSO.
  - Ordering dam safety investigations.
  - Recommending dam safety measures and reviewing the progress on such measures.
  - Assessing the potential impact on upstream and downstream states. These states will also have their representatives on the State Committee.
- **Obligations of dam owners:** Owners of specified dams are required to provide a dam safety unit in each dam. This unit will inspect the dams: (i) before and after the monsoon session, and (ii) during and after every earthquake, flood, or any other calamity or sign of distress.
  - Dam owners will be required to prepare an emergency action plan, and carry out risk assessment studies for each dam at specified regular intervals.
  - Dam owners will also be required to prepare a comprehensive dam safety evaluation of each dam, at regular intervals, through a panel of experts.
  - The evaluation will be mandatory in certain cases such as major modification of the original structure, or an extreme hydrological or seismic event.
- **Offences and penalties:** The Bill provides for two types of offences. These are: (i) obstructing a person in the discharge of his functions under the Bill, and (ii) refusing to comply with directions issued under the Bill.

Significance:
- The Bill will help ensuring of safety of dams and safeguard benefits to peoples from such dams. This shall also help in safeguarding human life, livestock and property.
- It addresses all issues concerning dam safety including regular inspection of dams, Emergency Action Plan, comprehensive dam safety review, adequate repair and maintenance funds for dam safety.
- It lays onus of dam safety on the dam owner and provides for penal provisions for certain acts.
- While dams have played a key role in fostering rapid and sustained agricultural growth and development in India, there has been a long felt need for a uniform law and administrative structure for ensuring dam safety.

Concerns:
- Criteria of selection of dam exclude basis of age of dam, which is the major issue which should have been taken up.
- The bill is too focused on structural safety and not on operational safety.
- There is inadequate compensation to the people affected by dams.
- There is need for an independent regulator as well as for a precise definition of stakeholders.
- It encroaches upon the sovereignty of States to manage their dams, and violates the principles of federalism enshrined in the Constitution.
- It is seen as an attempt by the Centre to consolidate power in the guise of safety concerns.

Controversy on large dams
- Dam reservoirs cause water losses. This is believed as mainly a result of the considerable amount of evaporation losses from the huge sizes of surface areas of reservoirs.
- Large dams **are generally justified by regional and/or national macro-economic benefits while their physical impacts are locally concentrated, most**ly affecting those within the confines of the river valley and along the river reaches.
- The **livelihoods of many millions of people also suffer because of the downstream effects of dams: the loss of fisheries, contaminated water**, decreased amount of water, and a reduction in the fertility of farmlands and forests due to the loss of natural fertilizers and irrigation in seasonal floods. Dams also spread waterborne diseases such as malaria, leishmaniasis and schistosomiasis.
- According to the study conducted dams can stop regular annual floods but often fail to hold back exceptionally large floods. Eg- Recent floods in Kerala.
- Because **dams lead people to believe that floods are controlled, they lead to increased** development of floodplains.
- When a large flood does come, damages caused are often greater than they would have been without the dam.
- Some scientists do not consider hydropower as clean power because of the destruction of river ecosystems and its many social impacts.
- Internationally, private investors in power projects are largely avoiding large dams and prefer to invest in cheaper and less risky gas-fired power plants, solar and wind mills.

CONSUMER PROTECTION ACT OF 2019 — Polity & Governance

Why in the news?
- Recently, government has come out with a list of proposed amendments to the Consumer Protection Act of 2019.

Draft Rules
- The **draft amendments propose banning of fraudulent flash sales and mis-selling** of goods and services on e-commerce platforms.
- Ban on **misleading users by manipulating search results, and appointment of chief compliance officer** and resident grievance officer are some of the other amendments being proposed.
- **E-commerce entities are also required to provide information not later than 72 hours of the receipt of an order from a government agency for prevention, detection** and investigation and prosecution of offences under any law, as per the proposed amendments.
- It has also **proposed 'fall-back liability' for every marketplace e-commerce entity to ensure that consumers are not adversely** affected in the event where a seller fails to deliver goods or services due to negligent conduct by such seller.

- To ensure compliance of the rules, the appointment of Chief Compliance Officer, a nodal contact person for 24×7 coordination with law enforcement agencies, officers to ensure compliance to their orders and Resident Grievance Officer for redressing of the grievances of the consumers on the e-commerce platform, has been proposed.
- Putting in place a framework for registration of every e-commerce entity with the DPIIT for allotment of a registration number which shall be displayed prominently on the website as well as invoice of every order placed by the e-commerce entity. This would help create a database of genuine e-commerce entities and ensure that the consumers are able to verify the genuineness of an e-commerce entity before transacting through their platform.
- It should also clearly define 'drip pricing 'wherein the final cost of the product goes up due to additional charges, and provide for protecting consumers against this by including penal provisions for violation.

Challenges

- It was observed that there was an evident lack of regulatory oversight in e-commerce which required some urgent action.
- Moreover, the rapid growth of e-commerce platforms has also brought into the purview the unfair trade practices of the marketplace e-commerce entities engaging in manipulating search result to promote certain sellers, preferential treatment to some sellers, indirectly operating the sellers on their platform, impinging the free choice of consumers, selling goods close to expiration etc.
- Additionally, conventional flash sales by third party sellers are not banned on e-commerce platform.
- But, certain e-commerce entities are engaging in limiting consumer choice by indulging in "back to back" or "flash" sales wherein one seller selling on platform does not carry any inventory or order fulfilment capability but merely places a "flash or back to back" order with another seller controlled by platform.
- This prevents a level playing field and ultimately limits customer choice and increases prices.

The new Consumer Protection Act, 2019 came into force on 20th July 2020. This Act replaced the earlier Consumer Protection Act, 1986.
- **Objective-** It will empower consumers and help them in protecting their rights through its various notified Rules and provisions.
- Who is Consumer?
  - A consumer is defined as a person who buys any goods or avails a service for consideration.
  - It does not include a person who obtains a good for resale or a good or service for commercial purpose.
  - It covers transactions through all modes including offline, and online through electronic means, teleshopping, multi-level marketing or direct selling.

Provisions of the Act:
- The following consumer rights have been defined in the Act-
  - To be protected against the marketing of goods and services which are hazardous to life and property.
  - To be informed of the quality, quantity, potency, purity, standard and price of goods or services.
  - To be assured of access to a variety of goods or services at competitive prices.
  - To seek redressal against unfair or restrictive trade practices.

Provision for a Central Authority-
- It provides for the establishment of the Central Consumer Protection Authority, CCPA to promote, protect and enforce the rights of consumers.
- The CCPA will be empowered to conduct investigations into-
  - Violations of consumer rights and institute complaints or prosecution.
  - Order recall of unsafe goods and services.
  - Order discontinuance of unfair trade practices and misleading advertisements.
  - Impose penalties on manufacturers or endorsers or publishers of misleading advertisements.
- The CCPA may impose a penalty on a manufacturer or an endorser of up to Rs 10 lakh and imprisonment for up to two years for a false or misleading advertisement and the case of a repeated offence, the fine may extend to Rs 50 lakh and imprisonment of up to five years.

- Consumer Disputes Redressal Commissions-
  - It will be set up at the district, state, and national levels.
  - A consumer can file a complaint with CDRCs in relation to Unfair or restrictive trade practices, defective goods or services, overcharging or deceptive charging and the offering of goods or services for sale which may be hazardous to life and safety etc.
  - Complaints against an unfair contract can be filed with only the State and National   Appeals from a District CDRC will be heard by the State CDRC.
  - Appeals from the State CDRC will be heard by the National CDRC. The final appeal will lie before the Supreme Court.
- Alternate Dispute Resolution Mechanism of Mediation-
  - The act provides for reference to mediation by Consumer Commissions wherever scope for early settlement exists and parties agree for it.
  - The mediation will be held in the Mediation Cells which will be established under the aegis of the Consumer Commissions.
  - There will be no appeal against settlement through mediation.
- E- commerce-related provisions-
  - It will have the rules for the prevention of unfair trade practice by e-commerce platforms.
  - E-commerce platforms will have to acknowledge the receipt of any consumer complaint within 48 hours and redress the complaint within one month from the date of receipt. They will also have to appoint a grievance officer for consumer grievance redressal.
  - Sellers cannot refuse to take back goods or withdraw services or refuse refunds, if such goods or services are defective, deficient, delivered late, or even if they do not meet the description on the platform.
  - It prohibits the e-commerce companies to manipulate the price of the goods or services.
- Other important provisions-
  - There will be no fee for filing cases up to Rs. 5 lakh.
  - State Commissions will provide information to the Central Government on a quarterly basis on vacancies, disposal, the pendency of cases and other matters.
  - Apart from these general rules, there are Central Consumer Protection Council Rules, provided for the constitution of the Central Consumer Protection Council (CCPC).
- It will be an advisory body on consumer issues, headed by the Union Minister of Consumer Affairs, Food and Public Distribution with the Minister of State as Vice Chairperson and 34 other members from different fields.
- It will have a three-year tenure and will have Minister-in-charge of consumer affairs from two States from each region- North, South, East, West, and North-East Region.

SUPREME COURT VERDICT ON COOPERATIVE SOCIETIES — Polity & Governance

Why is in the news?
- The recent Supreme Court verdict striking down a part of the 97th Constitution Amendment, insofar as it dealt with cooperative societies under the domain of the States.

97th amendment
- The Amendment proposed to create a framework for the functioning of cooperative societies. State laws on cooperatives should conform to this framework.
- It **introduced Part IXB in the Constitution so that the concept of cooperative** societies gains constitutional recognition.
- It was **on the lines of Part IX, which deals with panchayats, and Part IXA, which** deals with urban local bodies.
- The idea **was to empower Parliament to frame laws for cooperative societies that function across States (multi-State cooperative societies) and State legislatures** to make laws for all other cooperative societies falling under their jurisdiction.
- The **Amendment added the words "or cooperative societies" to Article 19(1)© of the Constitution to expand the** fundamental right to form associations or unions to cover cooperative societies too.

- It also **added a Directive Principle through Article 43B, which says: "The State shall endeavour to promote voluntary formation**, autonomous functioning, democratic control and professional management of cooperative societies."
- The Amendment set out basic rules:
  - such as a maximum of 21 directors in a society,
  - a fixed term of five years for elected members,
  - a six-month cap on the time limit for which a society's board of directors can be kept under supersession or suspension,
  - reservation of one seat for the Scheduled Castes or the Scheduled Tribes, and two seats for women on the board of every cooperative society.

Supreme Court Verdict
- The **Amendment had the effect of limiting and circumscribing the scope and extent to which States could frame** laws on cooperative societies. This impacted on their legislative power and would therefore amount to a change that would require ratification by the Assemblies.
- All **judges of supreme court agreed with the Gujarat High Court that the ratification by the State legislatures was required** for Part IXB, and in the absence of such ratification, the Part had to be struck down.
- The **court took the example of the 73rd and 74th Amendments which introduced the chapters on panchayats and municipalities**, respectively.
- Those **amendments, similar in impact on the legislative power of the States, had been passed by the special procedure involving** ratification by State legislatures.
- It would be valid as far as multi-State cooperative societies were concerned as Parliament had the power to regulate their functioning.

Government argument in Supreme Court
- The Centre's defense was that the Amendment did not alter the entry in the State List on „cooperative societies‟.
- In fact, it specified that the State legislatures would enact the relevant laws based on a common framework.
- There was no need for ratification by the Assemblies, as no subject was shifted from the State List to the Central or Concurrent List.

Implications
- The Union government will now have to revisit the management and regulation of cooperative societies while respecting the Supreme Court's judgment.
- Recently, Senior Maharashtra politician Sharad Pawar, had written to the prime minister, arguing against the September 2020 amendments to the Banking Regulation Act, 1949.
- The act strengthens the Reserve Bank of India's (RBI's) powers to regulate cooperative banks.
- These regulatory changes will now have to be re-examined in light of the judgment on the 97th Amendment.
- It may be necessary to do the full task of properly obtaining ratification from the states for an amendment.

CENTRAL INFORMATION COMMISSIONER — Polity & Governance

Why is in the news?
- The Supreme Court directed the Central government to place on record the latest information on the appointment of Information Commissioners, vacancies and pendency of cases in the Central Information Commission (CIC).
- Court guideline on appointment
- Court had directed in 2019 that the criteria for selection should be formulated and made public.
- the appointment process should be transparent and has to be put in the public domain.

COMPOSITION

- Consists of a Chief Information Commissioner and not more than ten Information Commissioners.
- Appointed by the PRESIDENT OF INDIA on the recommendation of a committee consisting of —
  - Prime Minister as Chairperson,
  - Leader of Opposition in the Lok Sabha
  - Union Cabinet Minister (nominated by the Prime Minister)
- Should be persons of eminence in public life with wide knowledge and experience in law, science and technology, social service, management, journalism, mass media or administration and governance.
- Should not be a Member of Parliament or Member of the Legislature of any State or Union Territory.
- Should not hold any other office of profit or connected with any political party or carrying on any business or pursuing any profession.

TENURE

- The Chief Information Commissioner and an Information Commissioner shall hold office for such terms as prescribed by the Central Government or until they attain the age of 65 years, whichever is earlier. They are not eligible for reappointment.
- The Information Commissioner is eligible for appointment as Chief Information Commissioner but cannot hold office for more than a total of five years including his term as Information Commissioner.
- The salary, allowances and other service conditions of the Chief Information Commissioner and an Information Commissioner shall be such as prescribed by the Central Government.
- They cannot be varied to his disadvantage during service.

REMOVALS

- President can remove the Chief Information Commissioner or any Information Commissioner from the office under the following circumstances:
  - If he is adjudged an insolvent; or
  - Convicted of an offence which (in the opinion of the President) involves a moral turpitude; or
  - Engages during his term of office in any paid employment outside the duties of his office; or
  - He is (in the opinion of the President) unfit to continue in office due to infirmity of mind or body; or
  - Acquired such financial or other interest as is likely to affect prejudicially his official functions.
- The President can also remove the Chief Information Commissioner or any Information Commissioner on the ground of proved misbehaviour or incapacity.
- The President has to refer the matter to the SUPREME COURT for an enquiry.
- If the Supreme Court, after the enquiry, upholds the cause of removal and advises so, then the President can remove him.

POWERS AND FUNCTIONS

- It is the duty of the Commission to receive and inquire into a complaint from any person:
- who has not been able to submit an information request because of non-appointment of a Public Information Officer;
  - who has been refused information that was requested;
  - who has not received response to his information request within the specified time limits;
  - who thinks the fees charged are unreasonable;
  - who thinks information given is incomplete, misleading or false; and
  - any other matter relating to obtaining information.
- The Commission can order inquiry into any matter if there are reasonable grounds (suo-moto power).
- While inquiring, the Commission has the powers of a civil court in respect of the following matters:
  - summoning and enforcing attendance of persons and compelling them to give oral or written evidence on oath and to produce documents or things;
  - requiring the discovery and inspection of documents;
  - receiving evidence on affidavit

- requisitioning any public record from any court or office;
- any other matter which may be prescribed.
- During the inquiry of a complaint, all public records must be given to the Commission during inquiry for examination.
- The Commission has the power to secure compliance of its decisions from the public authority. This includes:
  - providing access to information in a particular form;
  - directing the public authority to appoint a Public Information Officer where none exists;
  - publishing information or categories of information;
  - making necessary changes to the practices relating to management, maintenance and destruction of records;
  - enhancing training provision for officials on the right to information;
  - seeking an annual report from the public authority on compliance with this Act;
  - requiring the public authority to compensate for any loss or other detriment suffered by the applicant;
  - imposing penalties under this Act; and
  - Rejecting the application.
- The Commission submits an annual report to the Central Govt. on the implementation of the provisions of this Act. The Central Govt. places this report before each House of Parliament.
- When a public authority does not conform to the provisions of this Act, the Commission may recommend (to the authority) steps which ought to be taken for promoting such conformity.

PRADHAN MANTRI AWAS YOJANA   Polity & Governance

Why is in the news?
- According to ICRA, funding of the program may stall the progress of the program.

About Housing for all
- The mission started in 2015 and will be attained in seven years i.e., during 2015 – 2022.
- Pradhan MantriAwasYojna will bring a 'Pucca house' for every family in urban cities with water connection, toilet facilities, 24x7 electricity supply and complete access.

Objective
- Affordable homes with water connection, toilet facilities, 24x7 electricity supply and complete access.
- 2 crore houses to be built across nation's length and breadth
- Targeting the Lower Income Groups (LIG) and Economically Weaker Section of our society (EWS), basically the urban poor by the year 2022.
- 2 million non-slum urban poor households are proposed to be covered under the Mission.

Implementation
- will work by providing central assistance to Urban Local Bodies (ULBs) as well as other employed agencies through States/UTs for:
- Building onsite Rehabilitation of the existing slum- inhabitants by commencing private participation for using poor land area as a resource.
- By providing Credit Linked Subsidy
- Initiating Affordable Housing in Partnership
- Granting Subsidy to the beneficiary for individual house construction/enhancement.

Current status of PM Awas Yojana (PMAY)
- **Promised:**
  - The Centre had promised to build 50 million houses by 2022 under the PM Awas Yojana (PMAY) unveiled in 2015.

- **Lack of Funding:**
  - Even a subsequently scaled down target of 32.6 million may be difficult to meet by next year, as there is a 'large' Rs.1.24 lakh crore funding gap to be bridged in the next eighteen months.
- **Construction completion status:**
  - Implementation of the scheme is running behind schedule.
  - With 1.5 years to go, against the revised targets, 19.55 million houses have been sanctioned and 14.16 million have been completed through PMAY-Rural till April 2021.
  - Implying completion of 67% of the revised target and 72% of the sanctioned houses.In **PM Awas Yojana (PMAY) urban** is only 43% of the 11.2 million urban housing units had been built so far.

NATIONAL HUMAN RIGHTS COMMISSION | Polity & Governance

Why is in the news?
- The **National Human Rights Commission (NHRC) committee** formed to investigate complaints of post-poll violence in West Bengal has recommended that cases of heinous crimes be transferred to the Central Bureau of Investigation (CBI).

About NHRC
- It was established in 1993 under a legislation enacted by the Parliament, namely, the Protection of Human Rights Act, 1993.
- It is a statutory body.
- NHRC is a multi-member body, which consists of a Chairman and seven other members. Out of the seven members, three are ex-officio member.
- The Chairperson and the members of the NHRC are appointed for 5 years or until the age of 70 years, whichever is earlier.

Appointments:
- The Chairperson and members of the NHRC are appointed by the President of India, on the recommendation of a committee consisting of:
  - The Prime Minister (chairperson)
  - The Home Minister
  - The Leader of the Opposition in the Lok Sabha (House of the People)
  - The Leader of the Opposition in the Rajya Sabha (Council of States)
  - The Speaker of the Lok Sabha (House of the People)
  - The Deputy Chairman of the Rajya Sabha (Council of States)
- The NHRC (National Human Rights Commission) consists of:
  - A Chairperson, retired Chief Justice of India
  - One Member who is, or has been, a Judge of the Supreme Court of India
  - One Member who is, or has been, the Chief Justice of a High Court
  - Two Members to be appointed from among persons having knowledge of, or practical experience in, matters relating to human rights
  - In addition, the Chairpersons of four National Commissions of (1.Minorities 2.SC and ST 3.Women) serve as ex officio members.
  - A sitting judge of SC or chief justice of HC can be appointed only after recommendations of CJI. Once the members cease to occupy office they aren't eligible for any appointment under central or state government. Term is 70 yrs of age or 5 years.
- **Removal is done by president on grounds of bankruptcy, unsound mind, infirmity of body or mind, sentenced to imprisonment for a crime, or engages in paid employment. He can also be removed for proved misbehaviour or incapacity if SC enquiry finds him guilty. They can resign by writing to president.**

Powers:
- The commission has the power of a civil court and can take cognisance of cases if received within one year of occurrence.
- It can recommend compensation to victim, prosecution of accused. But such recommendations aren't binding.
- It submits special or annual reports to parliament and state legislatures along with action taken on their recommendations and reasons for non acceptance of advice.

OFFICIAL LANGUAGE — Polity & Governance

Why is in the news?
- There have been demands from time to time for inclusion of Khasi in the Eighth Schedule to the Constitution.
- Constitutional Provisions
- The Constitutional provisions relating to the Eighth Schedule occur in article 344(1) and 351 of the Constitution.
- Article **344(1) provides for the constitution of a Commission by the President on expiration of five years from the commencement of the Constitution** and thereafter at the expiration of ten years from such commencement, which shall consist of a Chairman and such other members representing the **different languages specified in the Eighth Schedule to make recommendations to the President for the progressive** use of Hindi for official purposes of the Union.
- Present status on inclusion of languages in the Eighth Schedule
  - As the **evolution of dialects and languages is dynamic, influenced by socioeco-political developments, it is difficult** to fix any criterion for languages, whether to distinguish them from dialects, or for inclusion in the Eighth Schedule to the Constitution of India.
  - Thus, both attempts, through the Pahwa (1996) and SitakantMohapatra (2003) Committees to evolve such fixed criteria have not borne fruit.

List of languages in the Eighth Schedule
- The Eighth Schedule to the Constitution consists of the following 22 languages:-
- **(1) Assamese, (2) Bengali, (3) Gujarati, (4) Hindi, (5) Kannada, (6) Kashmiri, (7) Konkani, (8) Malayalam, (9) Manipuri, (10) Marathi, (11) Nepali, (12) Oriya, (13) Punjabi, (14) Sanskrit,** (15**) Sindhi, (16) Tamil, (17) Telugu**, (18) Urdu (19) Bodo, (20) Santhali, (21) Maithili and (22) Dogri.
- Of these **languages, 14 were initially included in the Constitution. Sindhi language** was added in 1967.
- Thereafter three more languages viz., Konkani, Manipuri and Nepali were included in 1992. Subsequently Bodo, Dogri, Maithili and Santhali were added in 2004.

NIRBHAYA FUND — Polity & Governance

Why is in the news?
- Out of an allocation Rs.6212.85 crore (including Rs. 500 crore allocated to Ministry of Women and Child Development in the year Financial Year 2021-22) till date, under Nirbhaya Fund, a sum of Rs. 4087.37 crore has been disbursed/ released .

About the Fund
- The Government has set up a dedicated fund Nirbhaya Fund, which can be utilized for projects specifically designed to improve the safety and security of women.
- It is a non-lapsable corpus fund, being administered by Department of Economic Affairs (DEA), Ministry of Finance.
- As per the guidelines, the responsibility of Ministry of Women and Child Development (MWCD) includes nodal Ministry to appraise/ recommend proposals and schemes to be funded under Nirbhaya Fund to review and monitor the progress of sanctioned schemes/ projects in conjunction with the line Ministries/Departments.

Why in the news?

- The Union Cabinet recently approved **a revised implementation strategy for the BharatNet project** by opting for public-private partnership mode in **16 states.**

About the revised strategy

- The revised implementation strategy is for 3,60,000 villages at a total cost of Rs 29,430 crore. Of this, the government will provide Rs 19,041 crore as viability gap funding.
- Now BharatNet **will extend up to all inhabited villages beyond the gram panchayats (GPs)** in the said states.
- The **revised strategy includes creation, upgradation, operation, maintenance and utilisation of BharatNet by the concessionaire** who will be selected by a competitive international bidding process.
- Till date, 1.56 lakh out of the 2.5 lakh village panchayats have been connected with broadband.
- The Cabinet also accorded approval for extending BharatNet to cover all inhabited villages in the remaining states and union territories.
- The department of telecommunication will separately work out the modalities for the remaining states and Uts.
- The selected concessionaire, private sector partner is expected to provide reliable, high speed broadband services as per the predefined **services level agreement (SLA).**
- The states to be covered under the revised plan are Kerala, Karnataka, Rajasthan, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, West Bengal, Assam, Meghalaya, Manipur, Mizoram, Tripura, Nagaland and Arunachal Pradesh.

Ministry/Department : Ministry of Communications

- **Objective :** Bharat Net seeks to connect all of India's households, particularly in rural areas, through broadband by 2017, forming the backbone of the government's ambitious Digital India programme.
- **Project:**
  - BharatNet is Union Government's ambitious rural internet connectivity programme which is implemented by Bharat Broadband Network Limited (BBNL).
  - Earlier National Optical Fibre Network or NOFN failed due to slow implementation.
  - NOFN is now rebranded as Bharat Net.
  - At present, a special purpose vehicle, Bharat Broadband Network Ltd (BBNL), under the telecom ministry is handling the roll out of optical fibre network.
  - The project is being executed by BSNL, Railtel and Power Grid
  - It is world's largest rural broadband connectivity programme using Optical fibre
  - The project is being funded by Universal Service Obligation Fund (USOF).
  - The three-phase implementation under the BharatNet project is:
    - Under the first phase, one lakh gram panchayats would be provided connectivity by laying underground optic fibre cable (OFC) lines by March 2017. This phase is nearing its completion.
    - Under the second phase, connectivity will be provided to all 2,50,500 gram panchayats in the country. It is to be completed by December 2018.
    - Under the third phase from 2018 to 2023, state-of-the-art, future-proof network, including fibre between districts and blocks would be created.

Section 43D(5) of the Unlawful Activities Prevention Act (UAPA)

Why in the newS?

- Recently, Stan Swamy had moved the Bombay High Court challenging Section 43D(5) of the Unlawful Activities Prevention Act (UAPA).

What is Section 43D(5) of UAPA?

- The UAPA, enacted in 1967, was strengthened by the Congress-led UPA governmentin 2008 and 2012.

- The test for denying bail under the UAPA is that the court must be satisfied that a "prima facie" case exists against the accused.
- The Section 43D(5) reads that no person accused of an offence punishable under Chapters IV and VI of this Act shall, if in custody, be released on bail or on his own bond unless the Public Prosecutor has been given an opportunity of being heard on the application for such release.
- It provided that such accused person shall not be released on bail or on his own bondif the Court, on a perusal of the case diary or the report made under section 173 of the Code is of the opinion that there are reasonable grounds for believing that the accusation against such person is prima facie true.

Reasons of challenging Section 43D(5) of UAPA
- The petitioner termed the section 43D(5) as "illusory".
- The provision makes grant of bail virtually impossible under UAPA since it leaves little room of judicial reasoning.

Grounds on which bail is granted under UAPA
- In Union of India v K A Najeeb, the Supreme Court upheld the grant of bail under UAPA when the accused had undergone incarceration for a significant period even as it recognised that bail under UAPA was an exception.
- The rigours of provisions related to bail will melt down where there is no likelihood of trial being completed within a reasonable time and the period of incarceration already undergone has exceeded a substantial part of the prescribed sentence.
- It would safeguard against the possibility of provisions like Section 43D(5) of UAPA being used as the sole metric for denial of bail or for wholesale breach of constitutional right to speedy trial.

Law of Bail under UAPA
- Both regular bail and bail by default like CrPC are available under UAPA with some alterations under section 43 D of UAPA.
    - The Regular Bail in UAPA can be granted by a competent magistrate under section 437 CrPC and by the high court or district and sessions court under section 439 of CrPC.
    - The provisions for default bail is also available under section 167(2) CrPC read with section 43D(2) of UAPA, after 30 days of police custody and 90 days of judicial custody, subjected to delay in filing of charge-sheet.
- UAPA does not provide any specific conditions to be satisfied to grant bail.
- The Supreme Court in State through CBI v. Amaramani Tripathy had listed factors to be considered while deciding upon bail applications which include:
    - Enormity of the charge;
    - The nature of the accusation;
    - The severity of the punishment;
    - The nature of the evidence in support of the accusation;
    - The danger of the applicant absconding;
    - The danger of witnesses being tampered with;
    - The protracted nature of the trial; and
    - The health, age, and sex of the person accused

Curious case of Section 43D(5)
- It is only applicable to offences punishable under chapter IV and VI of the act i.e. offences related to terrorist acts and terrorist organizations.
- It has a proviso which basically explains condition when bail shall be denied, i.e. if reasonable grounds exist for accusations to be prima-facie true and such decision shall be based on chargesheet or case diary.
- The second part of proviso explains the burden over prosecution and the prosecution had to prove that reasonable grounds exist for accusations believed to be prima facie true.

Why in the news?

- Recently, opposition parties pressed for a Joint Parliamentary Committee to probe into the allegations of corruption in the purchase of Rafale fighter jets.

What is a Joint Parliamentary Committee(JPC)?

- JPC is set up to examine a particular bill presented before the Parliament, or for the purpose of investigating cases of financial irregularities in any government activity.
- The JPC is **an ad-hoc body, set up for a given period of time** and is **aimed at addressing a specific issue.**

What is the process to set up a JPC?

- In order to set up a JPC, a motion is passed in one House and supported by the other House.
- Another way to form a Joint Parliamentary committee is that two presiding chiefs of both houses can write to each other, communicate with each other and form the joint parliamentary committee.

Its composition

- The committee's members are decided by Parliament. The number of members can vary. There are twice as many Lok Sabha members as the Rajya Sabha. For example, if the Joint Parliamentary committee has 10 Lok Sabha Members then 5 members will be from Rajya Sabha.

Powers & functions of JPC

- It is authorised to collect evidence in oral or written form or demand documents in connection with the matter.
- A JPC can obtain evidence of experts, public bodies, associations, individuals or interested parties suo motu or on requests made by them.
- If a witness fails to appear before a JPC in response to summons, his conduct constitutes contempt of the House.
- The proceedings and findings of the committee are confidential, except in matters of public interest.
- The government can take the decision to withhold a document if it is considered prejudicial to the safety or interest of the State.
- The Speaker has the final word in case of a dispute over calling for evidence.
- The committee can invite interested parties for inquiry and summon people to appear before it. In the usual course of proceedings, the committee does not summon ministers to give evidence.
- The committee gets disbanded following the submission of its report to Parliament.

Effectiveness of JPC's recommendations

- JPC recommendations **have persuasive value** but the committee cannot force the government to take any action on the basis of its report.
- The government may decide to launch fresh investigations on the basis of a JPC report. However, the discretion to do so rests entirely with the government.
- The **government is required to report on the follow-up action taken on the basis** of the recommendations of the JPC and other committees.
- The committees then submit 'Action Taken Reports' in Parliament on the basis of the government's reply.
- These reports can be discussed in Parliament and the government can be questioned on the basis of the same.

Why is in the news?

- The Ministry of Women and Child Welfare has invited suggestions and comments for its Trafficking in Persons (Prevention, Care and Rehabilitation) Bill, 2021 which it has released.

Need for Anti-Trafficking bill

- Trafficking in persons is a serious crime affecting a large number of people across the globe.
- The Trafficking in Human Beings (THB) is a crime committed in order to target, lead or drive a human being into an exploitative situation with the aim to make profits.

- Human trafficking not only affects women and children but also men.
- Such exploitation may take many forms, for example commercial sexual exploitation, child labour, forced labour, bonded labour or illegal organ removal etc.
- India is witnessing cross-border as well as internal (intra-country from one state to another) trafficking.
- Traffickers often exploit the vulnerabilities of people my making false promises of a new job, better income, better living conditions and support to their families etc.
- While such promises of perpetrators appear legitimate to people, unfortunately it makes men, women and children easy prey for exploitation.
- Once trafficked, the victims fall prey to many forms of unfair treatment such as forced prostitution, forced labour, forced begging, forced marriages, drug peddling, child pornography etc.

Myraid Laws
- These laws regulate trafficking for specific purposes. For instance, the Immoral Traffic (Prevention) Act, 1986 deals with trafficking for the purpose of sexual exploitation. Similarly, the Bonded Labour Regulation Act, 1986 and Child Labour Regulation Act, 1986 deal with exploitation for bonded labour.
- India's efforts to protect victims of trafficking vary from state to state, but remain inadequate in many places.
- Each of these laws operate independently, have their own enforcement machinery and prescribe penalties for offences related to trafficking
- These laws are criticised as being antiquated, bureaucratic, and loophole-packed.

Objectives
- To prevent and counter trafficking in persons, especially women and children.
- To provide for care, protection, and rehabilitation to the victims, while respecting their rights
- To create a supportive legal, economic and social environment for the victims
- To ensure prosecution of offenders
- The bill has **increased the scope of the nature of offenses of trafficking** as well as the kind of victims of these offenses with stringent penalties.
- **Ministry**: Women and Child Development (WCD)
- A previous draft of the bill (The Trafficking of Persons Bill 2018) was passed in the Lok Sabha in 2018 but was never introduced in the Rajya Sabha.

Key Provisions of the Bill
- **Definition:** The bill defines exploitation to include the exploitation of the person for prostitution or other forms. Which includes pornography, forced labour, forced removal of organs or illegal clinical drug trials.
- **Includes Transgender:** The bill extends beyond the protection of women and children as victims. It now includes transgenders as well as any person who may be a victim of trafficking.
- **Victim Definition:** The bill does away with the provision that a victim necessarily needs to be transported from one place to another to be defined as a victim of trafficking.
- **Application**: The law will apply to **all citizens of India**, within and outside the country, persons on any ship or aircraft registered in India wherever it may be or carrying Indian citizens wherever they may be, and a **foreign national** or **a stateless person** who has residence in India. It also says the law shall apply to every offence of trafficking in persons with **cross-border implications**.
- **Punishment**: The Punishment will be for a minimum of seven years period, which can go up to an imprisonment of 10 years and a fine of Rs 5 lakh. However, in cases of the trafficking of more than one child, the penalty is life imprisonment. In certain cases, even the death penalty can be sought.
  - **More severe penalties** in case of aggravated offences, like death of a victim.
- **Nodal Investigative Agency:** National Investigation Agency (NIA) shall act as the national investigating and coordinating agency responsible for prevention and combating of trafficking in persons.
- **National Anti Trafficking Committee**: Once the bill becomes an Act, the central government will notify and set up a National Anti Trafficking Committee, while state governments will set up these committees at state and district levels to ensure effective implementation.
- **Jurisdiction:** The bill will extend to all citizens inside as well as outside India. It will also be applied to every offence of trafficking in persons with cross-border implications.

- **Seizing of Property:** Property bought via trafficking as well as used for trafficking can now be forfeited, similar to that of the money laundering Act.
- **Expands coverage:** The scope of the Bill vis a vis offenders will now also include defence personnel and government servants, doctors and paramedical staff or anyone in a position of authority. Penalty for the guilty will include life imprisonment along with a fine of Rs 30 lakh.

United District Information System for Education Plus (UDISE+) report 2019-20

Polity & Governance

Why in the news?
- The Union Education Minister has released the UDISE+ report recently.

Following are the key highlights of UDISE+ report:
- **Gross Enrolment Ratio(GER):**
  - GER at all levels of school education has improved in 2019-20 compared to 2018-19.
  - Total enrolment in schools has increased in 2019-20 compared to 2018-19 by 1.6%.
  - GER increased to
    - 89.7% (from 87.7%) at Upper Primary level.
    - 97.8% (from 96.1%) at Elementary Level.
    - 77.9% (from 76.9%) at Secondary Level and
    - 51.4% (from 50.1%) at Higher Secondary Level in 2019-20 (from 2018-19).
- **Enrolment of Girls:**
  - The enrolment of girls from primary to higher secondary is more than 12.08 crore. This is a substantial increase by 14.08 lakh compared to 2018-19.
- **Pupil Teacher Ratio (PTR):**
  - It has improved at all levels of school education
  - In 2019-20, 96.87 lakh teachers have been engaged in school education. This is higher by about 2.57 lakh compared to 2018-19.
  - In 2019-20, the PTR for primary has become 26.5, PTR for upper primary and secondary has become 18.5 and PTR for higher secondary has become 26.1.
- **Gender Parity Index (GPI):**
  - Between 2012-13 and 2019-20, the GPI at both Secondary and Higher Secondary levels have improved.
  - Improvement of GPI has been most pronounced at the higher secondary level, which has gone up to 1.04 in 2019-20 from 0.97 in 2012-13.
- **Enrolment of Divyang students:**
  - It has increased by 6.52% over 2018-19.

Number of students:
- In 2019-20, total students in school education from pre-primary to higher secondary have crossed 26.45 crore. This is higher by 42.3 lakh compared to 2018-19.

Other improvements
- The UDISE+ report shows a remarkable improvement in the number of schools with functional electricity, with functional computers, internet facility in 2019-20 over the previous year.
- More than 90% schools in India had **hand wash facility** in 2019-20. This is a major improvement, as this percentage was only 36.3% in 2012-13.
- More than 80% schools in India in 2019-20 had **functional electricity.** This is an improvement by more than 6% over the previous year 2018-19.
- Number of schools having **functional computers** increased to 5.2 lakh in 2019-20 from 4.7 lakh in 2018-19.
- Number of schools having **internet facility** increased to 3.36 lakh in 2019-20 from 2.9 lakh in 2018-19.
- More than 83% schools had electricity in 2019-20, an improvement by almost 7% over the previous year, 2018-19. In 2012-13, about 54.6% schools had electricity.

- More than 82% schools conducted **medical check-up of students i**n 2019-20, an increase by more than 4% compared to previous year 2018-19. In 2012-13, about 61.1% schools conducted medical checkups.
- More than 84% schools in India had a **library/reading room/ reading corner** in 2019-20, an improvement of nearly 4% compared to the previous year. In 2012-13, about 69.2% schools had library/ reading room/ reading corner.

DRAFT DRONE RULES, 2021 — Polity & Governance

Why in the news?
- The Ministry of Civil Aviation (MoCA) has released the updated, Drone Rules, 2021 for public consultation. The Drone Rules, 2021 will replace the UAS Rules 2021.

About the Drone Rules, 2021
- **Applicability:** Drone Rules 2021 will apply to individuals owning, possessing, exporting, importing, manufacturing, trading, leasing, operating, transferring, or maintaining a drone in India. They don't apply to drones used by the armed forces.
- **Issuing authority:** The certificate will be issued by the Quality Council of India or a certification body authorized by the government.
- **Drone Promotion Council:** The draft policy talks about a potential trade body called the Drone Promotion Council to develop "a business-friendly regulatory regime". The council will work on automated permissions, incubator centers, and organize drone technology events and competitions to state the draft policy.
- **Drone Corridor:** The rules also envision a drone corridor that will cater to deliveries and taxis. A drone taxi, or passenger drone, is a pilotless helicopter that can fly at a speed of around 130 km/hour.
- **Safety features:** Safety features like 'No permission – no take-off' (NPNT), real-time tracking beacon, geo-fencing, etc. to be notified in the future. A six-month lead time will be provided for compliance.
- Digital sky platform shall be developed as a business-friendly single-window online system.
  - Airspace map: An interactive airspace map with green, yellow, and red zones will be displayed on the digital sky platform.
- **Minimal human interface**: There will be a minimal human interface on the digital sky platform and most permissions will be self-generated.
- **Regulation of imports:** Import of drones and drone components to be regulated by DGFT.
- **Coverage**: Coverage of drones under Drone Rules, 2021 increased from 300 kg to 500 kg. This will cover drone taxis also.

Why the Drone Rules are needed?
- The new rules come over a month after India witnessed what has been described as the country's first-ever terror attack carried out by a UAV.
- The new rules will give a push for 'Made-in-India' drone technology.

JOINT COMMUNICATION SIGNED TO PROVIDE MORE POWERS TO TRIBALS — Polity & Governance

Why in the news?
- Joint Communication for more effective implementation of the Forest Rights Act(FRA) 2006 signed by Environment and Tribal Affairs Ministries recently.

Key updates on joint communication
- The joint communication is oriented towards the rights and duties of the forest dwellers and to improve participation of such communities in the process of forest management.
- The Joint Communication, addressed to all Chief Secretaries of States/UTs, pertains to more effective implementation of the FRA 2006 and for **harnessing the potential for livelihood improvement of the Forest Dwelling Scheduled Tribes (FDSTs)** and other Traditional Forest Dwellers (OTFDs).

- It notes that despite a considerable lapse of time since the Act came into force, the process of recognition of rights is yet to be completed.
- Further, the exercise of these rights as well as operationalization of Section 5 of the Act are other areas of concern.
- As per the joint communication, the frontline staff of State Forest department should extend assistance to the institutions/committees under Rule 4(1)(e) and (f) of the Act for:
    - Preparing conservation and management plan for community forest resources in order to sustainably and equitably manage such community forest resources for the benefit of FDSTsand OTFDs and
    - Integration of such conservation and management plans with the micro plans or working plans or management plans.
- State Governments were urged to **ensure close cooperation and coordination between State Forest Department and State Tribal Welfare Department,** which will provide a win-win situation for both the forests and tribal communities at grassroots level.
- Forest Departments of state governments have been directed to carry out verification of claims for forest rights, mapping of forest lands involved and provision of necessary evidence as required, authentication of records, joint field inspections, awareness generation etc.
- State forest departments have also been asked to undertake projects for value chain addition including capacity building of primary collectors, new harvesting methods, storage, processing and marketing of NTFP under schemes implemented by MoTA as well as designate a nodal agency for specific non-timber forest products as supply chain platforms in collaboration with TRIFED, NSTFDC, Ministry of Ayush, MFP Federations, TDCCs, Van Dhan Kendras etc.
- State tribal welfare departments along with forest departments are also to work out strategies to extend MGNREGS and NRLM to forest dwellers as well as initiate skill development programs and give impetus to agro-forestry and horticulture projects.

Significance
- The joint communication indicates a paradigm shift from one of working in silos to achieving convergence between Ministries and Departments, and is a very positive development.

ESSENTIAL DEFENCE SERVICES BILL, 2021   Polity & Governance

Why in the news?
- Recently, the Minister of Defence introduced the Essential Defence Services Bill, 2021, in the Lok Sabha.

Key features of the Bill include:
- **Essential defence services**: Essential defence services include any service in:
    - any establishment or undertaking dealing with the production of goods or equipment required for defense-related purposes, or
    - any establishment of the armed forces or connected with them or defense.
    - These also include services that, if stopped, **would affect the safety of the establishment** engaged in such services or its employees.
    - In addition, the government **may declare any service as an essential defence service if its cessation** would affect the:
        - production of defence equipment or goods,
        - operation or maintenance of industrial establishments or units engaged in such production, or
        - repair or maintenance of products connected with defence.
- **Public utility service**: The Bill amends the Industrial Disputes Act, 1947 to include essential defence services under public utility services.
    - Under the Act, in the case of public utility services, a six-week notice must be given before:
        - persons employed in such services go on strike in breach of contract or
        - employers carrying on such services do lock-outs.
- **Strikes**: Under the Bill, the **strike is defined as cessation of work by a body of persons acting together**. It includes:
    - mass casual leave,
    - coordinated refusal of any number of persons to continue to work or accept employment,

- refusal to work overtime, where such work is necessary for the maintenance of essential defense services, and
- any other conduct which results in, or is likely to result in, disruption of work in essential defense services.
- **Prohibition on strikes, lock-outs, and lay-offs**: Under the bill, the central government may prohibit strikes, lock-outs, and lay-offs in units engaged in essential defense services.
  - Such an order can be issued in the interest of sovereignty and integrity of India, security of any state, public order, public, decency, or morality.
  - The prohibition order will remain in force for six months and may be extended by another six months.
- **Punishments**
  - For illegal lock-outs and lay-offs: Employers violating the prohibition order through illegal lock-outs or lay-offs will be punished with up to one-year imprisonment or Rs 10,000 fine or both.
  - For illegal strikes: Persons commencing or participating in illegal strikes will be punished with up to one-year imprisonment or Rs. 10,000 fine or both.
  - Persons instigating, inciting or taking actions to continue illegal strikes, or knowingly supplying money for such purposes, will be punished with up to two years imprisonment or Rs. 15,000 fine, or both.
  - Further, such an employee will be liable to disciplinary action including dismissal as per the terms and conditions of his service.
    - In such cases, the concerned authority is allowed to dismiss or remove the employee without any inquiry, if it is not reasonably practicable to hold such inquiry.
  - All offences punishable under the Ordinance will be cognisable and non-bailable.

Present status of the right to strike:
- The right to strike is **a statutory and a legal right,** however, the Supreme Court has reiterated in its various judgements that it cannot be said to be a fundamental right.
- There is no fundamental right to strike under **Article 19(1) of the Constitution**. However, it includes the fundamental right to protest, the right to form associations, and trade unions.
- The right to strike has been recognised under the **Industrial Disputes Act, 1947**, as a legal right. However, the act differentiates between a 'legal strike' and an 'illegal strike' under section 24. The act defines certain conditions, to go for a legal strike.
- Other than that, the **Trade Unions Act, 1926** also recognises the right to strike. It confers immunity from civil liabilities upon the trade unions, under sections 18 and 19.

Why do we need this bill ?
- **Prevailing security**: It is meant to provide for the maintenance of essential defense services to secure the security of the nation. These restrictions are essential, considering the **rise in Chinese assertiveness at the border and fear of Taliban intrusion** in the Kashmir region.
- **Self-Reliance**: The ordnance factories form an **integrated base for the indigenous production** of defense hardware and equipment. The bill would boost domestic production of defense equipment, as it gives greater powers to the government for ensuring an uninterrupted supply.
- **Efficiency and Accountability**: With greater powers, the government would be able to **enforce its decision of corporatization of ordnance factories,** which is needed to improve the efficiency and accountability of ordnance factories.
  - In June the government announced the corporatization of the Ordnance Factory Board.
  - Under this, the 41 factories providing ammunition and other equipment to the armed forces will become part of seven government-owned corporate entities.

Issues with the bill:
- The employees of the Ordnance Factory Board (OFB) feel that the bill would **adversely affect their service conditions**. It would **curtail their autonomy and reduce their bargaining power** by restraining them from going on strikes.
- It would **enhance the trust deficit** between the government and 70000 employees of 41 ordnance factories as it has been introduced without due consultation.
- This bill as **a step to enable the privatisation of ordnance factories in** the future.
- The bill may **suppress the genuine demands of employees** as it also allows disciplinary action and subsequent removal of a hard-working employee participating in strikes.

Why in the news?

- Recently, the J&K administration has rolled out the process to issue domicile certificates to the spouses of erstwhile State subjects who have a domicile certificate.

About the certificates

- **The government has granted domicile certificates to spouses of a domicile in exercise of the powers conferred by provision to Article 309 of the Constitution of India** read with Section of the J&K Civil Service (Decentralisation and recruitment) Act, 2010.
- It will **allow husbands of women married outside to acquire the documents for the first time**
- The new clause has been added in the table appended to sub rule (1) of rule 5 of the Jammu and Kashmir Grant of Domicile (Procedure) Rules, 2020.
- The government has authorised **tahsildars to issue such certificates** against valid proof of marriage.
- A deputy commissioner will be the **appellate authority** for the same.
- **When the Centre ended J&K's special constitutional position in 2019,** husbands of local women married outside J&K **had no right** to buy property or apply for jobs in J&K.
- **Native women married to non-Kashmiris could so far get only their children to apply** for domicile certificates.
- As per **J&K Grant of Domicile Certificate Procedure Rules 2020,** domicile certificates will be issued to all Permanent Resident Certificate holders and their children living outside the Union Territory.
- The order **has also modified the application of domicile condition to all levels of jobs in the Jammu and Kashmir government,** as the newly added clause has been brought under the Jammu and Kashmir Civil Services (Decentralisation and Recruitment) Act as well.
- Domicile certificates have now been made a basic eligibility condition for appointment to any post under the Union Territory of J&K following the amendments in the previous Act.
- To make the process transparent and time-bound, any officer not able to issue the certificate would be penalised Rs. 50,000.
- Kashmiri migrants living in or outside J&K can get domicile certificates by simply producing their Permanent Residence Certificate (PRC), ration card copy, voter card or any other valid document.
- Earlier, it was provided for the issuance of a domicile certificate only to those who have resided in the Union Territory for 15 years, or have studied for seven years and appeared in Class 10 or 12 exam in the UT.
- The new clause into the Grant of Domicile (Procedure) Rules has removed these conditions.

Why in the news?

- Marine Aids to Navigation Bill, 2021 was introduced in Rajya Sabha.

About Marine Aids to Navigation Bill

- It was passed in Lok Sabha in March 2021.
- It seeks to provide a **framework for the development, maintenance, and management of aids to navigation in India** and **repeals the Lighthouse Act, 1927.**
- Its objective is also to ensure compliance with the obligation under the maritime treaties and international instruments to which India is a party.
- It also proposes to impart **training and certification** to the operator of aids to navigation, development of its historical, educational, and cultural value.
- It **applies to the whole of India** including various maritime zones such as territorial waters, continental shelf, and exclusive economic zone.

Key Features of the Bill

- **Aid to navigation:**
  - It defines aid to navigation as a device, system, or service, external to the vessels designed and operated to enhance the safety and efficiency of navigation of vessels and vessel traffic.

- A vessel includes a ship, boat, sailing vessel, fishing vessel, submersible, and mobile offshore drilling units. Vessel traffic service is defined as a service to improve the safety and efficiency of vessel traffic and protect the environment.
- **Director-General (DG) of Aids to Navigation:**
  - It provides that the **central government will appoint** a DG, Deputy Director Generals, and Directors for districts (which the centre may demarcate).
  - The DG will advise the central government on matters related to aids to navigation, among others.
- **Central Advisory Committee (CAC):**
  - The central government may appoint a CAC consisting of persons representing the interests affected by the Bill, or having special knowledge of the sector.
  - The government may consult the CAC on matters including the establishment of aids to navigation, additions, alteration, or removal of, any such aids, cost of any proposal relating to such aids, or appointment of any sub-committee.
- **Management of General Aids to Navigation and vessel traffic services:**
  - The central government will be responsible for the development, maintenance, and management of all general aids to navigation and vessel traffic services.
- **Training and certification:**
  - It provides that no person shall be allowed to operate on any aid to navigation or any vessel traffic service in any place unless he holds a valid training certificate.
  - The central government will accredit training organisations for imparting training to, or conduct assessments of, persons in the operation of aids to navigation and vessel traffic services.
- **Levy of marine aids to navigation dues:**
  - It provides that marine aids to navigation dues will be levied and collected for every ship arriving at or departing from any port in India, at the rate specified by the central government from time to time.
  - **Any dispute related to the marine aids** to navigation dues, expenses, or costs, will be **heard and determined by a civil court having jurisdiction at the place** where the dispute arose.
- **Heritage Lighthouse**:
  - The central government may designate any aid to navigation under its control as a heritage lighthouse.
  - In addition to their function as aids to navigation, such lighthouses will be developed for educational, cultural, and tourism purposes. The proposed legislation encompasses a major shift **from lighthouses to modern aids of navigation.**
- **Penalties:**
  - It provides certain offences and penalties for instances such as intentionally obstructing any aid to navigation or vessel traffic service, which will be punishable with imprisonment of up to six months, or a fine up to one lakh rupees, or both.
  - Intentionally causing damage to, or destruction of any aid to navigation or vessel traffic services, will be punishable with imprisonment of up to one year, or a fine up to five lakh rupees, or both.

EMIGRATION BILL 2021 — Polity & Governance

Why in the news?
- Recently, the Ministry of External Affairs has put Emigration Bill 2021, in the public domain for inputs.

About
- The bill seeks a long-overdue opportunity to reform the recruitment process for nationals seeking employment abroad especially countries in Gulf or West Asia etc.
- The bill will soon be introduced in Parliament.

Emigration Bill 2021
- The bill was introduced in June 2021.
- It will replace and improvise over the previous act, Emigration Act, 1983.
- Emigrants are defined as Indian citizens who seek to or have departed out of India for employment.

- New policy division: A new emigration policy division is launched under the Ministry of External Affairs. It establishes help desks and welfare committees for migrant workers
- The draft Bill seeks to create two authorities:
  - Bureau of Emigration Policy and Planning (BEPP): Its functions will consist of preparing policies on matters related to the welfare of emigrants and negotiating labour and social security agreements with destination countries.
  - Bureau of Emigration Administration (BEA): it will work on maintaining a database of Indian emigrants, and implementing measures and programmes for the welfare of emigrants.
- Nodal committees established in states and union territories (Uts): They are set up under Chief Emigration Officer. They work for initiating action to prosecute entities involved in the trafficking of persons and undertaking pre-departure orientation programmes & skill up-gradation programmes for prospective emigrants.
- Accreditation of employers: Any employer who intends to recruit an emigrant must apply for accreditation with the competent authority. Such accreditation will be valid for a period of five years.
- Punishment: workers will be punished by confiscating their passports and imposing fines up to Rs. 50,000 if they violate the provisions of the Bill.
- Human resources agencies: They will be registered by a Competent Authority and are engaged in recruitment for an employer. Appeal against decisions of the competent authority with regard to registration of these agencies will lie with the central government

Significance of Bill
- It increases the accountability of brokers and other intermediaries who are involved in labour hiring.
- Exploitative behaviour of middlemen and Recruitment Agencies towards emigrants could be curtailed by this Act.

Challenges in the Bill
- The human rights framework is not acknowledged and included in the Bill: this is the reason migrants face a lot of exploitation towards their own self and their family.
- International Standards are not adhered to: ILO's general principles recognise that employers and not workers should bear recruitment payments.
- Not a very female inclusive bill: The gender biases and harassment faced by women are not taken into account in the Bill.
- High worker services charge makes the migrants more vulnerable to indebtedness.
- Lack of worker representation: The Bill provides limited space for worker representation or civil society engagement in the policy and welfare bodies talked about in the Bill.

Why in the news?

- **The Minister launched CTRI portal pertinent to Ayurveda Dataset along with AMAR, RMIS, SAHI and e-Medha portals.**

Key Highlights

AMAR Portal

- It is a repository for Ayurveda, Yoga, Unani, Siddha and Sowa- Rigpa Manuscripts and catalogues.
- It is Ayush Manuscripts Advanced Repository Portal.
- It has digitized information on rare and hard to find Manuscripts and catalogues of Ayurveda, Yoga, Unani, Siddha, and Sowa Rigpa in libraries or in individual collections.

RMIS Portal

- It is a research guidance platform.
- It is a collaborative effort of Indian Council of Medical Research (ICMR) and Central Council for Research in Ayurvedic Sciences (CCRAS).
- It is CCRAS- Research Management Information System.
- It will be a one stop solution for Research and Development in Ayurveda based studies.
- It will provide free of cost research guidance by experienced Scientists, Clinicians of Ayurveda.

SHAHI Portal

- It is Showcase of Ayurveda Historical Imprints portal.
- It incorporates authentic resources and will be of immense help in showcasing historical veracity of Ayurveda.
- It showcases inscriptions, Archeo-botanical Information, Sculptures, Philological sources and advanced Archeo Genetic studies.
- It will be of tremendous use in understanding of Indian Knowledge system with a focus on indigenous health care practices.

E-Medha Portal

- It is electronic Medical Heritage Accession portal.
- It will provide online access to more than 12 thousand books related to Indian Medical Heritage through NIC's e-granthalaya platform.

Why in news?

- Recently uttar Pradesh has announced population control measures.

About Uttar Pradesh's Population Policy

- A new population policy released by the U.P government aims to bring fertility levels down. It also aims to create a **population balance among various communities.**
- Similarly, **a draft of the Uttar Pradesh Population (Control, Stabilisation, and Welfare) Bill, 2021** was published a few days ago and is currently open for public feedback.
- It states that any citizen who "violates" a two-child policy would be barred from:
  - contesting local bodies polls,
  - applying for, or getting promotion in, government jobs, and
  - even receiving government subsidies.

India Census 2011 data:
- The preliminary census count of the population with a "census date" of March 1, 2011, was **1,210,193,422** (about 130 million less than the current population of China). The **number of people added between the 2001 and 2011 censuses was slightly less than that between the 1991 and 2001 censuses**. Nonetheless, 181 million people added to India's population over the past 10 years is roughly equal to the population of Pakistan.

Provisions of UP Population Policy
- The provision of this legislation shall apply to a married couple where the boy is not less than 21 years of age and the girl is not less than 18.

Contraception and Abortion
- The state population policy will focus on efforts to increase the accessibility of contraceptive measures issued under the Family Planning Programme.
- It would provide a proper system for safe abortion
- Focus area to include reducing the newborns and maternal mortality rate.
- Care of the elderly, and better management of education, health, and nutrition of adolescents between 11 to 19 years has also been ensured in the policy, according to the state government

Two-child policy
- The state government will give promotions, increments, concessions in housing schemes and others perks to employees who adhere to population control norms, and have two or less children
- "Public servants who adopt the two-child norm will get two additional increments during the entire service, maternity or as the case may be.

Paternity leaves
- There shall be paternity leave of 12 months, with full salary and allowances and three percent increase in the employer's contribution fund under the National Pension Scheme.
- Those who aren't government employees and still adhere to two-child policy will get benefits in rebates in taxes on water, housing, home loans etc.
- It also states that maternity centres will be set up at all primary health centres.

Incentives for sterilization
- As per the draft, several incentives have been provided to people, including public servants, if they adopt the norm by undergoing voluntary sterilization.
- The incentives include a 3% increase in the employer's contribution fund under national pension; two additional increments during the entire service; subsidy towards purchase of plot or house site or build house etc.
- A couple living below the poverty line who have only one child and undergoes voluntary sterilisation, shall be eligible for payment of a one-time ₹80,000 if the single child is a boy and ₹1 lakh if it is a girl.

Issues with such measures necessary ?
- **Reduction in TFR**
  - India's **TFR is about to reach the net replacement rate**, or NRR, of about 2.1-2.2. So, India is **not being threatened by a "population explosion"**. The National Family Health Survey (NFHS) and Census data show that in most states, and many urban areas, the total fertility rate (TFR) has already reached replacement levels (2.1).Reasons include
    - The **increased acceptance of contraceptives is just** one of the factors for the decline of TFR.
    - **Significant rise in the married women ages have** also led to the decline in the total fertility rates.
    - **Improvement in the education status of the population along with the economic** living has also contributed in decline of total fertility rates.

Challenges of 2 children norm:

- International experience shows that any coercion to have a certain number of children is counter-productive and leads to demographic distortions.

Failure in controlling the Population growth:

- The **burden of planning a family falls almost entirely on Indian women**. According to the NFHS-4, in 2015-16, 36% of married women in the ages of 15-49 years underwent sterilisation as against less than 1% of married men aged 15-54 years.
- There **is a large need for contraception among married women**, and contraception choices for couples are limited.
- **Women's well-being has not been fully assured**. In November 2014, 16 young women tragically died and many were left critically ill following tubectomies at a mass sterilisation camp in Bilaspur district, Chhattisgarh.

Against National Human Rights Commission order

- The incentives/disincentives approach has been denounced in the past by the NHRC after such measures were introduced by several States in the 1990s and 2000s. i.e., Haryana, undivided Andhra Pradesh, Madhya Pradesh, Rajasthan, Chhattisgarh, and Odisha.

National Population policy, 2000:

- The National Population Policy (NPP) 2000 aims at stable population by 2045. The **essence of the policy** was the government's commitment to "**voluntary and informed choice and consent of citizens while availing of reproductive health care services**" along with a "**target free approach in administering family planning services**".
- The following national socio-demographic goals were formulated to be achieved by 2010:
  - To address the unmet needs for basic reproduction (contraception), child health services, supplies and infrastructure (health personnel).
  - To make school education up to age 14 free and compulsory and reduce dropouts at primary and secondary school levels to below 20 per cent for both boys and girls.
  - To reduce infant mortality rate to below 30 per 1,000 live births.
  - To reduce maternal mortality rate to below 100 per 100,000 live births.
  - To achieve universal immunization of children against all vaccine preventable diseases.
  - To promote delayed marriages for girls, not earlier than age 18 and preferably after 20 years of age.
  - To achieve universal access to information/counseling, and services for fertility regulation and contraception with a wide basket of choices.
  - To achieve 80 per cent institutional deliveries and 100 per cent deliveries by trained persons.
  - To achieve 100 per cent registration of births, deaths, marriages and pregnancies
  - To prevent and control communicable diseases, especially AIDS and sexually transmitted infections (STIs).
  - To promote vigorously the small family norm.
  - To integrate Indian Systems of Medicine (ISM) in the provision of reproductive and child health services, and in reaching out to households.

Why in the news?

- According to a WASH report, India is responsible for the largest drop in open defecation since 2015.

About WASH institue

- WASH is an acronym that stands for "water, sanitation and hygiene".
- Universal, affordable & sustainable access to WASH is a key public health issue within international development.
- It is the focus of the first two targets of Sustainable Development Goal 6.
- Over 700 children under age 5 die every day of diarrhoeal diseases due to lack of appropriate WASH services.
- The report is released by Wash Institute, a global non-profit organisation.
- The report emphasised on universal access to water, sanitation and hygiene (WASH) to achieve the United Nations-mandated SDG 6 in achieving universal access to basic water, sanitation and hygiene services.

Key Findings

- Open Defecation
  - India saw the largest drop in open defecation since 2015.
  - In 2006, the third round of the National Family Health Survey (NFHS) found open defecation to be practised by less than 10 per cent of the population in four states and the Union Territory of Delhi, but by more than half the population in 11 states.
  - By 2016, when the fourth round of the NFHS was conducted, open defecation had decreased in all states, with the largest drops seen in Himachal Pradesh and Haryana.
  - Progress in curbing open defecation in sub-Saharan Africa was slow.
- Sustainable Development Goal 6
  - SDG 6 is about ensuring availability and sustainable management of water and sanitation for all.
    - Water sources 'accessible on premises': If the point of water collection is within the dwelling, compound, yard or plot, or is supplied to the household through piped supply or tanks.
    - Water 'available when needed': If households report having 'sufficient water.
    - For the purposes of global monitoring, drinking water is considered 'free from contamination' if the water is free and safe from contamination of bacteria like E Coli.
  - Between 2016 and 2020, the global population with access to safely managed drinking water at home increased to 74 per cent, from 70 per cent.
  - An improvement is seen in at-source water resources including piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater and packaged or delivered water.
- Onsite sanitation system:
  - It is a system in which excreta and wastewater are collected, stored and/or treated on the plot where they are generated.
  - Globally, access to safely managed sanitation services increased over the 2000-2020 period by an average of 1.27 percentage points per year.

Why in the news?

- Recently, the Union Education Minister along with Tribal Affairs Minister has launched the'School Innovation Ambassador Training Program'.

About School Innovation Ambassador Training Program

- The program is for 50,000 School Teachers.
- It is jointly designed by Innovation Cell of Education Ministry and All India Council for Technical Education (AICTE).

- It is based on the Education Ministry's model of "Innovation Ambassador Training Program for Higher Educational Institution's faculty members".
- It aims to train the school teachers across country who will nurture the young school students on Ideation, IPR, product development, design thinking, problem-solving and critical thinking.
- Under the programme, the teachers shall be trained on the following five modules:
  - Design Thinking & Innovation;
  - Idea generation & Ideal hand-holding;
  - Intellectual Property Rights;
  - Product / Prototype development; and
  - Finance, HR and Sales
- Role of the Innovation Ambassadors under School Innovation Ambassador Training Program
  - Help in creating the culture of Innovation in their respective schools;
  - Mentor the teachers and students of their respective schools and nearby schools;
  - Provide support to other schools as resource person;
  - Spread the message of innovation and start-ups among the students and faculties;
  - Act as an evaluator for Idea Competitions conducted at national level; and
  - Act as a Mentor for the national level program on Innovation and related activities.
- Selection criteria under School Innovation Ambassador Training Program
  - Involved in developing innovative student projects;
  - Has passion for working with students on developing new ideas;
  - Demonstrable problem-solving skills;
  - Good communication and analytical Skills; and
  - Participated in any science/innovation exhibition, hackathons and idea competitions etc.

CRIME AGAINST WOMEN — Welfare

Why in news?
- According to the National Crime Record Bureau crime against women has increased by 25 percent. The data states that rape cases saw an increase of 43% from 580 till June 15 last year to 833 this year, molestation jumped by 39% from 733 to 1,022, kidnapping of women from 1,026 to 1,580, abduction of women from 46 to 159, and dowry deaths from 47 to 56.

India: A women unfriendly country
- Rape is the fastest growing crime in the country today and as many as 18 women are assaulted in some form or the other every hour across India.
- The National Family Health Survey (NFHS-4) suggests that 30 percent women in India in the age group of 15-49 have experienced physical violence since the age of 15.
  - The report further reveals that 6 percent of women in the same age group have experienced sexual violence at least once in their lifetime.
  - About 31 percent of married women have experienced physical, sexual or emotional violence by their spouses.
  - Domestic violence is one of the most prevalent forms of violence against women in India. According to the 2015-16 NFHS-4, 52 percent of women and 42 percent of men agreed with one or more of the specified 7 reasons for wife beating.
- India has some strong laws against such heinous crimes but the implementation part lacks the maturity.

Reasons for rise in crime against women in India:
- **Legal issues:** Various laws like Sexual harassment at workplace, Vishakha guidelines are in place. Unfortunately, these laws have failed to protect women and punish the culprits. Even law has a lot of loopholes. For example, under Sexual harassment at workplace act, the law states that there has to be an annual report that needs to be filed by companies, but there is no clarity with the format or filing procedure.

- **Prevailing Social hierarchy :** Despite the increased education levels and various government efforts like Beto Bachao Beti Padao, women status has not improved much. People are not shedding their patriarchal mindset. Honour killing, domestic violence are on rise due to increasing women's voices that is challenging patriarchal mindset.
- **Police failure:** Indifferent attitude of Police leads people to take law in their own hands. Police delays and inability to catch the criminals lead to more crime against women. The state police attitude is not good in implementing laws against sexual crime. Many cases of misbehave with women by police have been reported.
- **A lack of public safety:** Women generally aren't protected outside their homes. Many streets are poorly lit, and there's lack of women's toilets. Women who drink, smoke or go to pubs are widely seen in Indian society as morally loose, and village clan councils have blamed a rise in women talking on cellphones and going to the bazaar for an increase in the incidence of rape.
- **Laggard judicial system:** India's court system is painfully slow, because of a shortage of judges. The country has about 15 judges for every 1 million people. This leads to delay in justice. The Indian justice system has failed to investigate, prosecute, and punish the perpetrators and failed to provide effective redressal for victims.

Women's human Rights provided by Constitution of India and legislations
- The state is directed to **provide maternity relief to female workers under Article 42 of the Constitution**, whereas Article 51-A declares it as a fundamental duty of every Indian citizen to renounce practices to respect the dignity of women.
- Indian Parliament **has passed the Protection of Human Rights Act, 1993 for the proper implementation of Article 51-A.**
- The significant **among them are the Equal Remuneration Act, the Prevention of Immoral Traffic Act, the Sati (Widow Burning the rights of) Prevention Act**, and the Dowry Prohibition Act etc.
- Apart from these, **the 73rd and 74th Constitution (Amendment) Acts provided for 33% reservation for women** in both panchayat and Nagarpalika institutions as well as for the positions of chairpersons of these bodies.
- Besides this, the government in **India has enacted a variety of laws like Dowry Prohibition Act, Sati prevention Act etc to guarantee the rights** of women.
- Apart from this, in India, **the National Commission for Women(NCW) was established in 1990 to look into women's** problems.
- NCW have engaged them to deal with the cases relating to the violation of women's rights.

About NCRB
- The National Crime Records Bureau, abbreviated to NCRB, is an Indian government agency responsible for collecting and analysing crime data as defined by the Indian Penal Code (IPC) and Special and Local Laws (SLL)
- NCRB is headquartered in New Delhi and is part of the Ministry of Home Affairs (MHA), Government of India.
- NCRB was set-up in 1986 to function as a repository of information on crime and criminals to assist the investigators in linking crime to the perpetrators.

SMILE- Support for Marginalized Individuals for Livelihood & Enterprise

Welfare

Why in the news?
- Ministry of Social Justice & Empowerment (MoSJ&E) has formulated a scheme covering comprehensive measures for welfare of beggars.

Support for Marginalized Individuals for Livelihood & Enterprise (SMILE)
- The Ministry of Social Justice and Empowerment has formulated a scheme "SMILE – Support for Marginalized Individuals for Livelihood & Enterprise",
- The scheme includes sub-scheme – 'Central Sector Scheme for Comprehensive Rehabilitation of persons engaged in the act of Begging'.
- This scheme covers several comprehensive measures including welfare measures for persons who are engaged in the act of begging.

- It is estimated that an **approximate 60,000 poorest persons would be benefited** under this scheme for leading a life of dignity.
- The focus of the scheme is extensively on rehabilitation, provision of medical facilities, counseling, basic documentation, education, skill development, economic linkages and so on.
- The scheme would be implemented with the support of State/UT Governments/Local Urban Rodies, Voluntary Organizations, Community Based Organizations (CBOs), institutions and others. Scheme provides for the use of the existing shelter homes available with the State/UT Governments and Urban local bodies for rehabilitation of the persons engaged in the act of Begging.
- Ministry of Social Justice and Empowerment has also initiated pilot projects on Comprehensive Rehabilitation of Persons engaged in the act of Begging in ten cities namely Delhi, Bangalore, Chennai, Hyderabad, Indore, Lucknow, Mumbai, Nagpur, Patna and Ahmedabad.
- These pilots are being implemented in these cities by State Governments/UTs/Local Urban Bodies and Voluntary Organizations.
- Several comprehensive measures including survey and identification, mobilization, basic hygiene and medical facilities, providing basic documentation, counseling, rehabilitation, education, skill development and sustainable settlement of persons engaged in begging are being undertaken under these pilots.
- Further, the Department of School Education & Literacy in partnership with the States and UT Governments have taken steps to ensure that the children into begging are released and enrolled in schools to complete their elementary education.
- No funds are being allotted to NGOs for rehabilitation of destitute women and children by this Ministry.
- However, the Ministry of Women and Child Development supports the States /UTs either by themselves or in association with voluntary organizations for providing institutional care for destitute children covering age-appropriate education, access to vocational training, recreation, health care, counseling etc.

Features of SMILE:
- The scheme provides for the use of the existing **shelter homes** available with the State/UT Governments and Urban local bodies for rehabilitation of the persons engaged in the act of Begging.
- In case of the non-availability of existing shelter homes, new dedicated shelter homes are to be set up by the implementing agencies.
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- Several comprehensive measures including survey and identification, mobilization, basic hygiene and medical facilities, providing basic documentation, etc for persons engaged in begging are undertaken under these pilots.

National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat).   Welfare

Why in the news?
- The Department of School Education and Literacy, Ministry of Education has launched National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat).

About the NIPUN Bharat Mission
- It is among the series of measures taken for implementation of the National Education Policy 2020.
- The vision of NIPUN Bharat Mission is to create an enabling environment to ensure the universal acquisition of foundational literacy and numeracy, so that every child achieves the desired learning competencies in reading, writing, and numeracy by the end of Grade 3, by 2026-27.
- NIPUN Bharat will be implemented by the Department of School Education and Literacy.
- It is basically a goal oriented set of targets or lakshyas for foundational literacy and numeracy.
- The Laskhyas are based on the learning outcomes developed by the NCERT and international research and ORF studies.

- There will be a special emphasis on capacity building of teachers. A special package for foundational literacy and Numeracy under NISHTHA is being developed by NCERT and around 25 lakh teachers teaching at pre-primary to primary grade will be trained this year on FLN.
- A five-tier implementation mechanism will be set up at the National- State- District- Block- School level in all States and UTs, under the aegis of the centrally sponsored scheme of SamagraShiksha.

Expected Outcomes under the Mission

- Following outcomes have been envisaged from implementation of the goals and objectives of NIPUN Bharat Mission:
  - Foundational skills enable to keep children in class thereby reducing the dropouts and improve transition rate from primary to upper primary and secondary stages.
  - Activity based learning and conducive learning environment will improve quality of education.
  - Innovative pedagogies such as toy-based and experiential learning will be used in classroom transaction thereby making learning a joyful and engaging activity.
  - Intensive capacity building of teachers will make them empowered and provide greater autonomy for choosing the pedagogy.
  - Holistic development of the child by focusing on different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, life skills etc. which are interrelated and interdependent, which will be reflected in a Holistic Progress Card.
  - Children to achieve steeper learning trajectory which may have positive impacts on later life outcomes and employment.
  - Since almost every child attends early grades, therefore, focus at that stage will also benefit the socio-economic disadvantageous group thus ensuring access to equitable and inclusive quality education.

Why in the news?

- The OECD/G20 Inclusive Framework Tax Deal proposes two main elements – Pillar One, which calls **for the redistribution of profits generated by the largest companies to the domicile markets** where they actually make their sales instead of simply where they are headquartered .Pillar Two, **which establishes a global minimum effective tax rate of 15** percent determined on a country-by-country basis.

Objectives

- Pillar One will **ensure a fairer distribution of profits and taxing rights among countries with respect to the largest MNEs**, including digital companies.

- It **would re-allocate some taxing rights over MNEs from their home countries to the markets where they have business activities and earn profits,** regardless of whether firms have a physical presence there.

- Pillar Two **seeks to put a floor on competition over corporate income tax, through the introduction of a global minimum corporate tax rate** that countries can use to protect their tax bases.

How an OECD tax proposal would reallocate international taxing rights more fairly

- the two-pillar **package will provide much-needed support to governments needing to raise necessary revenues to repair their budgets and** their balance sheets while investing in essential public services, infrastructure.

- These are the **measures necessary to help optimize the strength and the quality of the post-COVID** recovery.
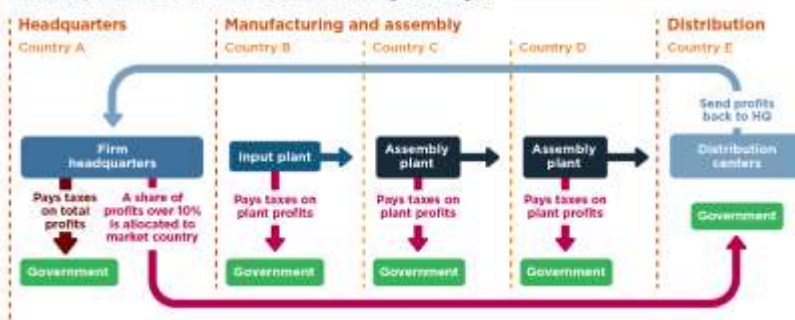
About Global Minimum tax

- Countries would **change their tax laws so that if their companies' profits go untaxed or lightly taxed offshore, the company would face an additional, top-up tax** back home to bring its rate up to the minimum.

- That would **remove the incentive for companies to shift profits to low-tax countries**, so the thinking goes, because if those companies escape taxes abroad, they would have to pay it at home anyway.

- And the **minimum would weaken the motivation for countries to enact rock-bottom tax** rates to attract companies in the first place.

Size of the Problem

- From 1985 to 2018, the global average corporate tax rate fell from 49 percent to 24 percent.

- And by 2000-2018, US companies booked half of all foreign profits in just seven low-tax jurisdictions: Bermuda, the Cayman Islands, Ireland, Luxembourg, the Netherlands, Singapore and Switzerland.

- Global **minimum would end a destructive race to the bottom** in international taxation.

Impact on Ordinary People

- As the tax load on corporate revenue has declined, the **overall tax burden has tended to shift to wages and labor — in other words, from generally affluent shareholders to ordinary workers.**

- Another reason to care: According to the OECD, large companies that operate across borders enjoy an **unfair competitive advantage by capitalizing on international tax avoidance strategies that aren't available to local-only companies.**

Benefits for the India

- The consensus adds much-needed certainty and stability to the international tax system.

- For India, the outcome is crucial because of its active engagement in the OECD-led deliberations.

- India had strongly advocated greater taxing rights to source or market jurisdictions.
- This has indeed been the demand of most developing countries.
- Because new-age MNEs have figured out the basis to limit their global tax incidence.
- They work through innovative tax structures and invisible presence due to digital technologies, within the framework of the current treaty principles.
- The Indian law-makers will now have to make a refined and nuanced direct taxation law.

Challenges with the India
- The proposals include complex rules.It includes applying formulas to data relating to global business revenue of the MNE group. Also, its application requires real-time information sharing and conjoint implementation by the tax-authorities across the globe.
- Despite the policy level alignment of the participating countries, achieving such shared tax-assessment in practice is challenging and uncertain.
  - **L**imited scope - By design, the two pillars cover a small class of taxpayers. MNEs which have a global turnover above 20 billion euros and net profitability above 10% for Pillar One. Given that the coverage is limited, the disputes and differences in approach are likely to continue for taxing smaller players.
  - **Net benefit** - Accepting the two-pillar solution brings taxing rights for the participating nations. Simultaneously, it implies foregoing the taxing rights for others. In other words, it is a trade-off, of taxing the big to spare the poor. This sounds wise on a progressive-taxation scale and horizontal equity ideal. But it may not be fair since it is not necessary that the biggest MNEs earn from India more. It also discounts the possibility of taxing the smaller MNEs who earn big from India.
  - So, who will have the net benefits from applying these rules remains a question. Specifically for India, accepting the two-pillar solution implies it under pressure. It has to undo its new international tax measures, particularly the equalisation levy, and possibly modify its nexus-based Significant Economic Presence.

Indian Stand
- India joined OECD **members in endorsing the global tax reform – in principle** – on July 1 and has committed to working towards the deal's final approval.
- Some **significant issues including share of profit allocation and scope of subject to tax** rules, remain open and need to be addressed.
- Further, the **technical details of the proposal will be worked out in the coming months** and a consensus agreement is expected by October 2021.
- The principles underlying the solution vindicates India's stand for a greater share of profits for the markets, consideration of demand side factors in profit allocation, the need to seriously address the issue of cross border profit shifting and need for subject to tax rule to stop treaty shopping.

> **OECD**
> - OECD - Organisation for Economic Co-operation and Development
> - OECD is an international organisation that works to build better policies for better lives.
> - The OECD brings together Member countries and a range of partners that collaborate on key global issues at national, regional and local levels.
>
> **BEPS**
> - BEPS - Base Erosion and Profit Shifting
> - It refers to tax planning strategies that exploit mismatches and gaps that exist between the tax rules of different jurisdictions.
> - It is done to minimize the corporation tax that is payable overall.
> - It is done by either making tax profits 'disappear' or shift profits to low tax jurisdictions where there is little or no genuine activity.
> - In general BEPS strategies are not illegal. They just take advantage of different tax rules operating in different jurisdictions.

Global Survey on Digital and Sustainable Trade Facilitation

Why is in the news ?
- India has substantially improved its score on a trade facilitation survey conducted by the United Nations for a total of 143 countries,

About the survey
- The survey is conducted **every two years by UNESCAP** and includes an assessment of 58 trade facilitation measures covered by the World Trade Organization's Trade Facilitation Agreement.
- A higher score for a country helps businesses in their investment decisions.
- The 58 measures include publications of existing import-export rules on internet, risk management, advance ruling on tariff classification, pre-arrival processing, independent appeal mechanism expedited shipments, automated customs system,

India's Performance
- India has scored 90.32 per cent in the United Nations Economic and Social Commission for Asia and the Pacific's (UNESCAP) latest Global Survey on Digital and Sustainable Trade Facilitation, and improving from 78.49 per cent in 2019.
- India's improvement in the scores on all five key indicators — transparency, formalities, institutional arrangement and cooperation, paperless trade and cross-border paperless trade.
- Under the transparency indicator, India scored 100 per cent in 2021, up from 93.33 per cent in 2019.
- The score for 'paperless trade' improved to 96.3 per cent from 81.48 per cent, while that for institutional arrangement and cooperation indicator rose to 88.89 per cent from 66.67 per cent. India is the best performing nation when compared to the South and South West Asia region (63.12 per cent) and Asia Pacific region (65.85 per cent).
- The overall score of India has also been found to be greater than many OECD countries including France, UK, Canada, Norway, Finland etc.
- The overall score is greater than the average score of EU

CBIC
- The CBIC (Central Board of Indirect Taxes and Customs) has been at forefront of path breaking reforms under the umbrella of 'Turant' Customs to usher in a Faceless, Paperless and Contactless Customs by way of a series of reforms
- The CBIC also created a dedicated single window to facilitate quick resolution of issues faced by importers, it added.

CREDIT RATING

Why in the news?
- S&P Global Ratings has kept India's sovereign rating unchanged at the lowest investment grade of BBB-'. Based on forecasts of an economic recovery following the resolution of the COVID-19 pandemic, S&P has kept the rating outlook for India at stable. S&P has projected a 9.5% GDP growth in the current fiscal year and a 7.8% GDP growth in the following year.

About Credit Ratings
- It is an assessment of a country's creditworthiness.
- It shows the level of risk associated with lending to a particular country since it is applied to all bonds issued by the government.
- The credit rating agencies consider various factors such as the political environment, economic status, and its creditworthiness to assign an appropriate credit rating.
- The three influential rating agencies include Moody's Services, Fitch Ratings, and Standard & Poor's.

Significance of Sovereign Credit Rating
- They are important for countries that want to access funds in the international bond market.
- A credit rating agency will evaluate a country's economic and political environment at the request of the government and assign a rating stretching from AAA grade to grade D.
- A country with high credit ratings can access funds easily from the international bond market and also secure foreign direct investment.
- A low sovereign credit rating means that a country faces a high risk of default and may have experienced difficulties in paying back debts.

Determinants of Sovereign Credit Ratings
- **Per capita income:** It estimates the income earned per person in a specific area.
  - It is calculated by taking the total income earned by individuals in a given area divided by the number of people residing in that area.
  - A high per capita income increases the potential tax base of the government, which subsequently increases the government's ability to repay its debts.
- **GDP growth:** It refers to the percentage growth in the GDP of a country from one quarter to another as the economy navigates a business cycle.
  - Strong GDP growth means that a country will be able to meet its debt obligations since the growth in GDP results in higher tax revenues for the government.
- **Rate of inflation:** Sovereign debts are susceptible to changes in the rate of inflation, and an increase in inflation will affect a country's ability to finance its debt.
  - A high inflation rate points to structural problems in a country's finances, and it is likely to cause political instability as the public becomes dissatisfied with the increasing inflation.
- **External debt:** Some countries rely heavily on external debts to finance their development and infrastructure projects.
  - Increasing debt levels translate to a higher risk of default, which may affect its ability to access funding from international lenders.
- **Economic development:** The credit rating agencies consider the level of development when determining the sovereign credit rating of a country.
- **History of defaults:** A country that defaulted on its debt obligations in the past is considered to have a high sovereign credit risk by rating agencies.
  - It means that countries with a record of defaults receive low ratings, making them less attractive to investors looking for low-risk investments.

Issues with credit agencies
- CRAs downgraded East Asian crisis countries more than what would have been justified by these countries' worsening economic fundamentals. This adversely affected the supply of international capital to these countries.
- Sovereign credit ratings tend to be reactive, especially for emerging market economies, with significantly higher probability of downgrade as well as higher size of downgrade as compared to developed economies.
- CRAs give higher ratings to developed countries regardless of their macroeconomic fundamentals.
- Subjective component of S&P, Moody's and Fitch ratings tends to be large, especially for low-rated countries.
- S&P and Fitch are further shown to find it more difficult to upgrade African countries relative to other developing countries, for any given improvement in ability and willingness to repay debts.
- Findings suggest that respective home country, countries with linguistic and cultural similarity, and countries with higher home-bank exposure received higher ratings than justified by their political and economic fundamentals.

Indian Concern
- India is a negative outlier and is currently rated much below expectation for its level of general government gross debt (as per cent of GDP).
- India is a negative outlier, rated much below expectation for its level of CPI inflation.
- India **remains a negative outlier, currently rated much below expectation for its level of cyclically adjusted primary balance** (per cent of potential GDP).

- India is a **negative outlier, currently rated much below expectation for its level of current account balance (as per cent of GDP)**.
- India is a **negative outlier and is currently rated much below expectation for its level of political** stability.
- India is **again a negative outlier, currently rated much below expectation for its level** of rule of law
- India is a negative outlier and is rated much below expectation for its level of control of corruption.
- India continues to be a negative outlier and is currently rated much below expectation for its level of short-term external debt (as per cent of reserves).

| DISTRICT MINERAL FUND | Economy |

Why in news?
- Recently, Centre has denied Odisha government to transfer district mineral fund in the non-priority areas. It has asked the State to strictly adhere to the provisions of DMF Rules formulated under the Mines and Minerals (Development and Regulation) Act, 1957.

Composition and functions of DMF
- Composition and Functions of the **DMF is prescribed by the State Governments taking guidelines** from Article 244 of Indian Constitution, fifth and sixth schedules,
- Funds **every mining lease holder of will pay a fraction of royalty, not exceeding one-third of the** royalty, to the DMF as per rates prescribed by Central Government.
- This **fund will be used for welfare of the people affected in the mining** a ected areas.
- The Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) will be implemented by the DMFs of the respective districts using the funds accruing to the DMF.

District Mineral Foundation:
- District Mineral Foundations are statutory bodies set up as non-profit organizations in districts which are affected by the mining works.
- Each District Mineral Foundation is established by the State Governments by notification as a trust or non-profit body in the mining operation affected districts.
- They derive their legal status from Mines and Minerals (Development and Regulation) Amendment Act, 2015 and is established as a non-profit trust.
- The Ministry of Mines is the nodal agency for monitoring the implementation of the DMF.
- The objective of the District Mineral Foundation is to work for the interest of the persons and areas affected by mining-related operations.

Issues with DMF
- The Centre also observed that **states have been found transferring DMF funds to their own treasury and consolidated funds, and even to the Chief Minister's** Relief Fund and other schemes.
- This, according to the mines ministry, **is in violation of Section 9B of Mines and Minerals (Development and Regulation)** Act that guides the DMF.
- Ever since its establishment in 2015, the **DMF has been portrayed as the saviour of communities tribals mostly that have benefitted little from mineral exploration** and development in the regions they inhabit.
- Six years down the line, there are **instances galore where DMF funds have gone to areas that have little or no bearing on the lives of the vulnerable population.**

Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY):
- The Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) will be implemented by the District Mineral Foundations (DMFs) of the respective districts using the funds accruing to the DMF.
- It is aimed at the welfare of areas and people affected by mining-related operations, using the funds generated by District Mineral Foundations (DMFs).

Objective of PMKKKY scheme:
- To implement various developmental and welfare projects/programs in mining-affected areas, that complement the existing ongoing schemes/projects of State and Central Government;

- To minimize/mitigate the adverse impacts, during and after mining, on the environment, health and socio-economics of people in mining districts and
- To ensure long-term sustainable livelihoods for the affected people in mining areas.

Utilisation of Funds:
- At least 60% of PMKKKY funds will be utilized for high priority areas like:
- (i) drinking water supply; (ii) environment preservation and pollution control measures; (iii) health care (iv)education; (v) welfare of women and children; (vi) welfare of aged and disabled people; (vii) skill development; and (viii) Sanitation.
- The rest of the funds will be utilized undertaking works like for (i) physical infrastructure; (ii) irrigation; (iii) energy and watershed development; and (iv) any other measures for enhancing environmental quality in mining district.

SAGARMALA PROJECTS | Economy

Why in news?
- Ro-Ro & Ro-Pax ferry projects have been taken under Sagarmala Projects.

About Sagarmala Projects
- Sagarmala is a flagship project by the government aimed at revitalizing the ports of India in order to enable them to play a primal role in the economic growth and development. Close to 400 projects, costing around 8 lakh crore rupees would be implemented under the project in the next two decades.

Aims and Objectives of the Project
- reduction in cargo transportation costs by optimizing the modal mix (various modes of transport such as roads, inland waterways, railways etc.)
- locating future industrial capacities in proximity to ports with an aim of lowering the logistics costs for bulk commodities.
- developing manufacturing clusters close to the ports.
- optimization of cargo movement in containers and containerization of cargo movement.

Need for Sagarmala Project
- India has been recognized as one of the fastest growing major economies in the world with a growth rate of 7-8 percent per annum. The 7500 km long coastline of India has played a crucial role in achieving such high growth rates. Around 95 percent of India's merchandise trade, by volume, happens through the seaports.
- In addition to this, ports are evolving as the nodal points for specialized economic activities in the region. For instance,
  - Chennai port - auto hub
  - JNPT port - multi-product SEZ
  - Sikka port (Jamnagar) - petrochemical hub
- However, Indian ports face capacity constraints due to inadequate infrastructure leading to various operational challenges. Some of them include,
- **Turnaround Time (TAT)** for major ports in India has been 4 days on an average in 2014-15, while the global average is around 1-2 days. Only a couple of recently developed private ports in India were able to achieve TATs of around 2 days.
- **Poor last mile connectivity** - last mile connectivity is essential to ensure a smooth movement of cargo from the hinterland to the ports, and this can be through various modes like roads, railways, and inland waterways. However, 94 percent of the bulk cargo is transported by road or rail of which a significant amount experiences "idle time" due to capacity constraints on the highways and railway lines which connect ports to the production and consumption centers.
- N**eglect of Inland waterways** - cargo transported through the inland waterways amounts to just 6 percent of the total bulk cargo transported in India. The corresponding ratio in other major economies is much higher, like 47

percent in China, 34 percent in US etc. Cargo movement through waterways is much cheaper, costing just one-sixth of the cost of rail transport, which can lead to significant cost savings for the industry and also increase the competitiveness of domestic manufacturing.

- **Location of Industries/manufacturing centers** - In India, many industrial clusters are located at a great distance from ports which is leading to a higher transportation cost when compared to other manufacturing nations like China.

Components of Sagarmala Project

- **Port Modernization and New Port Development** - developing greenfield ports and expanding the capacity of existing ports. Under this, six new ports will be developed across five coastal states by the government
- **Port Connectivity Enhancement** - evolving multimodal logistics solutions for cargo movement, including inland waterways, with an aim of optimizing the cost and time of cargo movement. 170 port connectivity enhancement projects would be taken up under this scheme.
- **Port-linked Industrialization** - Development of Coastal Economic Zones (CEZs) and other industrial clusters in proximity to the ports in order to reduce the logistics cost of EXIM as well as domestic cargo. 33 port-linked industrialization projects were identified.
- **Coastal Community Development -** through skill development and livelihood enhancement activities such as fisheries, coastal tourism etc., ensuring the sustainable development of coastal communities.

Project Implementation

- According to the draft of Sagarmala project that was approved by the Union Cabinet, a National Perspective Plan (NPP), which includes regions with geographic potential and identified as Coastal Economic Zones (CEZs), has to be prepared for a comprehensive planning of the project. The NPP should ensure the integration of the Sagarmala project with ongoing infrastructure projects such as Dedicated Freight Corridors, Industrial Corridors, National Highway Development Programme, and Special Economies Zones (SEZs).
- Mechanism **for Sagarmala Project Implementation**
- At the central level, National Sagarmala Apex Committee (NSAC) is envisaged to provide overall policy guidance, ensure high-level coordination and to review the implementation of various plans and projects under Sagarmala. It consists of the Minister of Shipping, Cabinet Ministers of various ministries as well as the Chief Ministers/State Minister in charge of ports of coastal states. The NSAC responsible for the approval of NPP.
- Sagarmala Development Corporation (SDC) is to be set up under the Companies Act, at the central level, to assist the State level/port level Special Purpose Vehicles (SPVs)with equity support as well as in preparing the Detailed Project Reports for the respective zones.
- The State Sagarmala Committee (SSC), headed by the Chief Minister/Minister in charge of ports, is responsible for coordinating the implementation of projects, through State Port Department and SPVs.
- Sagarmala Coordination and Steering Committee (SCSC), including the Cabinet Secretary and the Secretaries of concerned departments, Chairman of Railway Board and CEO of NITI Aayog, shall ensure inter-ministerial coordination, and monitor the implementation of various projects under Sagarmala.

BOT MODEL   Economy

Why in news?

- Modern Bus Terminus are being developed based on Build-operate-transfer and Hybrid annuity model mechanism.

Various Models

1. **The Build Operate and Transfer (BOT) Annuity Model**
    - Under BOT annuity, a developer builds the highway, operates it for a specified duration and transfers it back to the government.
    - The government starts payment to the developer after the launch of commercial operation of the project.
    - Payment will be made on a six month basis.

2. **BOT Toll Model**
- In this toll based BOT model, a road developer constructs the road and he is allowed to recover his investment through toll collection.

- This toll collection will be over a period of nearly 30 years in most cases.
- There is no government payment to the developer as he earns his money invested from tolls.

3. Engineering, Procurement and Construction (EPC) Model
- Under this model, the cost is completely borne by the government. Government invites bids for engineering knowledge from the private players.
- Procurement of raw material and construction costs are met by the government.
- The private sector's participation is minimum and is limited to the provision of engineering expertise.
- A difficulty of the model is the high financial burden for the government.

DIRECT TAX   Economy

Why in news?
- Net direct tax collection in the 1st quarter of FY 20212022 is Rs. 2,46,519.82 crore as against Rs. 1,17,783.87 crore during the same period of previous FY 202021.

Different types of direct taxes
- **Personal Income Tax**
  - An income tax is a tax which governments impose on individuals within their jurisdiction.
- **Corporate Tax**
  - Corporate tax is a tax levied on the net income of the company.
  - Companies, both private and public which are registered in India under the Companies Act 1956, are liable to pay corporate tax.
- **Dividend Distribution Tax**
  - The Dividend Distribution Tax is imposed on dividends that a company pays to its shareholders out of its profits.
- **Minimum Alternate Tax**
  - Minimum Alternate Tax (MAT) was effectively introduced in India by the Finance Act of 1987. It was introduced to tax the zero tax companies'. Zero tax companies are such companies which show zero or negligible income to avoid tax nets.
  - Under MAT, such companies are taxed a certain percentage of their book profit as taxable income.
  - MAT has been brought in to reduce tax avoidance practices followed by some companies to avoid the income tax, though they had the ability to pay.
  - MAT is applicable to all corporate entities, whether public or private.
  - MAT is not applicable to:
  - Any income accruing or arising to a company from the life insurance business.
  - Shipping income liable to tonnage taxation.
- **Alternate Minimum Tax**
  - It is leviable alternative to normal tax.
  - AMT is a tax levied on adjusted total income' in a FY wherein tax on normal income is lower than AMT on adjusted total income. So, irrespective of normal tax, AMT has to be paid by taxpayers to whom AMT provisions apply.
- **Capital Gain Tax**
  - Capital gain is any profit that is received through the sale of a capital asset (Land, building, house property etc.).
  - The tax that is paid on that profit is called capital gains tax.
  - Capital gain tax can either be long term (individuals own an asset for a duration of more than 36 months) or short term (In case assets are held for a duration of 36 months or less).
- **Securities Transaction Tax (STT)**
  - Securities Transaction Tax (STT) is a type of financial transaction tax levied in India on transactions done on the domestic stock exchanges.

- The rates of STT are prescribed by the Central/Union Government through its Budget from time to time.
- It is categorized as a direct tax.
- **Commodity Transaction Tax (CTT)**
  - Commodities transaction tax (CTT) is a tax similar to Securities Transaction Tax (STT), levied in India, on transactions done on the domestic commodity derivatives exchanges.
  - The concept of CTT was first introduced in the Union Budget 2008-09.
  - CTT aims at discouraging excessive speculation, which is detrimental to the market.
- **Direct Tax Code (DTC)**
  - DTC is the proposed legislative reform of the direct taxation system.
  - It seeks to simplify and consolidate all the direct tax of the central government like income tax, gift tax, wealth tax etc.
  - It seeks to increase tax revenue by broadening the tax base.
  - Features of DTC are:
  - Tax laws will be rewritten in simple and unambiguous language to reduce the scope of misinterpretation.
  - Reduce exemption deduction debate to reduce their scope of misuse.
  - Flexible tax system to make changes in tax provision without amendment in tax law.
  - In 2017, the Government set up an expert committee under Akhilesh Ranjan to draft a new Direct Taxes Code. The task force submitted its Report in 2019 which has not been made public.

Difference between Direct and Indirect Taxes

Direct Tax	Indirect Tax
Direct tax is paid directly by liable person or organization to the government.	Indirect tax is paid indirectly to government. Imposed on income or profits. Imposed on goods and services.
The burden to pay the tax directly falls on the individual.	The burden is shifted to the consumer by the manufacturer or service provider.
Direct taxes are levied based on the paying capacity of the individual.	Indirect Tax does not look at the consumer's ability to pay but is the same for everyone who buys the goods or services.
Direct taxes can be evaded if there is an absence of proper collection administration.	Indirect taxes cannot be escaped from as they are charged automatically on goods and services.
Direct taxation is example of progressive taxation method.	Indirect taxes is example of regressive taxation method.
Income Tax, Wealth Tax, Corporate Tax etc. are the examples of direct taxes.	GST (Goods and Services Tax), Sales Tax etc. are the examples of indirect taxes.

COMPENSATION CESS   Economy

Why in the news?
- The central government recently borrowed from market and gave Rs 75,000 crore to states, to make up for the shortfall in their revenues because of the Goods and Services Tax (GST) implementation.

Compensation under GST regime
- Due to the consumption-based nature of GST, manufacturing states like Gujarat, Haryana, Karnataka, Maharashtra and Tamil Nadu feared a revenue loss.
- Thus, GST Compensation Cess or GST Cess was introduced by the government to compensate for the possible revenue losses suffered by such manufacturing states.
- However, under existing rules, this compensation cess will be levied only for the first 5 years of the GST regime – from July 1st, 2017 to July 1st, 2022.
- Compensation cess is levied on five products considered to be 'sin' or luxury as mentioned in the GST (Compensation to States) Act, 2017 and includes items such as- Pan Masala, Tobacco, and Automobiles etc.

Alternatives to Prevent Losses

- The input tax credit can help a producer by partially reducing GST liability by only paying the difference between the tax already paid on the raw materials of a particular good and that on the final product.
- In other words, the taxes paid on purchase (input tax) can be subtracted from the taxes paid on the final product (output tax) to reduce the final GST liability.
- Distributing GST compensation
- The compensation cess payable to states is calculated based on the methodology specified in the GST (Compensation to States) Act, 2017.
- The compensation fund so collected is released to the states every 2 months.
- Any unused money from the compensation fund at the end of the transition period shall be distributed between the states and the centre as per any applicable formula.

INDO-BHUTAN BHIM UPI   Economy

Why is in the news?
- NPCI arm to extend BHIM UPI payments system to Bhutan.

More about news
- National Payment Corporation of India's arm, NPCI International Payments Ltd. (NIPL) has partnered Royal Monetary Authority (RMA) of Bhutan for implementing BHIM UPI in Bhutan.
- The collaboration between NIPL and RMA will **enable acceptance of Unified Payments Interface (UPI) powered BHIM App in Bhutan.**
- And RMA will ensure that the **participating NPCI mobile application through UPI QR transactions is accepted at all RMA acquired merchants in Bhutan.**

About UPI
- Unified Payments Interface (UPI) is an instant real-time payment system.
- It allows users **to transfer money on a real-time basis,** across multiple bank accounts without disclosing details of one's bank account to the other party.
- In 2020, UPI enabled commerce worth $457 billion, which is equivalent to approximately 15% of India's GDP.

Significance
- This facility will **benefit more than 200,000 tourists from India** who travel to Bhutan each year.
- Bhutan will become the **first country to adopt Unified Payment Interface(UPI) standards** for its QR deployment.
- Bhutan will also become the **only country to both issue and accept RuPay cards as well as accept BHIM UPI.**

SECURED LOGISTICS DOCUMENT EXCHANGE (SLDE)   Economy

Why is in the news?
- With an aim to further improve ease of doing business, Centre launched the Secured Logistics Document Exchange along with a Calculator for GreenHouse Gas Emissions recently.

Initiated by the Logistics Division, Ministry of Commerce
- The Logistics Division with the mandate of "Integrated Development of the Logistics Sector" has planned specific digital initiatives with a focus on integrating the various digital systems across ministries/ departments and filling gaps so identified.
- In this context key digital initiatives including SLDE platform & Calculator for GHG emissions have been developed.

Secured Logistics Document Exchange(SLDE)
- SLDE is a platform for **digital exchange of logistics-related documents.**

- **Objective: To achieve the targets of improved India's ranking in Logistics Performance Index; reduction in logistics cost** and establishment of indigenous India-specific metrics for continual improvement in logistics.
- The SLDE platform is a solution to **replace the present manual process of generation, exchange** and **compliance of logistics documents** with a digitized, secure and seamless document exchange system.
- This will **enable generation, storage and interchange of logistics-related documents digitally using Aadhaar** and blockchain-based security protocols for data security and authentication.
- It will also **provide a complete audit trail of document transfer, faster execution of transactions,** lower cost of shipping and overall carbon footprint, easy verification of authenticity of documents, lowered risk of fraud, etc.
- The **proof of concept of the platform has been developed and executed with banks** (ICICI, Axis Bank, State Bank of India and HDFC Bank) and stakeholders including freight forwarders, exporters, importers and vessel operators.

Calculator for GHG Emissions
- Along with the SLDE, Centre also launched a Green House Gas Emission calculator as well.
- It has been **launched for choosing sustainable and right mode of transport for freight movement.**
- The GHG Calculator is an **efficient, user-friendly tool and provides for calculating and comparing GHG emissions across different modes.**
- It allows for **commodity-wise comparison of GHG emissions** and total cost of transportation, including their environmental cost, between movement by road and rail.
- The tool is intended to facilitate appropriate modal choice for all concerned.

Benefits of the initiatives
- The Digital initiative is now set to improve logistics efficiency, reduce logistics cost, and promote multi-modality and sustainability in a big way.
- These digital initiatives have been launched to fill the gap areas where no action has yet been taken either by private players or any of the line ministries.

BHALIA VARIETY   Economy

Why in the news ?
- Recently, the first shipment of Bhalia variety of wheat was exported to Kenya and Sri Lanka from Gujarat.
- About Bhalia Wheat
- It is a Geographical Indication (GI) certified variety of wheat.
- It received the Geographical Indication (GI) status in 2011.
- It is grown mostly across Bhal region of Gujarat which includes districts of Ahmadabad, Anand, Kheda, Bhavanagar, Surendranagar and Bharuch.
- It has high protein content and is sweet in taste.
- Its unique characteristic is that it is grown in the rainfed condition without irrigation and cultivated in around two lakh hectares of agricultural land in Gujarat.

Significance of Wheat export
- In 2020-21, the wheat exports from India witnessed a significant growth of 808 % to Rs 4034 crore from Rs 444 crore reported in the previous fiscal.
- In US dollar terms, the wheat exports rose by 778% to $ 549 million in 2020-21.
- India exported substantial quantity of grain to seven new countries i.e. Yemen, Indonesia, Bhutan, Philippines, Iran, Cambodia and Myanmar during 2020-21.

BHALIA WHEAT

Why in the news?

- Union Minister for Fisheries, Animal Husbandry and Dairying, today launched the Online Course Mobile App "**Matsya Setu**".

About Matsya Setu:

- The app was developed by the **ICAR-Central Institute of Freshwater Aquaculture (ICAR-CIFA), Bhubaneswar**, with the funding support of **the National Fisheries Development Board (NFDB), Hyderabad.**
- The online course app aims to disseminate the latest freshwater aquaculture technologies to the aqua farmers of the country.
- **Matsya Setu** app has species-wise/ subject-wise self-learning online course modules, where renowned aquaculture experts explain the basic concepts and practical demonstrations on breeding, seed production and grow-out culture of commercially important fishes like carp, catfish, scampi, murrel, ornamental fish, pearl farming etc. Better Management Practices to be followed in maintaining the soil & water quality, feeding and health management in aquaculture operations were also provided in the course platform.
- The app is absolutely free
- The modules are divided into small video chapters for the convenience of the learners, along with additional learning materials. In order to motivate the learners and provide a lively learning experience, Quiz/Test options were also provided for self-assessment.
- Upon successful completion of each course module, an e-Certificate can be auto-generated.
- Farmers can also ask their doubts through the app and get specific advisories from experts.
- The app has been developed as a deliverable of an innovative project titled "Capacity Building of Knowledge Intermediaries and Primary Stakeholders through Virtual Learning Approach" sanctioned to ICAR-CIFA in 2018 .With the funding support obtained, a Digital Outreach Center has been established with studio facilities to record the lectures of the experts and post-production setup

Why in the news?

- E-commerce companies **lost their legal battle before the High Court of Karnataka against the Competition Commission of India's order to conduct an investigation into** whether they had entered into anti-competitive agreements in violation of the provisions of the Competition Act, 2002.

About Competition Commission of India

- CCI is the competition regulator in India.
- It is a statutory body responsible for enforcing The Competition Act, 2002 and promoting competition throughout India and preventing activities that have an appreciable adverse effect on competition in India.
- It was established on 14 October 2003. It became fully functional in May 2009.

Aims and objectives

- A need was felt to promote competition and private enterprise especially in the light of 1991 Indian economic liberalization.
- The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, follows the philosophy of modern competition laws.
- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises, and regulates combinations (acquisition, acquiring of control, and Merger and acquisition), which causes or likely to cause an appreciable adverse effect on competition within India.

Powers of Competition Commission of India

- Competition Commission of India under which ministry? CCI works under the Ministry of Corporate Affairs. Through various sections, CCI gets its powers to execute orders against any unlawful trade practices.

1. Section 20 of the Act empowers the competition commission of India to inquire about the acquisition or combination to understand if there is any appreciable adverse effect on competition.
2. Reference of the issue by a statutory authority under section 21.
3. Section 33 empowers the issue of interim orders in case of anti-competitive agreement.
4. Reference made by the CCI in the course of proceedings of its contraventions of the provision of the Competition Act of India.
. Competition advocacy section 49 of the act provides that the central or state government may reference the commission for the opinion. But that is not binding on the Government.
• After the application of CCI, the graph of trade internationally has grown significantly. In the coming years, India can expect continuous progress from both the industrial and service sectors.

Anti-Competitive behaviour by firms and companies
• Foreclosing competitors/ competition.
• Unfair or discriminatory pricing/ conditions.
• Limiting or restricting production of goods or provision of services.
• Limiting or restricting scientific or technical development to the prejudice of consumers.
• Mutual anti-competitive agreements.
• Predatory pricing.
• Denial of market access to others.
• Making conclusions of contracts subject to the acceptance by other parties of supplementary obligations that are unrelated to the original contract.

Need of the hour
• Firms should fix internal protocols for decision making and information sharing with regard to sensitive financial and commercial information.
• Firms **should create awareness and run regular training programs amongst all employees** handling sensitive financial and commercial information.
• A competition law due diligence should be conducted by firms that have a high market share or perhaps have exclusive rights at ports etc. so as to avoid anti-competitive clauses in agreements with suppliers, vendors and other market players.
• Communication with **competitors with regard to any business discussion should be limited**/ restricted as well as recorded properly to mitigate any competition law risk.
• Any pricing below the cost must have **a sound economic rationality to justify its efficiency and business** purpose.

STOCK LIMIT ON PULSES   Economy

Why in the news?
• Central Govt. has imposed a stock limit of 200 tonnes per pulse on all pulses except moong held by wholesalers, retailers, importers, and millers till October 2021. The decision is to prevent hoarding and check price rise.

Need for Stocking Limits
• In an attempt to arrest the spiralling prices of pulses, the Union government on Friday directed the States to impose stock limit on all pulses except moong till October 31.
• The Department of Consumer Affairs issued the Removal of Licensing Requirements, Stock Limits and Movement Restrictions on Specified Foodstuffs (Amendment) Order, 2021 prescribing the limits which have been imposed with immediate effect.
• The stock limit of 200 tonnes has been imposed on wholesalers provided they do not hold more than 200 tonnes of one variety of pulses.
• On retailers, the stock limit will be 5 tonnes.
• In case of millers, the stock limit will be the last three months of production or 25% of annual installed capacity whichever is higher.

- For importers, stock limit will be the same as that of wholesalers for stocks held or imported prior to May 15, 2021
- And for pulses imported after May 15, stock limit applicable on wholesalers will apply after 45 days from date of customs clearance, the order said.
- If the stocks of entities exceed the prescribed limits, they have to be declared on the online portal of the Department of Consumer Affairs and have to be brought within the prescribed limit within 30 days of the notification of the order.

Imposing Stock Limits
- Under the amended EC Act, **agri-food stuffs can only be regulated under extraordinary circumstances** such as war, famine, extraordinary price rise, and natural calamity.
- However, any action on imposing stock limits will be based on the price trigger.
- Thus, in case **of horticultural produce, a 100 per cent increase** in the retail price of the commodity over the immediately preceding 12 months or the average retail price of the last five years, whichever is lower, will be the trigger for invoking the stock limit for such commodities.
- For non-perishable agricultural foodstuffs, the price trigger will be **a 50 per cent increase** in the retail price of the commodity over the immediately preceding 12 months or the average retail price of the last five years, whichever is lower.
- The **essential Commodities Act 2020 removed cereals, pulses, oilseeds, edible oils, onion and potatoes from the list of essential commodities**.

Need for imposing stock limits: The dangers of hoarding/cartelization
- Hoarding creates real-economy shortages of goods.
- It eliminates competition and leads to monopoly.
- A process of speculation, self-fulfilling prophecies, and inflation is generated through hoarding.
- Poorest is at risk of hunger if the cycle of inflation continues beyond a point in essential goods.
- In India, cartelization is a civil offence **prohibited under the Competition Act, 2002**

Essential Commodities Act: Definition of an essential commodity
- It was enacted to ensure the easy availability of essential commodities to consumers and to protect them from exploitation by traders.
- The Act provides for the regulation and control of production, distribution and pricing of commodities which are declared as essential. Center can fix MRP of Essential commodities.
- States are the implementing agencies to implement the EC Act, 1955 and the Prevention of Black marketing & Maintenance of Supplies of Essential Commodities Act, 1980. Food and civil supply authorities execute the provisions of the Act.
- This is reviewed periodically at the National Level. Anyone cannot stockpile anything beyond a certain limit. A State can choose not to impose any restrictions. But once it does, traders have to immediately sell into the market any stocks held beyond the mandated quantity. Currently restrictions like licensing requirements, stock limits and movement restrictions have been removed from ~ all agri commodities.
- Wheat, Pulses and edible oils, edible oilseeds and rice are the exceptions where States can impose some temporary restrictions.
- 7 major commodities are covered under the act: **1.** Drugs; **2.** Fertilizer; **3.** Foodstuffs, including edible oilseeds & oils; **4.** Hank yarn made wholly from cotton; **5.** Petroleum and petroleum products; **6.** Raw jute and jute textile; **7.** Seeds of food-crops and seeds of fruits and vegetables; recently Masks & Sanitizers are included in ECA.

Benefits of ECA, 1955
- The ECA gives consumers protection against irrational spikes in prices of essential commodities.
- The Government has invoked the Act umpteen times to ensure adequate supplies.
- It cracks down on hoarders and black-marketeers of such commodities.
- State agencies conduct raids to get everyone to toe the line and the errant are punished.

Negatives of ECA,1955
- Less investment in warehousing and storage infrastructure. The fear of the ECA may explain the lack of formal warehouses and silos in India.

- Encourages a group of grey market intermediaries between farmer and the end consumer to come up.
- It becomes a tool to expropriate traders who may have stored products during harvest to sell during the lean months.
- It may not always be possible to differentiate between genuine stock and speculative hoarding.
- In Sep 2019, Center used ECA to impose stock limits on onions after heavy rains wiped out a quarter of the kharif crop and led to a sustained spike in prices. But it actually increased price volatility.
- Thus in the long term, the Act disincentivises development of storage infrastructure, thereby leading to increased volatility in prices following production/ consumption shocks — the opposite of what it is intended for.
- Economic Survey 2019-2020 recommends to scrap ECA,1955

2020 Amendment to ECA, 1955
- Commodities like Cereals, Pulses, Oilseeds, Edible oils, Onion and Potatoes will be removed from the list of essential commodities.
- This will remove fears of private investors of excessive regulatory intereference in their business.
- It will attract FDI/ Foreign investment in Agri sector and investment in cold storages and modernization of food supply chain.

AUTHORISED ECONOMIC OPERATORS   Economy

Why in the news?
- Central Board of Indirect Taxes & Customs (CBIC) has inaugurated the online filing of Authorised Economic Operators (AEO) T2 and T3 applications.
- Who are Authorised Economic Operators?
- The AEO concept is one of the main building blocks within the WCO SAFE Framework of Standards (SAFE).
- The latter is part of the future international Customs model set out to support secure trade.
- The growth of global trade and increasing security threats to the international movement of goods have forced customs administrations to shift their focus more and more to securing the international trade flow and away from the traditional task of collecting customs duties.
- Recognizing these developments, the World Customs Organization, drafted the WCO Framework of Standards to Secure and Facilitate global trade (SAFE).
- In the framework, several standards are included that can assist Customs administrations in meeting these new challenges.
- Developing an Authorized Economic Operator programme is a core part of SAFE.

AEOs in India
- AEO is a voluntary programme.
- It enables Indian Customs to enhance and streamline cargo security through close cooperation with the principal stakeholders of the international supply chain viz. importers, exporters, logistics providers, custodians or terminal operators, customs brokers and warehouse operators.

COMMUNITY-MANAGED NATURAL FARMING (APCNF)   Economy

Why in the news?
- Previously known as Zero Budget Natural Farming (ZBNF) is now Andhra Pradesh Community-managed Natural Farming (APCNF).

Why is ZBNF necessary?
- From the (NSSO) National Sample Survey Office data, **70% plus of farmers spend more they earn, and most farmers have debt.**
- The indebtedness level is around 90% in states like Andhra Pradesh and Telangana, where each household has an average debt of Rs 1 lakh.

- To achieve the promise of the central government to double the income of farmers by 2022, one factor being considered is natural farming methods zero budget natural farming.

4 PILLARS OF ZERO BUDGET NATURAL FARMING

01 BIJAMRITA — seed treatment using local cowdung and cow urine

02 MULCHING — activities to ensure favorable microclimate in the soil

02 JIBAMRITA — applying inoculation made of cowdung and urine without any fertilizers and pesticides

04 WAAPHASA (Soil Moisture) — soil aeration, improved soil structure and humus content

ZERO BUDGET NATURAL FARMING

Why is ZBNF important in a nutshell
- Farmers depend on loans.
- The economic survey has highlighted the ecological benefits.
- Cost of farming inputs is rapidly increasing.
- The number of farmer's suicide cases is growing continuously.
- The demand for safe food increased among customers.
- Unstable market price.

Advantages of Zero Budget Natural Farming
- Zero budget natural farming reduces the initial cost of farmers.
- Farmer's income automatically increases.
- The soil ecosystem improves.
- Cow dung adds soil value. It is full of nutrients value and available locally.
- Bacteria of cow dung decompose the organic matter in soil and make soil for the plants.
- It requires less electricity and water.
- ZBNF improves the productivity of the soil.
- It decreases the disease attack risk on the crop.

Disadvantages of Zero Budget Natural Farming
- This farming method used in some parts of India.
- The type of farming being debated, and there is not much scientific research under evaluation.
- This farming technique used in negligible areas.

Zero Budget Natural Farming V/S Organic Farming

No.	Zero Budget Natural Farming(ZBNF)	Organic Farming
1	No external fertilizers are used in ZBNF.	Organic fertilizers such as compost, cow dung, and vermicompost are used in organic farming.
2	There is no tilling and no mixing. It requires natural ecosystems.	It requires basic agro methods like tilling, plowing, mixing, etc.
3	It is low-cost farming due to the local biodiversity.	It is expensive due to the need for bulk manures.

Why in the news?

- A consignment of GI certified Fazil mango variety sourced from West Bengal's Malda district was exported to Bahrain.

About

- GI certified Khirsapati, Lakkhanbhog, Fazli, Amrapali and Chausa (all sourced from Malda), Langda from West Bengal's Nadiya, and Uttar Pradesh's Dusshheri are the nine types of mangoes which were exported.
- The mangoes were sourced from farmers by APEDA.

Mango

- Mango in India is also referred to as **"king of fruits"** and referred to as Kalpavriksha (wish granting tree) in ancient scriptures.
- **India is by far the world's largest producer,** producing around 20 million tonnes of mango annually.
- In 2019, global production of mangoes was 56 million tonnes, led by India with 46% (26 million tonnes) of the world total. The second-largest source is Indonesia.

APEDA

- Agriculture and processed food production export Development Authority (APEDA) is an apex body that promotes export trade of agricultural products in India.
- Set-up by the **Ministry of Commerce and Industry**, APEDA was formed under the act passed by parliament in 1985.
- APEDA is mandated with the responsibility of export promotion and development of the following scheduled products:
  - Fruits, vegetables and their products
  - Meat and meat products
  - Poultry and poultry products
  - Dairy products
  - Confectionery biscuits and Bakery products
  - Honey, jaggery and sugar products
  - Cocoa and its products, Chocolates of all kinds.
  - Alcoholic and non-alcoholic beverages
  - Cereal and cereal products
  - Groundnuts peanuts and walnuts
  - Pickles, papads and chutney
  - Guar gum
  - Floriculture and its products
  - Herbal and Medicinal plants
- The above product categories are almost covered 50% of all Agriculture products exported from India.
- APEDA has also been entrusted with the responsibility to **monitor import of sugar.**

GI Tag

- A geographical indication or GI is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- Geographical Indications are part of the intellectual property rights that comes **under the Paris Convention for the Protection of Industrial Property.**
- In India, Geographical Indications registration is administered by the **Geographical Indications of Goods (Registration and Protection) Act of 1999.**
- This tag **is valid for a period of 10 years** following which it can be renewed.
- GI tags are covered under World Trade Organization.

- Geographical indications are typically used for <u>agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products.</u>
- It is basically an assurance that the product is coming from that specific area. It's kind of trademark in the international market.
- **<u>Karnataka has the highest number of GI tags i.e. 47</u>** products followed by Tamil Nadu (39). Some of the major products that have got GI tag are: Mysore Silk of Karnataka.
- Products that recently got GI tags are
  - o Kashmir Saffron
  - o Manipur Chak-Hao
  - o Telangana Telia Rumal
  - o Gorakhpur Terracotta
  - o Jharkhand Sohrai – Khovar Painting

OECD TAX PROPOSALS SPECIAL LIVESTOCK SECTOR PACKAGE — Economy

Why in the news?
- The Union Government has approved implementation of a Special Livestock Sector Package recently.

About special package
- **Purpose :** To further boost growth in the livestock sector and thereby **making animal husbandry more remunerative to 10 crore farmers engaged in Animal Husbandry Sector**.
- **Financial support:** This package envisages **Central Government's support amounting to Rs.9800 crore** over duration of 5 years for leveraging total investment of Rs. 54,618 crore for 5 years(**starting from 2021-22**).
- The financial support also includes share of investments by State Governments, State Cooperatives, Financial institutions, External funding agencies and other stakeholder

Merging old schemes
- The package has revised and realigned components of all the schemes of the Department of Animal Husbandry and Dairying and **merged into three broad categories as:**
  1. **Development Programmes :** It includes Rashtriya Gokul Mission, National Programme for Dairy Development (NPDD), National Livestock Mission (NLM) and Livestock Census and Integrated Sample Survey (LC & ISS) as sub-schemes.
  2. **Disease Control programme:** The programme is **renamed as Livestock Health and Disease Control (LH & DC) which includes** the present Livestock Health and Disease Control (LH & DC) scheme and National Animal Disease Control Programme (NADCP).
  3. **Infrastructure Development Fund**: In this the Animal Husbandry Infrastructure Development fund (AHIDF) and the Dairy Infrastructure Development Fund (DIDF) are merged and the present scheme for support to Dairy Cooperatives and Farmer Producer Organizations engaged in Dairy activities is also included in this.

Other schemes
National Programme for Dairy Development (NPDD)
- The realigned National Programme for Dairy Development (NPDD) will have two components:
  - **Component 'A' of the NPDD:**
    - It will be implemented with **emphasis on milk procurement, processing, marketing** and quality of milk and milk products.
    - The scheme is targeted towards installation of about 8900 bulk milk coolers, which is likely to cover about 26,700 villages and thus providing benefit to more than 8 lakh milk producers and 20 LLPD milk will be additionally procured.
  - **Component 'B' of NPDD:**
    - It will avail **financial assistance from Japan International Cooperation Agency (JICA)** as per project agreement already signed with them.
    - It will create strengthened or fresh infrastructure in 4500 villages, 8.96 LLPD chilling and 7 LLPD processing capacity with incremental procurement of about 14.20 LLPD from 1.5 Lakh additional milk producers.

The Rashtriya Gokul Mission:

- It will help in development and conservation of indigenous breeds and would also contribute in improving the economic condition of the rural poor.

The Livestock Sector in India

- The Livestock Sector in the country has been growing at a Compound Annual Growth Rate (CAGR) of 8.15% (at constant prices) from 2014-15 to 2019-20.
- This CAGR is higher than other sectors like manufacturing sector, which has shown 6.15%, Agriculture (Crop) sector which shown 1.95% and services sector with 7.7% for similar period.
- Similarly, the Poultry sector is also growing at (CAGR constant prices) of 10.5% and playing immense role in livelihood creation in the rural economy.
- As per the estimates of Central Statistical Office (CSO) for sector wise Gross Value Added (GVA) of Agriculture and allied sector, the percentage contribution of livestock sector as a percentage of total crop and livestock sector has increased from 28% (2014-15) to 34% (2019-20).
- The Dairy sector has been growing consistently with milk production increasing from 22 million MT in 1970 to 198 million MT in 2019-20.

KISAN SARATHI APP — Economy

Why is in the news?

- Government of India launched digital platform Kisan Sarathi

Key Highlights Kisan Sarathi

- **The platform Kisan Sarathi** was jointly launched by Ministry of Agriculture and Ministry Electronics and Information Technology through video conference on the occasion of **93rd ICAR Foundation Day.**
- Launched to facilitate farmers to get 'right information at right time' in their desired language
- With this digital platform, the farmers can interact and avail personalized advisories on agriculture and allied areas directly from the respective scientists of Krishi Vigyan Kendra (KVKs).
- Kisan Sarathi will empower farmers with the technological interventions and reach farmers in remote areas.
- 'KisanSarathi' initiative will be highly valuable not only in addressing the location specific information needs of the farmers but also in Agricultural Extension, Education and Research activities of ICAR.

The Indian Council of Agricultural Research (ICAR)

- The Indian Council of Agricultural Research (ICAR) is an autonomous organization.
- It work under the **Department of Agricultural Research and Education (DARE)**, Ministry of Agriculture and Farmers Welfare , Government of India.
- Formerly known as Imperial Council of Agricultural Research,
- It was established on **16 July 1929** as a registered society under the Societies Registration Act, 1860 in pursuance of the report of the Royal Commission on Agriculture.
- The ICAR has its headquarters at **New Delhi.**

Krishi Vigyan Kendra

- Krishi Vigyan Kendras commonly known as KVKs are the agricultural science centres established as innovative institutions for imparting vocational training to the practising farmers, school dropouts and field level extension functionaries.
- Krishi Vigyan Kendra has been in the news as the 11th National Krishi Vigyan Kendra Conference was held in New Delhi in February 2020.
- Krishi Vigyan Kendras are the centres for agriculture extensions created by Indian Council for Agricultural Research (ICAR) and its affiliated institutions at the district level.
- KVKs are an integral part of the National Agricultural Research System (NARS) and serve as the link between the NARS and the farmers.
- The KVK centre provides various types of farm support to the agricultural sector and creates awareness about the improved agricultural technologies.
- The first Krishi Vigyan Kendra, on a pilot basis, was established in 1974 at Puducherry (Pondicherry) under the administrative control of the Tamil Nadu Agricultural University, Coimbatore.

- KVKs are sanctioned to Agricultural Universities, ICAR institutes, related Government Departments and Non-Government Organizations (NGOs) working in Agriculture. Usually, a KVK is associated with a local agricultural university.
- All KVKs fall under the jurisdiction of one of the 11 Agricultural Technology Application Research Institutes (ATARIs) throughout India.
- These Krishi Vigyaan Kendra are 100% financed by the Government of India and are crucial to fulfilling the target of doubling farmer's income in near future.

HORTICULTURE PRODUCTION Economy

Why is in th news?
- India is expected to have the highest ever horticulture production of 329.86 million tonnnes in 2020-21, up by 2.93% over previous year.

About India's horticulation production
- It ranks **second in fruits and vegetables production in the world, after China.**
- Its horticulture production has increased by 30 per cent in the last five years.
- India is the second largest producer of fruits and vegetables in the world **with first rank in the production of Banana, Mango, Lime & Lemon, Papaya and Okra.**
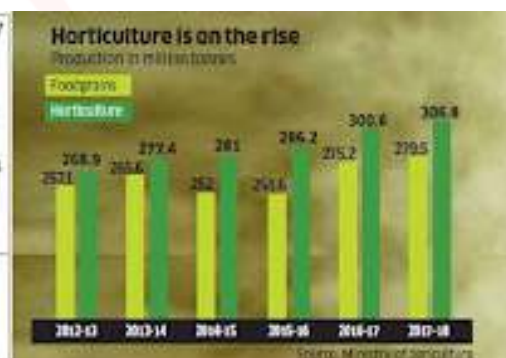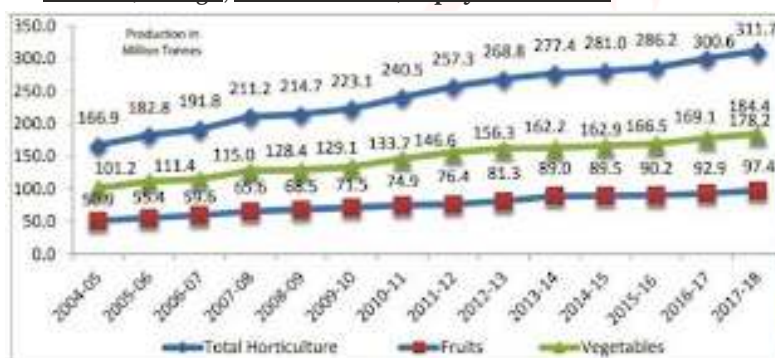
Initiatives taken
- **Horticulture Area Production Information System (HAPIS) -** a web enabled information system by which data from the states/districts is reported. This minimizes the time-lag and maximizes the coverage area.
- **Coordinated programme on Horticulture Assessment and MANagement using geoinformatics (CHAMAN)** - to develop scientific methodology for estimation of area & production under horticulture crops. **Method used:** Remote Sensing and Sample Survey Techniques.
- **Mission for Integrated Development of Horticulture (MIDH)** is a **Centrally Sponsored Scheme** for the holistic growth of the horticulture sector. Under MIDH, Government of India (GOI) contributes 60%, of total outlay for developmental programmes in all the states except states in North East and Himalayas, 40% share is contributed by State Governments. In the case of North Eastern States and Himalayan States, GOI contributes 90%. **Schemes under it are:** National Horticulture Mission (NHM); Horticulture Mission for North East and Himalayan States (HMNEH); National Horticulture Board (NHB); Coconut Development Board (CDB) & Central Institute of Horticulture (CIH), Nagaland.

Top State and their percent (%) Share in Production

Fruit	
State	Share
Andhra Pradesh	15.63%
Maharashtra	12.05%
Uttar Pradesh	10.82%
Vegetable	
Uttar Pradesh	15.40%
West Bengal	15.03%
Madhya Pradesh	9.52%
Plantation Crops	
Kerala	33.48%
Karnataka	27.30%
Tamil Nadu	23.42%
Flower	
Tamil Nadu	17.33%
Andhra Pradesh	15.40%
Karnataka	11.63%
Spices	
Madhya Pradesh	14.67%
Rajasthan	14.09%
Andhra Pradesh	13.54%

Why in the news?

- Union Agriculture and Farmers Welfare Minister inaugurated the office of National Farmers Welfare Program Implementation Committee.

About NFWP

- The National Farmers Welfare Program Implementation Committee would act as a project monitoring unit for the implementation of
- PM-KisanYojana,
- Kisan Maandhan Yojana,
- Agriculture Infrastructure Fund and
- other schemes of the Department of Agriculture and Farmers Welfare.

1. Pradhan MantriKisanSammanNidhi (PM-KISAN) scheme

- Under the PM-KISAN scheme launched in 2019 , the government is providing Rs 6,000 in three equal installments to 14 crore farmers annually.
- The amount is directly transferred into the bank accounts of the beneficiaries through direct benefit transfer (DBT) mode.
- The scheme defines family as husband, wife and minor children.
- The fund of Rs 2,000 is directly transferred to the bank accounts of the farmers/farmer's family.

Who is eligible for PM Kisan scheme?

- Landholding farmers' families with cultivable landholding in their names can apply under this scheme
- Farmers from both the urban and rural areas
- Small and marginal farmers families

2. Pradhan Mantri Kisan Maan DhanYojana (PM-KMY)

- Government launched the Pradhan MantriKisanMaanDhanYojana (PM-KMY) in 2019 with a view to provide social security to Small and Marginal Farmers in their old age.

Benefits

- A minimum fixed pension of Rs.3,000/- is provided to the small and marginal farmers, on attaining the age of 60 years.
- It is a voluntary and contributory pension scheme.
- The eligible farmer is required to contribute to a Pension Fund between Rs.55 to Rs.200 per month depending on the entry age.
- The Central Government also contributes in equal amount to the Pension Fund.

Eligibility

- Small and Marginal Farmer (SMF) - a farmer who owns cultivable land upto 2 hectare as per land records of the concerned State/UT.
- Age of 18- 40 years

3. Agriculture Infrastructure Fund

- Cabinet gave its approval to the following modifications in Central Sector Scheme of Financing Facility under 'Agriculture Infrastructure Fund':
  - Eligibility has now been extended to State Agencies/APMCs, National & State Federations of Cooperatives, Federations of Farmers Producers Organizations (FPOs) and Federations of Self Help Groups (SHGs).
  - At present Interest subvention for a loan upto Rs. 2 crore in one location is eligible under the scheme.
  1. In case, one eligible entity puts up projects in different locations then all such projects will be now be eligible for interest subvention for loan upto Rs. 2 crore.

2. However, for a private sector entity there will be a limit of a maximum of 25 such projects.

3. This limitation of 25 projects will not be applicable to state agencies, national and state federations of cooperatives, federations of FPOs and federation of SHGs.

4. Location will mean physical boundary of a village or town having a distinct LGD (Local Government Directory) code. Each of such projects should be in a location having a separate LGD code.

- For APMCs, interest subvention for a loan upto Rs. 2 crore will be provided for each project of different infrastructure types e.g. cold storage, sorting, grading and assaying units, silos, et within the same market yard.

- The power has been delegated to Hon'ble Minister of Agriculture & Farmers Welfare to make necessary changes with regard to addition or deletion of beneficiary in such a manner so that basic spirit of the scheme is not altere

- The period of financial facility has been extended from 4 to 6 years upto 2025-26 and overall period of the scheme has been extended from 10 to 13 upto 2032-33.

- The modifications in the Scheme will help to achieve a multiplier effect in generating investments while ensuring that the benefits reach small and marginal farmers. APMC markets are setup to provide market linkages and create an ecosystem of post-harvest public infrastructure open to all farmers.

Agriculture Infrastructure Fund

- It is a part of the over Rs. 20 lakh crore stimulus package announced in response to the Covid-19 crisis. For FY 2020-2029.

- Aim: To provide medium - long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets.

- The funds will be provided for setting up of cold stores and chains, warehousing, silos, assaying, grading and packaging units, e-marketing points linked to e-trading platforms and ripening chambers, besides PPP projects for crop aggregation sponsored by central/state/local bodies.

- Financial Support: Rs. 1 Lakh Crore will be provided by banks and financial institutions as loans to Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies, Farmer Producers Organizations (FPOs), Self Help Group (SHG), Farmers, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs and Central/State agencies or Local Bodies sponsored by Public Private Partnership Projects.

- Loans will be disbursed in four years starting with sanction of Rs. 10,000 crore in the current year and Rs. 30,000 crore each in next three financial years.

- CGTMSE Scheme: A credit guarantee coverage will be available for eligible borrowers from the scheme under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) scheme for a loan up to Rs. 2 crore.

- In case of FPOs the credit guarantee may be availed from the facility created under FPO promotion scheme.

- Moratorium for repayment may vary subject to minimum of 6 months and maximum of 2 years.

- Loans will have interest subvention of 3% per annum up to a limit of Rs. 2 crore. This subvention will be available for a maximum period of seven years.

- The fund will be managed and monitored through an online Management Information System (MIS) platform. It will enable all the qualified entities to apply for loan under the Fund.

- The National, State and District level monitoring committees will be set up to ensure real-time monitoring and effective feed-back.

BHARATIYA PRAKRITIK KRISHI PADHATI (BPKP)   Economy

Why in the news?

- Recently, the Ministry of Agriculture & Farmers Welfare has stated that an area of 4.9 lakh ha is covered in 8 states and Rs. 4980.99 lakh has been released under Bhartiya Prakritik Krishi Paddhati (BPKP). The eight states are Andhra Pradesh, Chhattisgarh, Kerala, Himachal Pradesh, Jharkhand, Odisha, Madhya Pradesh and Tamil Nadu.

About Bhartiya Prakritik Krishi Paddhati (BPKP)

- It is a sub scheme of Paramparagat Krishi Vikas Yojana (PKVY).

- It was launched in 2020-21 for the promotion of traditional indigenous practices.

- It emphasizes on exclusion of all synthetic chemical inputs and promotes on-farm biomass recycling with major stress on:
    - Biomass mulching;
    - Use of cow dung-urine formulations;
    - Plant-based preparations; and
    - Time to time working of soil for aeration
- Under BPKP, financial assistance of Rs 12200/ha for 3 years is provided for cluster formation, capacity building and continuous handholding by trained personnel, certification and residue analysis.

About Paramparagat Krishi Vikas Yojana (PKVY)
- It is an elaborated component of Soil Health Management (SHM) of major project National Mission of Sustainable Agriculture (NMSA).
- It aims at development of sustainable models of organic farming through a mix of traditional wisdom and modern science to ensure long term soil fertility buildup, resource conservation and helps in climate change adaptation and mitigation.
- It primarily aims to increase soil fertility and thereby helps in production of healthy food through organic practices without the use of agro-chemicals.
- It aims at empowering farmers through institutional development through clusters approach not only in farm practice management, input production, quality assurance but also in value addition and direct marketing through innovative means.
- It promotes Participatory Guarantee System (PGS) For India (PGS- India) form of organic certification that is built on mutual trust.
- The Funding pattern under the scheme is in the ratio of 60:40 by the Central and State Governments respectively.
- In case of North Eastern and Himalayan States, Central Assistance is provided in the ratio of 90:10 (Centre: State) and for Union Territories, the assistance is 100%.

Objectives of Paramparagat Krishi Vikas Yojana (PKVY)
- To promote natural resource based integrated and climate resilient sustainable farming systems that ensure maintenance and increase of soil fertility, natural resource conservation, on-farm nutrient recycling and minimize dependence of farmers on external inputs;
- To reduce cost of agriculture to farmers through sustainable integrated organic farming systems thereby enhancing farmer's net income per unit of land;
- To sustainably produce chemical free and nutritious food for human consumption;
- To protect environment from hazardous inorganic chemicals by adoption of eco-friendly low cost traditional techniques and farmer friendly technologies;
- To empower farmers through their own institutional development in the form of clusters and group with capacity to manage production, processing, value addition and certification management; and
- To make farmers entrepreneurs through direct market linkages with local and national markets

ENFORCEMENT DIRECTORATE   Economy

Why in the news?
- Nirav's sister has transferred Rs. 17.25 cr. to govt. account.

Organisational Setup
- The Directorate of Enforcement, **with its Headquarters at New Delhi is headed by the Director of Enforcement. There a**re five Regional offices at Mumbai, Chennai, Chandigarh, Kolkata and Delhi headed by Special Directors of Enforcement.

Functions
- Investigate contraventions of the provisions of Foreign Exchange Management Act, 1999(FEMA)
- Investigate offences of money laundering under the provisions of Prevention of Money Laundering Act, 2002(PMLA)

- take actions of attachment and confiscation of property if the same is determined to be proceeds of crime derived from a Scheduled Offence under PMLA,
- prosecute the persons involved in the offence of money laundering.
- Processing cases of fugitive/s from India under Fugitive Economic Offenders Act, 2018.
- Render cooperation to foreign countries in matters relating to money laundering and restitution of assets under the provisions of PMLA and to seek cooperation in such matters.

FINANCIAL STABILITY REPORT — Economy

- Recently, the Reserve Bank of India released its latest Financial Stability Report (or FSR).

About the report
- FSR is Published twice each year and is one of the most crucial documents on the Indian economy.
- It reflects the collective assessment of the Sub-Committee of the Financial Stability and Development Council (FSDC) on risks to financial stability and the resilience of the financial system in the context of contemporaneous issues relating to development and regulation of the financial sector.
- It focuses on public and private banks with the following aspects:
  - Capital availability for working
  - Cost of NPAs and whether they are manageable
  - Credit flow in different sectors of the economy
  - Credit flow at personal levels (households)
  - Macro-financial risks in the economy
  - Macro-financial risks refer to the risks that originate from the financial system but affect the wider economy as well as risks to the financial system that originate in the wider economy.
  - Stress tests are also performed by RBI as part of FSR

Key Findings
- **Capital Adequacy Ratio:**
  - The capital to risk-weighted assets ratio (CRAR) of scheduled commercial banks (SCBs) increased to 16.03 per cent and the provisioning coverage ratio (PCR) stood at 68.86 per cent in March 2021.
- **Non Performing Asset:**
  - Macro stress tests indicate that the gross non-performing asset (GNPA) ratio of SCBs may increase from 7.48 per cent in March 2021 to 9.80 per cent by March 2022 under the baseline scenario;
  - and to 11.22 per cent under a severe stress scenario, although SCBs have sufficient capital, both at the aggregate and individual level, even under stress.
  - A kind of regulatory moratorium was announced, resulting in reduced NPAs.
- **Credit Demand:**
  - Going forward, as banks respond to credit demand in a recovering economy, they will need to reinforce their capital and liquidity positions to fortify themselves against potential balance sheet stress.
  - Demand for consumer credit across banks and non-banking financial companies (NBFCs) has decreased amidst the second wave of Covid-19.
- **Retail loans and loans to MSME:**
  - NPA levels and quality of credit might deteriorate in this sector.
  - Consumer loan climate will get affected by this
  - The only thing to worry about is this point
- **Nurturing the global recovery:**
  - Sustained policy support, benign financial conditions and the gathering momentum of vaccination are nurturing an uneven global recovery.
- **Covid 19:**
  - On the domestic front, the ferocity of the second wave of COVID-19 has dented economic activity, but monetary, regulatory and fiscal policy measures have helped curtail the solvency risk of financial entities, stabilise markets, and maintain financial stability.

- Write-offs as a percentage of GNPA at the beginning of the year, fell sharply as compared to 2019-20, except for private banks.
- **RBIs Protection:**
  - Banks remain relatively unaffected by distractions caused due to the pandemic and are well protected by regulatory, monetary and fiscal policies.

G-SECS

Why in the news?
- Government is selling bonds to raise the money.
- Recently, the Reserve Bank of India unveiled a scheme allowing retail investors to directly participate in the government securities market.

Key Highlights
- The investors can open and maintain a 'Retail Direct Gilt Account' (RDG Account) with the RBI through a portal.
- The scheme will provide access to primary issuance of G-Secs and the secondary market as well.
- The greater participation will support the government's expanding borrowings plan, estimated at around Rs 12 lakh crore annually.

What are Government Securities (G-Secs)?
- It is a tradeable instrument issued by the Central Government or the State Governments.
- The government securities market is dominated by institutional investors like mutual funds, banks, insurance companies.
- The government securities are of two types:
  - Short term popularly called treasury bills, with original maturities of less than one year;
  - Long term generally called Government bonds or dated securities with an original maturity of one year or more.
- In India, the Central Government issues both, treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs).
- G-Secs are called risk-free gilt-edged instruments because practically they carry no risk of default.
- G-Secs offer the maximum safety as they carry the Sovereign's commitment for payment of interest and repayment of principal.
- G-Secs can be sold easily in the secondary market to meet cash requirements.

Significance of G-Secs for Retail Investors
- The Central Bank has proposed to provide retail investors with online access to the government securities market (both primary and secondary) directly through the Reserve Bank (Retail Direct).
  - Primary markets are the financial markets where a security is issued for the first time.
  - Secondary markets are the ones where buying and selling of already issued securities takes place.
- The move will broaden the investor base and provide retail investors with enhanced access to participate in the government securities market.
- It is a major structural reform placing India among select few countries which have similar facilities.
- The directly buying of G-secs by retail investors alongwith HTM [hold to maturity] relaxation, will facilitate smooth completion of the government borrowing programmein 2021-22.
- It is a bold step towards the financialisation of a vast pool of domestic savings and could be a game-changer.
- It allows retail investors to directly invest in the safest fixed income avenue in the country and gives an alternative safer than bank fixed deposits as G-secs come with a sovereign guarantee.

Risks associated with direct investment in G-Secs
- The experts argue that although these are safe-asset class, it is better to invest through mutual fund schemes that invest in G-Secs because G-Secs are highly volatile.

- The G-Sec attracts tax on both interest income and capital gains if the papers are traded in the market before maturity.
- The interest income attracts tax at the marginal tax rate, and capital gains at 10% but the G-Secs do not attract capital gains tax if the papers are held till maturity.
- G-Sec yields move on account of various factors, and investors will need to keep an eye on both domestic and global developments.
- The investors suffer capital losses in a rising interest rate regime, and make capital gains in a falling rate environment.

INITIAL PUBLIC OFFER

Why in news?
- Zomato IPO is coming to market for raising the funds.

Means of raising fund in the primary market Initial Public Offer (IPO)
- Initial Public Offer is the process of offering its new securities to the public/ investor for the first time through the issue of prospectus.
- It is **issued only by the unlisted company (a com**pany whose shares are not traded on a stock exchange).

Follow on Public Offer (FPO)
- Follow on Public Offer (FPO) refers to the process where already listed company offers its securities to the public/investor to an offer for sale.
- A follow-on offering is the issuance of additional shares made by a company after an initial public offering (IPO).
- It is also called as the secondary offering.

Right Issue
- A listed company offers its new securities only to the existing shareholders in proportion to their existing shareholding.
- In the Right Issue, shares are issued at a discount.

Referential Issue
- Under this, a listed company offers its new securities only to a selected class of shareholders.

Bonus Issue
- **Bonus shares or issues are additional shares given to the existing** shareholders without any additional cost, in the proportion of their shareholding in lieu of distribution of dividend.

Private Placement
- Raising capital by selling the share to a select group of investors, or individual.
- The advantage of the private placement is saving in marketing expenses.
- Under this, number of investors who are issued shares cannot be more than 50.

Sweat Equity
- Under this, the share is allotted to top management like directors of a company at a highly discounted price in recognition of their outstanding contribution.

Why in the news?

- Under Pradhan Mantri Mudra Yojana (PMMY) **over 11.29 crore loans amounting to Rs. 6.41 lakh crore have been disbursed across the country during FY 2019-20 and FY 2020-21**

About Pradhan Mantri Mudra Yojana

- The Union Government launched the Pradhan Mantri MUDRA Yojana (PMMY) **on April 8, 2015, to provide loans up to Rs. 10 lakhs to non-farm small/microenterprises and non-corporate.**
- All banks, including Public Sector Banks, Private Sector Banks, Regional Rural Banks (RRBs), State Co-operative Banks, Urban Co-operative Banks, Foreign Banks, and Non Banking Finance Companies (NBFCs)/Micro Finance Institutions (MFIs), are required to lend to non-farm sector income-generating activities with a value of less than Rs.10 lakh under the PMMY.
- These loans are categorized as MUDRA loans under PMMY. Institutional Mechanism
- The government has **established a new institution called MUDRA (Micro Units Growth & Refinance Agency Ltd.) to** carry out the Scheme's development and refinancing activities, as well as serve as a regulator for the microfinance sector in general.
- PMMY's **mission is to provide grants to small businesses that are not corporations**. Loan offerings under PMMY

Category of Loans

- Shishu: covering loans up to Rs. 50,000/- given with no collateral, at 1% rate of interest/month repayable over a period of 5 years.
- Kishor: cover loans above Rs. 50,000/- and up to Rs. 5 lakh.
- Tarun: cover loans beyond Rs. 5 lakh to Rs. 10 lakh.

Approach of PMMY

- Enterprises in the smallest segment must receive at least 60% of the funding. MUDRA Bank's partner intermediaries must strive to adhere to the following general framework:
- First-time entrepreneurs, young entrepreneurs (those under 30 years old), and women entrepreneurs will be welcomed, with special schemes being planned for them.
- Cash flow-based lending would be prioritized over security-based lending. Collateral securities, among other things, must be avoided.
- Repayment commitments shall be flexible and framed in light of the entrepreneur's company cash flows.

About Micro Units Development Refinance Agency (MUDRA) Bank

- The Micro Units Development Refinance Agency (MUDRA) Bank is a microfinance refinancing institution. of SIDBI and renamed as MUDRA (SIDBI) Bank.
- The MUDRA Bank is primarily responsible for –
- Developing policy guidelines for the micro/small enterprise financing industry, as well as registering and regulating MFI organizations.
- MFI organizations are accredited and rated.
- Establishing responsible lending policies to avoid indebtedness and to ensure proper client security principles and recovery methods.
- Creating a standardized set of covenants for last-mile lending to micro and small businesses.
- Promoting appropriate technological strategies for the final mile.
- Creating and implementing a Credit Guarantee System to provide loan guarantees to micro-enterprises.
- Creating a **good architecture of Last Mile Credit Delivery to micro businesses** under the scheme of Pradhan Mantri Mudra Yojana.
- MUDRA Bank operates **through regional level financing institutions who in turn connects with last-mile lenders like Micro Finance Institutions (MFIs), Small Banks, Primary Credit Cooperative Societies, Self Help Groups** (SHGs), NBFC (other than MFI) and such other lending institutions.
- In lending, **MUDRA gives priority to enterprises set up by the under-privileged sections of the society** particularly those from the scheduled caste/tribe (SC/ST) groups, first-generation entrepreneurs and existing small businesses.

Context

- The Centre asked the seed industry to bring in transparency in certification of truthful labelled seeds.

About the certification

- It is the category of seed produced by cultivators, private seed companies and is sold under truthful labels.
- This type of seeds **does not come under the purview of the Department of Seed Certification**.
- Rather, field standard and seed standard should be maintained as per seed act and certified seed stage.
- Under the seed act, the **seed producer and seed seller are responsible for the seed.**
- Truthful labelling is **compulsory for notified kind of varieties** and it is tested for physical purity and germination.
- **Notified Variety:** After a variety has been released for a zone by the Central Sub-Committee, the Director, HYV, Ministry of Agriculture and Irrigation, notifies the concerned authorities of the states within that zone for seed multiplication and distribution of variety. This is known as notification of variety.

Difference between certified seed and truthful labeled seed

Certified seed	Truthful labelled seed
Certification is voluntary. Quality guaranteed by certification agency.	Truthful labelling is compulsory for notified kind of varieties. Quality guaranteed by producing agency
Applicable to notified kinds only.	Applicable to both notified and released varieties
It should satisfy both minimum field and seed standards	Tested for physical purity and germination
Seed certification officer, seed inspectors can take samples for inspection	Seed inspectors alone can take samples for checking the seed quality.

Why is in the news?

- Recently, the European Commission has announced a plan called 'Fit for 55 Package' for all its members against climate change.

What is Fit for 55 Package?

- It calls for 27 member states of European Commission to cut their output of greenhouse gases by 55% by 2030, compared with 1990 levels.
- Its target is more aggressive than that of the United States, which committed to reduce emissions by 40% to 43% over the same period, but behind Britain, which pledged a 68% reduction.
- It includes a contentious plan called "Carbon Border Adjustment Mechanism" which would impose tariffs on imported products based on the greenhouse gas emissions associated with them.

Impact of 'Fit for 55' Package

- The European Union's plan to cut its greenhouse gas emissions by more than half by the end of the decade will touch almost every industry in the trade bloc.
- The transition will be painful for some consumers and companies by raising the cost of a wide variety of goods and services.
- The proposals could reshape polluting industries like steelmaking, which directly employs 330,000 people in the European Union.

Impact on Automakers

- Most automakers have announced plans to shift to electric vehicles, but many have resisted putting an expiration date on the fossil-fuel powered vehicles, which still generate the most profits.
- The European Commission plan would effectively require all new cars to be emissions-free by 2035, removing any flexibility for companies to continue selling some gasoline or diesel vehicles.
- The public funds will be used to help build charging stations every 60 kilometers, or 36 miles, on major highways.
- The commission will help finance a network of hydrogen fueling stations, benefiting companies that are planning to build long-haul trucks that run on fuel cells that convert hydrogen to electricity.

Impact on Airline

- The aircrafts are major producers of carbon dioxide emissions but also difficult to convert to emission-free operation.
- Under the new proposal, the airlines would be compelled to begin mixing synthetic fuel with the fossil fuels they now use, and they will no longer receive tax breaks on fossil fuels.

Impact on Shipping

- The deal singles out companies that ship cargos by water, making them pay more for the emissions they generate to encourage their transition to cleaner energy.
- The shipping industry lobbyists have already complained that it was unclear how the plan would be applied and which shipping routes would be affected.

Impact on Heavy Industry

- The plan would raise the cost of polluting by tightening the European Trading System, which compels companies to effectively pay for the dangerous carbon dioxide they release.
- The anticipation of the changes has already helped drive up the price of credits by about 50%.
- The steelmakers have warned that the proposals could further erode their competitive advantage over producers in China and discourage the investment needed to shift to lower emissions.

Impact on Energy
- The electricity producers will be pushed to speed up the switch to wind, solar and hydropower from coal.
- The goal is to raise the figure electricity generation by renewables to 40% by 2030, largely by increasing the penalty that utility companies pay for power generated by fossil fuels.

INDIA AND NEPAL RAIL CONNECTIVITY
> International Relations

Why in the news?
- Recently, India and Nepal signed a letter of exchange(LoE) to revise the India-Nepal Rail Services Agreement (RSA), 2004.

About
- The revised agreement will facilitate the import and export of goods through the Indian railway freight services and will come into force from 9th July 2021.
- The revised pact permits all types of cargo train operators (public, private, special freight, automobile) authorized by the Indian Railways (IR) to use the Indian Railway Network for carrying Nepal's container and freight – both bilateral between India & Nepal or Third country from Indian ports to Nepal.

India-Nepal Rail Services Agreement (RSA) 2004
- It was executed on 21st May 2004 between the Ministry of Railways, Government of India and the Ministry of Industry, Commerce & Supplies (now Ministry of Commerce), Government of Nepal.
- It was launched for the introduction of freight train services between these two countries to and from Birgunj (Nepal) via Raxaul (India).
- It guides movement between India and Nepal by rail.
- Its rationale was to create a framework for operational and commercial aspects and procedures for customs clearances for rail-bound cargo.
- It shall be reviewed every five years and may be modified by the Contracting Parties by mutual consent.

Significance
- The revised agreement aims to increase the efficiency, and cost-competitiveness of the rail freight sector.
- It is seen as a step by India to enhance regional connectivity under the 'Neighbourhood First' policy.
- It will reduce transportation costs for automobiles and certain other products whose carriage takes place in special wagons.

CENTRAL & SOUTH ASIA: REGIONAL CONNECTIVITY CONFERENCE '21
> International Relations

Why is in the news?
- Uzbekistan hosted a high-level International Conference titled 'Central and South Asia: Regional Connectivity. Challenges and Opportunities' at Tashkent.

Central Asian Connectivity
- The Iranian port of Chabahar has the **potential to shift some of the regional dynamics in India's favor.**
- **Double landlocked Uzbekistan** has been interested in using the port to expand its trade and transit options.
- Uzbekistan has already developed **rail connectivity into Afghanistan** as a means to link with Iranian railway lines reflects Tashkent's seriousness.

- Other Central Asian states like Kazakhstan have also been interested in exploring such options.
- Given the **geostrategic location of Central Asia,** the region is also witnessing a fair share of great power competition.
- The region is viewed as **Russia's immediate backyard** and Moscow has traditionally maintained a dominant role in relations with Central Asia, **China has steadily strengthened its footprint**. India has also been **pursuing both geopolitical and economic ties** with the region.

INSTC
- INSTC is a **multi-modal infrastructure initiative** spanning around 7,200 km.
- It encompasses a network of ship, rail and road routes for transporting freight between **India, Iran, Afghanistan, Central Asia, Azerbaijan, and Europe**, with the goal of creating transport linkages among major cities including Astrakhan, Baku, Bandar Abbas, Moscow, and Mumbai.
- Feasibility studies undertaken so far has shown significant reduction of transportation costs, to the tune of $2,500 per 15 tons of cargo.
- India is pitching for Uzbek participation in the INSTC connectivity project. **International North-South Transport Corridor (INSTC).**

Why is in the news?
- The OPEC+ group of countries had, entered into a **two-year agreement,** which entailed **steep cuts in crude production to deal with a sharp fall in the price of oil as a result of the Covid-19 pandemic.**

OPEC+
- It refers to the alliance of crude producers, who have been undertaking corrections in supply in the oil markets since 2017.
- Its countries include Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.
- The Opec and non-Opec producers first formed the alliance at a historic meeting in Algiers in 2016.
- Its aim was to undertake production restrictions to help resuscitate a flailing market.

About OPEC
- **I**t was founded in Baghdad, Iraq, with the signing of an agreement in September 1960 by five countries namely Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela.
- They were to become the Founder Members of the Organization. It is a permanent, intergovernmental organization. Currently, it has a total of 14 Member Countries. It is headquartered in Vienna, Austria.
- Its objective is to co-ordinate and unify petroleum policies among Member Countries, in order to secure fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry.
- Its membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization.

Why is OPEC+ is more influenced than OPEC?
- OPEC's 14 members control **35 percent of global oil supplies and 82 percent of proven reserves**. With the addition of the 10 Non-OPEC nations, notable among them Russia, Mexico and Kazakhstan, those shares increase to **55 percent and 90 percent respectively**.

How will this impact India?
- If the UAE and other OPEC+ nations do not reach an agreement to increase production in August, expected relief in the form of lower crude oil prices could be delayed.
- India is currently facing record-high prices of petrol and diesel, which is impacting its economic growth.

Why in the news?

- The 6th meeting of the **BRICS Counter Terrorism Working Group** was held virtually under the **Chairship of India.**

About the BRICS Counter-Terrorism Action Plan

- The planwill strengthen the counter-terror cooperation among members of the BRICS grouping.
- Action Plan will help in bringing "result-oriented cooperation" among the BRICS member states.
- The plan contains specific measures to implement BRICS Counter-Terrorism Strategy which was adopted by BRICS Leaders in 2020.
- The document will help to increase intra-BRICS collaboration for combating terrorism, radicalization, financing of terrorism and cyber-crime, etc.
- It will also help to curb the travel of terrorists, to strengthen border control, and protect soft targets.

Comprehensive Convention on International Terrorism (CCIT)

- This was proposed by India in 1996.
- The ratification of the CCIT is pending due to opposition from the US and OIS countries
- CCIT provides a legal framework to make it binding on all signatories to deny funds and safe havens to terrorist groups.
- This includes the following major objectives:
  - To have a universal definition for terrorism
  - To ban all the terror groups and shutting down the terror camps
  - To prosecute all the terrorists under special laws
  - To make cross-border terrorism an extraditable offense worldwide

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Why is in the news?

- U.K. want to renegotiate the Northern Ireland Protocol

About Northern Ireland Protocol

- It aims to resolve the issue of the border between Northern Ireland and the Republic of Ireland.
  - Northern Ireland is part of the UK and the Republic of Ireland remains part of the European Union(EU).
  - It has been one of the major issues created by Brexit.
- This frontier is contested and parts of it were fortified during the decades of violence known as "The Troubles".
- With the Good Friday Agreement those visible signs of division melted away along the open border, however, it has again come into a troubled position with Brexit.
  - The Good Friday Agreement, also known as Belfast Agreement, was reached on Good Friday, 10th April 1998.
    - It was an agreement between the British and Irish governments and most of the political parties in Northern Ireland, on how Northern Ireland should be governed.
  - Under Brexit, the UK Prime Minister insisted on leaving Europe's customs union and its single market, allowing goods to flow freely across European borders without checks.
- The protocol sets out a plan to deal with this unique situation by effectively leaving Northern Ireland half inside the European system and half inside the British one.

Why is in the news?
- The Minister of State for Culture and Tourism, hosted 6th BRICS Culture Ministers' Meeting through video conference.

Details
- **Aim:** advancement and expansion of cultural activities amongst BRICS countries.
- **Theme:** Bonding and Harmonizing Cultural Synergy.

Highlights of the meet
- It emphasized on collaborations in the field of online exchange of cultural experiences on knowledge of tangible and intangible heritage amongst BRICS countries.
- Importance of culture for establishing vibrant international humanitarian dialogue is emphasized.
- Formation of BRICS Alliance in the field of conservation, preservation and digitization of ancient manuscripts is proposed.
- Need to protect our tangible and intangible cultural heritage through mutual help and support within the BRICS framework in addition to the compliance of prevailing UNESCO Conventions.

Declaration of the meeting
- It was agreed upon to strengthen and enhance cultural cooperation amongst BRICS Nations in the fields of museums, art galleries, theatre, libraries and promote use of modern technologies to conduct online events to overcome the adverse effects of pandemic like situations.

Why in the newS?
- The Taliban's possible triumph threatens not just India's diplomatic stakes in Afghanistan, but also 20 years and $3 billion worth of Indian investment in various projects — dams, roads, trade infrastructure.

India's development assistance
- India built vital roads, dams, electricity transmission lines and substations, schools and hospitals, etc.
- India's development assistance is now estimated to be worth well over $3 billion.
- And unlike in other countries where India's infrastructure projects have barely got off the ground or are mired in the host nation's politics, it has delivered in Afghanistan.
- The 2011 **India-Afghanistan Strategic Partnership Agreement** recommitted Indian assistance to
- help rebuild Afghanistan's infrastructure and institutions;
- education and technical assistance for capacity-building in many areas;
- encourage investment in Afghanistan; and
- provide duty-free access to the Indian market.
- **Bilateral trade is now worth $1 billion.**
- No part of Afghanistan today is untouched by the **400-plus projects that India** has undertaken in all 34 of Afghanistan's provinces. The fate of these projects is now up in the air.

India's major project in Afghanistan
- **SALMA DAM:** The hydropower and irrigation project, completed against many odds and inaugurated in 2016, is known as the Afghan-India Friendship Dam. The Taliban claim the area around the dam is now under their control.
- **ZARANJ-DELARAM HIGHWAY:** Zaranj is located close to Afghanistan's border with Iran. With Pakistan denying India overland access for trade with Afghanistan, the highway provides an alternative route into landlocked Afghanistan through Iran's Chabahar port.

- **PARLIAMENT:** The Afghan Parliament in Kabul was built by India at $90 million. A block in the building is named after former PM AB Vajpayee.
- **STOR PALACE:** In 2009, India, Afghanistan, and the Aga Khan Development Network signed a tripartite agreement for its restoration. The Aga Khan Trust for Culture completed the project between 2013 and 2016.
- **POWER INFRA:** Rebuilding of power infrastructure such as the 220kV DC transmission line from Pul-e-Khumri to the north of Kabul, to beef up electricity supply to the capital.
- **HEALTH INFRA:** India has reconstructed a children's hospital. 'Indian Medical Missions' have held free consultation camps in several areas. India has also built clinics.
- **TRANSPORTATION:** India gifted 400 buses and 200 mini-buses for urban transportation, 105 utility vehicles for municipalities, 285 military vehicles for the Afghan National Army, and 10 ambulances for public hospitals in five cities.
- **OTHER PROJECTS:** India has contributed desks and benches for schools, and built solar panels in remote villages, and Sulabh toilet blocks in Kabul.
- **ONGOING PROJECTS:** India had concluded with Afghanistan an agreement for the construction of the **Shatoot**
- **Dam in Kabul** district, which would provide safe drinking water to 2 million residents.
- India pledged $1 million for another **Aga Khan heritage project**, the **restoration of the Bala Hissar Fort south of Kabul**, whose origins go back to the 6th century.
- Bala Hissar went on to become a significant Mughal fort, parts of it were rebuilt by Jahangir, and it was used as a residence by Shah Jahan.

MEKONG-GANGA COOPERATION   International Relations

Why in the news?
- External Affairs Minister S. Jaishankar addressed the 11th Mekong-Ganga Cooperation meeting comprising six countries — **India, Cambodia, Myanmar, Thailand, Laos and Vietnam**

About:
- **Membership:** The MGC, is a sub-regional cooperation organisation comprising India and five ASEAN countries, namely, Cambodia, Laos, Myanmar, Thailand and Vietnam.
- **History:** MGC was launched in 2000 at Laos capital Vientiane.
- **Name:** MGC takes its name from the Ganga and the Mekong, the two civilisational rivers in Southeast Asia.
- **Mandate:** The MGC aims at facilitating closer contacts among the people inhabiting these two major river basins and enhancing cooperation in tourism, culture, education, transport and communications.

WHITE FLAG MOVEMENT   International Relations

Why in the news?
- Recently, some residents of low-income families in Malaysia have started waving white flags as part of the so-called "White Flag Campaign" or the #benderaputi (white flag) movement.

About White Flag Movement
- It aims to convey distress about the financial crunch the low-income families have had to deal with amid the lockdowns due to Covid-19.
- The families that are facing hunger or need any other kind of assistance are encouraged to wave a white flag or put a piece of white cloth outside their homes to signal that they need help.
- The idea is that by spotting the white flag, neighbours and good Samaritans can reach them.
- The Bendera Putih app or the Sambal SOS app provides the map of Malaysia where active food banks are marked and helps people easily track down food banks.

Reasons for use of White Flags
- The world over, white flags are used as a symbol of surrender or truce.
- The phrase 'white flag' has also found its way into the Cambridge dictionary, which defines it as "a flag that is waved to show that you accept defeat or do not intend to attack".

- In some Central American countries such as El Salvador, Guatemala, and Honduras"white flags have appeared all over the social terrain".
- It depicted indictments of a failed political and economic system whose primary effect for common people has been enduring a life of dehumanization, precarity, and marginalization.

CHILD LABOUR: GLOBAL ESTIMATES 2020   International Relations

What is the news?
- "Child Labour: Global estimates 2020, trends and the road forward" report has been released by International Labour Organization and UNICEF.

Key Findings of the Child Labour: Global estimates 2020 report
- **Overall gist**: The report warns that progress to end child labour has stalled for the first time in 20 years. It has reversed the previous downward trend that saw it fall by 94 million between 2000 and 2016.
- **The number of children** in child labour has risen to 160 million worldwide – an increase of 8.4 million children in the last four years.
- **Covid-19 Impact:** Globally, 9 million additional children are at risk of being pushed into child labour by the end of 2022 as a result of the pandemic.
- **Sectors:** The agriculture sector accounts for 70% of children in child labor (112 million) followed by 20% in services (31.4 million) and 10% in industry (16.5 million).
- **Age Group:** Nearly 28% of children aged 5 to 11 years and 35% of children aged 12 to 14 years in child labour are out of school.
- **Gender:** Child labor is more prevalent among boys than girls at every age. But the gap narrows when household chores performed for at least 21 hours per week are taken into account.
- **Rural vs Urban:** The prevalence of child labor in rural areas (14%) is close to three times higher than in urban areas (5%).

Recommendations of Child Labour: Global estimates 2020 report
- **Adequate social protection** for all, including universal child benefits.
- **Increased spending** on quality education and getting all children back into school – including children who were out of school before COVID-19.
- **Promotion of decent work** for adults, so families don't have to resort to children helping to generate family income.
- **An end to harmful gender norms** and discrimination that influence child labor.
- **Investment in child protection systems**, agricultural development, rural public services, infrastructure and livelihoods.

Child labour in India
- As per Census 2011, the total child population in India in the age group 5-14 years is 259.6 million.
- Among them, over 10 million (4% of total child population) are working either as 'main worker' or 'marginal worker'.
- The Census data indicates the decreased incidence of child labour in India by 2.6 million between 2001 and 2011.
- Moreover, there is a greater decline in rural than in urban areas. This is because an increase in rural-to-urban migration is driving demand for child workers in urban areas.

Why in the news?

- Indian-origin Vandi Verma drives the Perseverance rover on Mars, says it's incredible.

Perseverance

- Perseverance, nicknamed Percy, is a **car-sized Mars rover designed to explore the crater Jezero on Mars** as part of NASA's **Mars 2020 mission.**
- NASA named the landing site **Octavia E. Butler Landing.**
- The rover also carried the mini-helicopter **Ingenuity to Mars,** that made the first powered flight on another planet on 19 April 2021.

Significance of the Perseverance Mission

- Perseverance focuses on finding life on Mars and will help in a future human mission to that planet.
  - Perseverance would bring rock samples back from Mars. This will provide a **decisive answer on whether life existed on Mars in the past or not.**
  - **Producing oxygen on Mars** is needed for a successful human mission. Perseverance has an instrument known as **MOXIE or Mars Oxygen In-Situ Resource Utilisation Experiment.** It will use 300 watts of power to produce about 10 grams of oxygen using atmospheric carbon dioxide.
  - This will provide oxygen for breathing and rocket fuel.
  - Perseverance will carry the Radar Imager for Mars' Subsurface Experiment (**RIMFAX).** This will **help in looking for underground water on Mars.** It could possibly help in the human settlement on Mars if the water is found.
  - Apart from that, Perseverance will **try to fly a helicopter on Mars** (which has a sparse atmosphere). The Mars Helicopter is really a small drone. Currently, long-distance transportation on Mars has to depend on vehicles that rely on rocket engines for powered ascent and powered descent.

Why in the news?

- Indian stem cell and developmental biologist Prof. Maneesha S Inamdar has been part of the WHO Expert Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing.

About Stem Cells

- Stem cells are the body's raw materials — cells from which all other cells with specialized functions are generated.
- **No other cell in the body has the natural ability to generate new cell types.**
- They are **found in both embryonic and adult organisms**.
- They serve as a repair system for the body.

Embryonic stem cells

- Embryonic stem cells supply new cells for an embryo as it grows and develops into a baby.
- These stem cells are said to be pluripotent, which means they can change into any cell in the body.
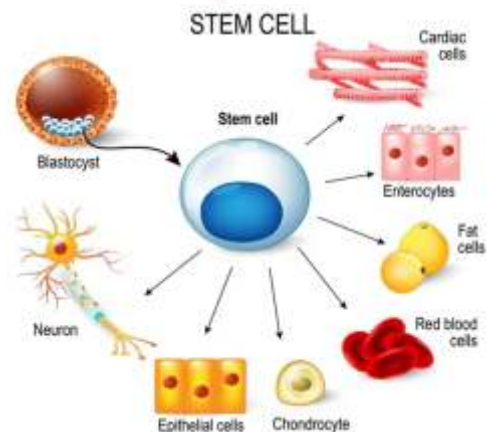
Adult stem cells

- Adult stem cells supply new cells as an organism grows and to replace cells that get damaged.
- Adult stem cells are said to be multipotent, which means they can only change into some cells in the body, not any cell, for example:
- Blood (or 'haematopoietic') stem cells can only replace the various types of cells in the blood.Skin (or 'epthelial') stem cells provide the different types of cells that make up our skin and hair.

Significance of Stem Cell Research

Stem Cell Therapy for Various Diseases in India

- <u>Bone marrow transplantation (BMT):</u> It is a known clinical application of stem cell transplantation. In chemotherapy or radiotherapy (process to eliminate endogenous cancer cells), the blood cells get damage. In bone marrow transplantation, different blood cell types are restored.
- Skin replacement: The skin stem cells are found in the hair follicle and can be removed by plucking the hair. By using these skin stem cells, the scientists can grow skin from the plucked hair of a person. Skin stem cells are cultured to form an epidermal equivalent of the person's own skin and provide tissue for autologous graft.
- <u>Brain cell transplantation:</u> Stem cells can be used to treat Parkinson's disease and Alzheimer's disease by replenishing the damaged tissue.
- <u>Organ and tissue regeneration:</u> Tissue regeneration is one of the important application of stem cell therapy. Stem cells can be used to grow a particular tissue or the organ.
- <u>Treatment for diabetes:</u> Diabetes is caused by abnormal metabolism of insulin (it is produced by islets of Langerhans located in pancreas). It affects people all around the world. Recently, insulin expressing cells have been derived from mouse stem cells. Thus, future research might aim at providing a stem cell-based therapy to treat diabetes and replace the constant need for insulin injections.
- <u>Stem Cell Treatment in India:</u> Stem Cell Treatment is still under research mode in India. Indian Government is supporting various basic pre-clinical and clinical researches. Stem cell treatment is provided to cancer and thalessemia patients at All India Institute of Medical Sciences, New Delhi. Tata Memorial Centre located in Mumbai is also leading in Stem Cell treatment.

Guidelines related to Stem cells in India

- **In 2002, Indian Council of Medical Research had released Draft Guidelines for Stem Cell Research/Regulation.**
- **In 2007, Department of Biotechnology had released Guidelines for Stem Cell Research and Therapy.**
- **In 2013, National Guidelines for Stem Cell Research were released. These guidelines help the clinicians and scientists working in the field to conduct research in scientific and ethical manner.**
- **In 2017, National Guidelines for Stem Cell Research were released. According to these guidelines, only bone marrow stem cell transplant for blood disorders is permitted.**

Why in the news?

- A fierce solar storm is moving towards the Earth at a speed of 1.6 million kilometers per hour. It is feared that this storm may hit the Earth today, due to which there may be a power failure around the world.

About the storm

- NASA has classified this flare as an X1.5-class flare.
- X-class denotes the most intense flares, while the number provides more information about its strength.
- An X2 is twice as intense as an X1, an X3 is three times as intense, etc.

Impact

- **Satellite signals can be interrupted** due to this collision.
- It can also have a **direct effect on radio signals, communication and weather.**
- It can **cause interference in GPS navigation, mobile phone signals and satellite TV,** current in power lines can be increased.

Why in the news?

- In recent years, countries around the world have been attempting to pass effective 'right to repair' laws.But large tech companies, including Apple, Microsoft, Amazon and Tesla, have been lobbying against the right to repair.

About the concept

- As your device grows older, it needs to be repaired by new parts, however the repairs inaccessible for most, by dictating who can fix your device and making it an inordinately expensive affair.

Right to repair movement:

- Activists and organisations have been advocating for the right of consumers to be able to repair their own electronics and other products as part of the 'right to repair' movement.
- The movement traces its roots back to the very dawn of the computer era in the 1950s.
- The goal of the movement is to get companies to make spare parts, tools and information on how to repair devices available to customers and repair shops to increase the lifespan of products and to keep them from ending up in landfills.

Need for right to repair

- Electronic manufacturers are encouraging a culture of 'planned obsolescence' — which means that devices are designed specifically to last a limited amount of time and to be replaced., leads to immense pressure on the environment and wasted natural resources.
- It makes use of polluting sources of energy, such as fossil fuel, which has an adverse impact on the environment.
- Right to repair advocates also argue that this will help boost business for small repair shops, which are an important part of local economies.
- If a manufacturer has monopoly on repairs, then prices rise exponentially and quality tends to drop

Arguments against:

- Their argument is that opening up their intellectual property to third party repair services or amateur repairers could lead to exploitation and impact the safety and security of their devices.
- Threaten data security and cyber security.

Significance of the Movement

- The goal of the movement is to get companies to make spare parts, tools and information on how to repair devices available to customers and repair shops to increase the lifespan of products and to keep them from ending up in landfills.
- Electronic manufacturers are encouraging a **culture of 'planned obsolescence'** — which means that devices are designed specifically to last a limited amount of time and to be replaced.
- This, leads to immense pressure on the environment and wasted natural resources.
- Mining and manufacturing materials used to make an iPhone represent roughly 83 per cent of its contribution to the heat- trapping emissions in the atmosphere throughout its life cycle - Manufacturing data released by Apple.
- The Movement **will also help boost business for small repair shops**, which are an important part of local economies.

LAMBDA VARIANT — Science & Technology

Why in the news?

- Amid Delta variant of the SARS-CoV-2 coronavirus continues to drive the rise in infections around the world, another variant, Lambda, is increasingly being seen by scientists and health experts as a new emerging threat.

What is Lambda Covid Variant?

- It is previously known by its formal scientific name C.37.
- In June 2021, the World Health Organization has designated the Lambda variant, as the seventh and newest "variant of interest".
- It has been the dominant variant in Peru and other countries of South America.
- The Lambda variant has not yet been found in the Indian population, but has been detected in the UK and other European countries.

Mutations in Lambda Covid Variant

- According to the WHO, the Lambda variant has at least seven significant mutations in the spike protein (the Delta variant has three).
- It could have a range of implications, including the possibility of increased transmissibility or enhanced resistance to antibodies, created either through natural infection or vaccination.
- It had greater infectivity than the Alpha and Gamma variants (known to have originated in the UK and Brazil respectively).
- The study by researchers at the Chile reported decreased effectiveness of the Chinese Sinovac vaccine (Coronavac) against the Lambda variant.

What does 'variant of interest' designation mean?

- It implies that the genetic changes involved are predicted or known to affect transmissibility, disease severity, or immune escape.
- It is an acknowledgement of the fact that the variant has caused significant community transmission in multiple countries and population groups.
- There are currently seven variants, including the Lambda that the WHO classifies as "variants of interest".

MONKEY B VIRUS (BV) — Science & Technology

Why in the news?

- Recently, China has reported the first human infection case with Monkey B virus (BV) after a Beijing-based veterinarian was confirmed with the same.

What is Monkey B Virus?

- The virus was initially isolated in 1932.
- It is an alphaherpesvirus enzootic in macaques of the genus Macaca.

- B virus is the only identified old-world-monkey herpesvirus that displays severe pathogenicity in humans.
- B virus is also commonly referred to as herpes B, monkey B virus, herpesvirus simiae, and herpesvirus B.
- It is caused by macaques, a genus of Old World monkeys that serve as the natural host.
- While the virus is transmitted by macaques, chimpanzees & capuchin monkeys can also become infected and die.

Transmission of Monkey B Virus
- It can be transmitted via direct contact and exchange of bodily secretions of monkeys.
- It has a fatality rate of 70 per cent to 80 per cent.
- Macaque monkeys commonly have this virus, and it can be found in their saliva, feces (poop), urine (pee), or brain or spinal cord tissue.
- The virus may also be found in cells coming from an infected monkey in a lab.
- B virus can survive for hours on surfaces, particularly when moist.
- Till date, only one case has been documented of an infected person spreading B virus to another person.

Impact of Monkey B Virus on Humans
- Humans can get infected if they are bitten or scratched by an infected monkey.
- Humans can get an infected monkey's tissue or fluid on broken skin or in eyes, nose, or mouth.
- The scratch or cut oneself on a contaminated cage or other sharp-edged surface or get exposed to the brain (especially), spinal cord, or skull of an infected monkey.

Symptoms of Monkey B Virus
- The symptoms typically start within one month of being exposed to B virus, but could appear in as little as three to seven days.
- The first indications of B virus infection are typically flu-like symptoms such as fever and chills, muscle ache, fatigue and headache.
- The infected person may develop small blisters in the wound or area on the body that came in contact with the monkey.
- The other symptoms of the infection include shortness of breath, nausea and vomiting, abdominal pain and hiccups.
- The virus spreads to and causes inflammation (swelling) of the brain and spinal cord, leading to neurologic and inflammatory symptoms.

H5N1 AVIAN INFLUENZA　　　　　　　　　Science & Technology

Why in the news?
- Recently, an 11-year-old boy died of H5N1 avian influenza in Delhi which is the first recorded death due to the bird flu in India in 2021.

What is H5N1 Avian Influenza?
- Bird flu or avian influenza is a disease caused by avian influenza Type A viruses found naturally in wild birds worldwide.
- The virus can infect domestic poultry including chickens, ducks and turkeys.
- Avian Influenza type A viruses are classified based on two proteins on their surfaces i.e. Hemagglutinin (HA) and Neuraminidase (NA).

Bird Flu Infection in Humans
- There have been reports of avian and swine influenza infections in humans including A(H1N1), A(H1N2), A(H5N1), A(H7N9), etc.
- The first report of human H5N1 infection was in 1997 and currently, over 700 human cases of Asian Highly Pathogenic Asian Avian Influenza A (HPAI) H5N1 virus have been reported.
- The most common route of virus transmission is direct contact i.e. when a person comes in close contact with infected birds, either dead or alive.

- Humans can also be affected if they come in contact with contaminated surfaces or air near the infected poultry.
- There is no sufficient evidence suggesting the spread of the virus through properly cooked meat.

Symptoms of avian influenza
- According to US CDC, the reported signs and symptoms of avian influenza A virus infections in humans have ranged from mild to severe influenza-like illness.
- Fever, cough, sore throat, muscle aches, nausea, abdominal pain, diarrhea, vomiting
- Severe respiratory illness (e.g., shortness of breath, difficulty breathing, pneumonia, acute respiratory distress, viral pneumonia, respiratory failure)
- Neurologic changes (altered mental status, seizures)

High Risk group under avian influenza
- The children and adults below 40 were seen to be the most affected.
- The mortality was high in 10-19 years old.
- Human to Human Transmission of Bird Flu
- The transmission of the virus from birds to humans is rare and sustained human-to-human transmission of the H5N1 virus has not yet been established.
- Avian influenza or bird flu is predominantly a zoonosis, and there is no evidence of sustained human-to-human transmission so far.

MONKEY POX   Science & Technology

Why in the news?
- US health officials are now monitoring over 200 people in the United States for monkeypox after an individual who traveled from Nigeria to Texas earlier this month was diagnosed with the disease. The first case of monkeypox was discovered in 1958 in a colony of monkeys that were being used to research, hence the 'monkey'part of the name.

What is It?
- Monkeypox virus (MPXV) is an orthopoxvirus that causes a viral disease with symptoms in humans similar, but milder, to those seen in smallpox patients.
- Smallpox was declared eradicated in 1980, whereas human monkeypox is endemic in villages of Central and West Africa.
- The occurrence of cases is often found close to tropical rainforests where there is frequent contact with infected animals.
- There is no evidence to date that person-to-person transmission alone can sustain monkeypox in the human population.

Transmission:
- Monkeypox is a viral zoonosis, i.e. a disease transmitted from animals to humans. It can be transmitted through contact with the blood, bodily fluids, or cutaneous or mucosal lesions of infected animals. Human infections have been documented through the handling of infected monkeys, Gambian giant rats and squirrels, with rodents being the most likely reservoir of the virus.

Treatment:
- As of now, there is no specific treatment or vaccine available for monkeypox infection. The patient is generally treated in isolation by doctors.

Why in the news?

- The release of Biotech-PRIDE (Promotion of Research and Innovation through Data Exchange) as 1st of its kind developed by Department of Biotechnology (DBT), Ministry of Science and Technology.

About the guidelines

- These Guidelines will be implemented through Indian Biological Data Centre (IBDC) at Regional Centre for Biotechnology supported by Department of Biotechnology. Other existing datasets/ data centres will be bridged to this IBDC which will be called Bio-Grid.
- This Bio-Grid will be a National Repository for biological knowledge, information and data and will be responsible for enabling its exchange, developing measures for safety, standards and quality for datasets and establishing detailed modalities for accessing data.
- The Biotech PRIDE Guidelines will facilitate this and enable exchange of information to promote research and innovation in different research groups across the country.
- The Biotech-PRIDE (Biotech Promotion of Research and Innovation through Data Exchange) guidelines aim at providing a well-defined framework and guiding principle to facilitate and enable sharing and exchange of biological knowledge, information and data and is specifically applicable to high-throughput, high-volume data generated by research groups across the country.
- These guidelines do not deal with generation of biological data per se but is an enabling mechanism to share and exchange information & knowledge generated as per the existing laws, rules, regulations & guidelines of the country.
- These guidelines will ensure data sharing benefits viz. maximizing use, avoiding duplication, maximized integration, ownership information, better decision-making and equity of access.
- These guidelines are the enabling mechanism for sharing the data publicly and within a reasonable period of time after data-generation, thus the utility of the data will be maximal.
- Resultantly, accrual of benefit of public investment for data generation will not be compromised.
- The PRIDE Guidelines will be helpful to harmonize, synergize and encourage the data sharing for research and analysis in the country and to promote scientific work and foster progress by building on previous work.
- These guidelines will also be advantageous in avoiding duplication and wasteful expenditure of resources on research. Initially, these Guidelines will be implemented through Indian Biological Data Centre (IBDC) at Regional Centre for Biotechnology supported by Department of Biotechnology.

About SAMVEDAN 2021

- **SAMVEDAN 2021** aims to inspire citizens to use the Internet of Things(IoT) Sensor Board in order to solve India-specific problems of societal interest.
- **The grand challenge competition** is open to all the Indian nationals.

About IIM-PTF:

- **IIT Madras Pravartak Technologies Foundation(IITM-PTF)** is a Technology Innovation Hub(TIH).
- **It is supported by the** Department of Science and Technology (DST) under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-CPS).

About NM-ICPS:

- **NM-ICPS** was launched in 2018 by the Department of Science & Technology for a period of five years.
- **Aim:** To create a seamless ecosystem for CPS by coordinating and integrating nationwide efforts encompassing knowledge generation, human resource development, research, technology, innovation, and commercialization.
- **Under this,** Technology Innovation Hubs (TIH), Application Innovation Hubs(AIH) and Technology Translation Research Parks(TTRP) have been established.
- **These hubs** connect the Academics, Industry, Central Ministries, and State Government in developing solutions at reputed academic, R&D and other organizations across the country in a hub and spoke model.

Why in the news?

- Indian astronomers' were part of a team which spotted the first short duration gamma-ray burst from a stellar collapse.

About GRB 200826A

- It was a very short, powerful burst of high-energy radiation that lasted for about a second and had been racing toward Earth for nearly half the present age of the universe.
- The burst detected by NASA's Fermi Gamma-ray Space Telescope on August 26, 2020, turned out to be one for the record books – the shortest gamma-ray burst (GRB) caused by the death of a massive star.
- The burst emitted 14 million times the energy released by the entire Milky Way galaxy over the same amount of time, making it one of the most energetic short-duration GRBs ever seen.
- GRB 200826A was a sharp blast of high-energy emission lasting just 0.65 seconds.
- After traveling for eons through the expanding universe, the signal had stretched out to about one-second-long when it was detected by Fermi's Gamma-ray Burst Monitor.
- Named GRB 200826A, after the date it occurred, the burst is the subject of two papers published in Nature Astronomy on July 26.
- The first, led by Zhang, explores the gamma-ray data.
- The second, led by Tomás Ahumada, a doctoral student at the University of Maryland, College Park, and NASA's Goddard Space Flight Center in Greenbelt, Maryland.

About Gamma ray bursts(GRBs)

- GRBs are the most powerful events in the universe, detectable across billions of light-years.
- They produce thousands of times more energy than Supernovae and their distinctive gamma-ray emission lasts from a fraction of seconds to only a few minutes.
- Historically this was the first distinction between long-GRB and short-GRB.
- Astronomers classify them as long or short based on whether the event lasts for more or less than two seconds.

Why in the news?

- Sarlink broadband is slated to provide broadband services in India by 2022.

About the project Starlink Project

- Starlink is a **satellite-based broadband network**, with the objective of eventually building a low-cost, satellite-based broadband network capable of **delivering internet access to the entire globe.**
- While satellite internet has been around for ages, it has generally suffered from high latency, unreliable connections, and spotty service areas.
- With **Starlink Project**, SpaceX intends to put a "constellation" of satellites in **low earth orbit**, thereby providing high-speed, cable-like internet to every corner of the planet.
- SpaceX will need to launch 4,425 satellites into orbit to achieve its desired coverage.

Low Earth orbit (LEO)

- A low Earth orbit (LEO) is normally at an altitude of less than 1000 km but could be as low as 160 km above Earth – which is low compared to other orbits but still very far above Earth's surface.
- By comparison, most commercial airplanes do not fly at altitudes much greater than approximately 14 km, so even the lowest LEO is more than ten times higher than that.
- Unlike satellites in geostationary orbit (GEO) that must always orbit along Earth's equator, LEO satellites do not always have to follow a particular path around Earth in the same way – their plane can be tilted.
- This means there are more available routes for satellites in LEO, which is one of the reasons why LEO is a very commonly used orbit.

- LEO's close proximity to Earth makes it useful for several reasons.
- It is the orbit most commonly used for satellite imaging, as being near the surface allows it to take images of higher resolution.
- It is also the orbit used for the International Space Station (ISS), as it is easier for astronauts to travel to and from it at a shorter distance.
- Satellites in this orbit travel at a speed of around 7.8 km per second; at this speed, a satellite takes approximately 90 minutes to circle Earth, meaning the ISS travels around Earth about 16 times a day.
- However, individual LEO satellites are less useful for tasks such as telecommunication, because they move so fast across the sky and therefore require a lot of effort to track from ground stations.
- Instead, communications satellites in LEO often work as part of a large combination or constellation, of multiple satellites to give constant coverage.

OXYJANI

Why in the news?
- Indian researchers have designed a robust, mobile group oxygen concentrator called Oxyjani.

About OxyJani
- **OxyJani** is a mobile group oxygen concentrator that can be used in rural settings and also be rapidly deployed in emergencies in any location.
- **Technology:** It is based on the principles of Pressure Swing Adsorption (PSA) technology.
- **Significance:** The team replaced lithium zeolites (LiX) which is usually used in oxygen concentrators with sodium zeolites which do not generate toxic solid waste and can be manufactured in India.

Advantages of OxyJani:
- It is modular and capable of delivering a range of solutions such as conversion of medical air to medical oxygen.
- It is an entirely off-grid solution including all modules that can facilitate deployment in rural areas.
- It is portable just like personal oxygen concentrators and affordable too.
- the waste from the zeolite plant can be potentially a good agricultural input mate

NHP BHUVAN PORTAL

Why in the news?
- ISRO, Dr. K. Sivan also launched the NHP –Bhuvan portal of NRSC.

About NHP –Bhuvan Portal:
- **The National Hydrology Project or NHP-Bhuvan Portal** is a repository of information on the initiatives undertaken by NRSC under NHP (National Hydrology Project).
- **The portal also has a facility** to download the reports and knowledge products being developed by NRSC.

About National Hydrology Project(NHP):
- **National Hydrology Project (NHP)** is a Central Sector scheme. It was launched by the Department of Water Resources, River Development, and Ganga Rejuvenation, Ministry of Jal Shakti with the financial aid of the World Bank.
- **Objective:** To improve the extent and accessibility of water resources information and strengthen institutional capacity to enable improved water resources planning and management across India.
- **Components**: The project comprises four broad components:
  - Improving In Situ Monitoring System (IMS)
  - Improving Spatial Information System (SIS)
  - Promoting Water Resources Operation and Management Applications(WROMA)
  - Strengthening Water Resources Institutions and Capacity Building.
- **Implementing Agency:** National Remote Sensing Centre (NRSC)

Why in the news?

- China successfully launched a new **meteorological satellite, called Fengyun-3E(FY-3E).**

About the meteorological satellite

- The satellite is named, Fengyun-3E (FY-3E).
- It was launched by a Long March-4C rocket.
- This is s the 377th flight mission of the Long March rocket series, according to the China National Space Administration.
    - FY-3E will be the world's first meteorological satellite in early morning orbit for civil service.
    - It is designed with a lifespan of eight years and will mainly obtain the atmospheric temperature, humidity, and other meteorological parameters for numerical prediction applications, improving China's weather forecast capacity.
    - It will also monitor the global snow and ice coverage, sea surface temperature, natural disasters, and ecology to better respond to climate change and prevent and mitigate meteorological disasters.
    - The satellite will monitor solar and space environments and their effects, as well as ionospheric data to meet the needs of space weather forecasts and supporting services.
    - The satellite and rocket were developed by the Shanghai Academy of Spaceflight Technology.
    - It operates under the China Aerospace Science and Technology Corporation.

Long March 4C

- The Long March 4C, also known as the Chang Zheng 4C, CZ-4C ,and LM-4C, previously designated Long March 4B-II, is a Chinese orbital launch vehicle.
- It is a 3-stage rocket, used mostly to place satellites into low Earth orbit and sun-synchronous orbits.
- It was first launched on 10 May 1999, with the FY-1C weather satellite, which would later be used in the 2007 Chinese anti-satellite missile test.

Why in the news?

- Amnesty International, the Forensic Architecture and the Citizen Lab recently launched a database documenting attacks against human rights defenders using the spyware Pegasus.

About the Pegasus Project

- Pegasus is a type of malware classified as a spyware. Pegasus enables law enforcement and intelligence agencies to remotely and covertly extract" data "from virtually any mobile devices"
- The Spyware Pegasus can gain access to devices without the knowledge of users. After this, it can gather personal information and relay it back to whoever is using the software to spy.
- A zero-click attack helps spyware like Pegasus gain control over a device without human interaction or human error. Pegasus can infect a device without the target's engagement or knowledge. So, all awareness about how to avoid a phishing attack or which links not to click are pointless.
- The Israeli firm NSO Group (set up in 2010) developed the Pegasus spyware. Since then, NSO's attack capabilities have become more advanced.

What is Malware

- Malware is short for malicious software. Malware is a catch-all term for various softwares including viruses, adware, spyware, browser hijacking software, and fake security software.
- Ransomware, Spyware, Worms, viruses, and Trojans are all varieties of malware.

Types of Malware

- Viruses which are the most commonly-known form of malware and potentially the most destructive. They can do anything from erasing the data on your computer to hijacking your computer to attack other systems. Viruses can also send spam, or host and share illegal content.
- Worm is a type of malware that spreads copies of itself from computer to computer. Additionally, it can replicate itself without any human interaction. Also, it does not need to attach itself to a software program in order to cause damage.
- Trojan is a type of malware that is often disguised as legitimate software to be used by cyber-thieves and hackers trying to gain access to systems.
- Spyware collects your personal information and passes it on to interested third parties without your knowledge or consent. Spywares can also install Trojan viruses.
- Ransomware is malware that employs encryption to hold a victim's information at ransom.
- Adware displays pop-up advertisements when you are online.
- Fake security software poses as legitimate software to trick you into opening your system to further infection, providing personal information, or paying for unnecessary or even damaging "clean ups".
- Browser hijacking software changes your browser settings (such as your home page and toolbars), displays pop-up ads and creates new desktop shortcuts. Additionally, it can also relay your personal preferences to interested third parties.

NEOWISE | Science & Technology

Why in the news?

- The recently discovered comet C/2020 F3 will make its closest approach to the Earth at a distance of 64 million miles or 103 million kilometres while crossing Earth's outside orbit on 22nd July 2020.

NASA's NEOWISE

- Launched in December 2009 as the Wide-Field Infrared Survey Explorer, or WISE, the space telescope was originally designed to survey the sky in infrared, detecting asteroids, stars and some of the faintest galaxies in space.
- It did so successfully until completing its primary mission in February 2011. In December 2013, it was re-purposed for the NEOWISE project as an instrument to study near-Earth objects, or NEOs, as well as more distant asteroids and comets.

Significance of the Study

- Astronomers believe that comets hold important clues about the formation of the solar system and it is possible that comets brought water and other organic compounds to Earth.
- NASA tracks all Near Earth Objects (NEOs) that includes comets and asteroids using telescopes placed all around the Earth, as part of its NEO Observation Program.
- Objective of the Program: To find, track and characterise NEOs that are 140 meters or larger in size since they can pose a risk to the Earth because of the devastation a potential impact can cause.

DBT-BIRAC | Science & Technology

Why in the news?

- DBT-BIRAC supported startup Blackfrog Technologies has developed Emvolio.

About DBT BIRAC

- Emvólio is a portable, battery-powered medical-grade refrigeration device that improves the efficiency of the immunization by strictly maintaining preset temperature for up to 12 hours, thus enabling the safe and efficient transportation of vaccines to the last mile.
- Emvólio has a 2-litre capacity, enabling it to carry 30-50 vials, the standard for a daylong immunization campaign.

- The device also includes continuous temperature monitoring, location tracking, state-of-charge indication, communication with headquarters via live-tracking, and vital statistics for improved coverage. Blackfrog is an ISO-13485 certified manufacturer of medical devices, and Emvólio has been designed in accordance with WHO-PQS E003 standards.
- About BIRAC: Set up by the Department of Biotechnology (DBT), Government of India, Biotechnology Industry Research Assistance Council (BIRAC), is a not-for-profit Section 8, Schedule B, Public Sector Enterprise.

Context
- The 7th edition of Indian Ocean Naval Symposium (IONS), a **biennial event**, was hosted by the French Navy at La Réunion.

About IONS
- It was conceived by the Indian Navy **in 2008**.
- It seeks **to enhance maritime cooperation among Navies of the littoral states of the IOR**.
- It provides a forum **to increase maritime security cooperation, discuss regional maritime issues, and promote friendly relationships among the member states.**
- The **chairmanship of IONS** has been held by India in 2008-10.
- The symposium was **first held in 2008** with India as host.
- It is a **voluntary initiative** among the navies and maritime security agencies of the member nations.
- Now, France has assumed the Chairmanship on 29 Jun 21 for a two-year tenure.
- **IONS Conclave of Chiefs (CoC)** is the decision-making body at the level of Chiefs of Navies, which meets biennially.

Why in news?
- Ministry of Defence has implemented **SPARSH [System for Pension Administration (Raksha)]**. **About SPARSH System**
- It is an integrated system for automation of sanction and disbursement of defence pension.
- It is a web-based system which processes pension claims and credits pension directly into the bank accounts of defence pensioners without relying on any external intermediary.
- It is an end to end Online System facilitating and easing every aspect of Defence Pensions from Initiation to Disbursement.
- It is being implemented for meeting the pension sanction and disbursement requirements for Armed Forces viz. Army, Navy, Air Force and Defence Civilians.
- It will be administered by the Defence Accounts Department through the Principal Controller of Defence Accounts (Pensions), Prayagraj.

Significance of SPARSH
- It is available for pensioners to view their pension related information, access services and register complaints for redressal of grievances, if any, relating to their pension matters.
- It envisages establishment of Service Centres to provide last mile connectivity to pensioners who may be unable to directly access the SPARSH portal for any reason.
  - The two largest banks dealing with defence pensioners i.e. State Bank of India (SBI) and Punjab National Bank (PNB) have been co-opted as Service Centres.
- It will interface all the stakeholders and provide a single source of truth there by ensuring transparency, accountability and ease of doing business through information dissemination.

TITANIUM ALLOY

Why in news?

- The Defence Research and Development Organisation (DRDO) has developed a **high strength titanium alloy on industrial scale for applications in aerospace structural forgings.**
- **Beta titanium alloys**
- The high strength beta titanium alloys are unique due to their **higher strength, ductility, fatigue, and fracturetoughness** –
- making them increasingly attractive for aircraft structural applications.
- Their relatively **lower lifetime cost**, owing to **superior corrosion resistance** in comparison to steels, was an effective trade-off to justify the use of this expensive material in India too.
- The **high strength metastable beta titanium alloy, Ti-10V-2Fe-3Al**, containing <u>Vanadium, Iron and Aluminium, was</u> developed by the Defence Metallurgical Research Laboratory (DMRL).
- These alloys are beneficial substitute for the relatively heavier traditional structural steels to achieve weight savings.
- The excellent forgeability of Ti-10V-2Fe-3Al alloy facilitated the manufacture of intricately configured components for aerospace applications with potential for significant weight savings, the statement added.

MAN-PORTABLE ANTI-TANK GUIDED MISSILE (MPATGM)

Why in news?

- The DRDO successfully flight tests home-grown Man-Portable Anti-Tank Guided Missile (MPATGM).
- The missile was launched from a man-portable launcher integrated with thermal site and the target was mimicking a tank.

About MPATGM

- It is an **Indian third-generation fire-and-forget anti-tank guided missile derived from Nag ATGM.**
- It is indigenously development by the Defence Research and Development Organisation (DRDO) in partnership with Indian defence contractor VEM Technologies Private Ltd.
- It is fitted with high-explosive anti-tank (HEAT) warhead.
- The missile has a length of about 1,300 mm and a diameter of about 120 mm with aluminum and carbon fiber launch tube and collapsible tripod to save on weight.
- The MPATGM is equipped with an **advanced imaging infrared (IIR) sensor and integrated avionics.**
- The missile has top attack capability. It reportedly share many similarities with systems such as FGM-148 Javelin, and Spike (ATGM).

BAIL PROVISIONS UNDER UAPA

Why in news?

- UAPA bail provisions are in the news owing to the death of Stan Swamy.

About Section 43D (5) of UAPA

- The UAPA, enacted in 1967, was strengthened by the Congress-led UPA government in 2008 and 2012.
- The test for denying bail under the UAPA is that the court must be satisfied that a "prima facie" case exists against the accused.
- The Section **43D(5)** reads that no person accused of an offence punishable under Chapters IV and VI of this Act shall, if in custody, be released on bail or on his own bond unless the Public Prosecutor has been given an opportunity of being heard on the application for such release.

- It provided that such accused person shall not be released on bail or on his own bond if the Court, on a perusal of the case diary or the report made under section 173 of the Code is of the opinion that there are reasonable grounds for believing that the accusation against such person is prima facie true.

Law of Bail under UAPA
- Both regular bail and bail by default like CrPC are available under UAPA with some alterations under section 43 D of UAPA.
- The Regular Bail in UAPA can be granted by a competent magistrate under section 437 CrPC and by the high court or district and sessions court under section 439 of CrPC.
- The provisions for default bail is also available under section 167(2) CrPC read with section 43D(2) of UAPA, after 30 days of police custody and 90 days of judicial custody, subjected to delay in filing of charge-sheet.
- UAPA does not provide any specific conditions to be satisfied to grant bail.

Curious case of Section 43D(5)
- It is only applicable to offences punishable under chapter IV and VI of the act i.e. offences related to terrorist acts and terrorist organizations.
- It has a proviso which basically explains condition when bail shall be denied, i.e. if reasonable grounds exist for accusations to be prima-facie true and such decision shall be based on charge sheet or case diary.
- The second part of proviso explains the burden over prosecution and the prosecution had to prove that reasonable grounds exist for accusations believed to be prima facie true.

PROJECT 75 (I) — Security & Defense

Why in the news?
- Recently, the Ministry of Defence has issued Request of Proposal (RFP) for the first acquisition programme under the Strategic Partnership Model for construction of six AIP fitted Conventional Submarines named Project 75(India) for the Indian Navy.

About Project-75 (India)
- It is a follow-on of the Project 75 Kalvari-class submarine for the Indian Navy.
- The P-75 (I) contract will be awarded to MDL (Mazagon Docks Ltd) or Larsen & Toubro.
- It is part of a 30-year submarine building plan that ends in 2030.
- The 'I' symbolizes the attempt to give India the ability to design and produce submarines as part of a 30-year submarine building programme.
- The goal is to produce 24 conventional submarines by 2030 (now been reduced to 18).
- It offers a chance to stabilise the entire submarine line on an in-service platform, whether French, Russian or German.
- Under the Project 75 (I), the navy will operate six Scorpene submarines by 2023 which will be in service until 2050 and beyond.

Significance of Project-75(India)
- It envisages indigenous construction of six modern conventional submarines with contemporary equipment, weapons & sensors including Fuel-Cell based AIP (Air Independent Propulsion Plant).
- It would provide a major boost to the indigenous design and construction capabilityof submarines in India, in addition to bringing in the latest submarine design and technologies as part of the project.
- It would aid in boosting the core submarine/ship building industry.
- It would greatly enhance manufacturing/industrial sector, especially the MSME by development of an industrial eco-system for manufacture of associated spares/systems/equipment related to submarines.
- It aims to give the navy a fleet of modern conventional submarines with greater endurance and capabilities.

Why in the news?

- Recently, the Ministry of Defence has approved the budgetary support of Rs 498.8 crore to Innovations for Defence Excellence (iDEX) - Defence Innovation Organisation (DIO)for the next five years.

About Innovations for Defence Excellence (iDEX)

- It was launched by the Hon'ble Prime Minister in April 2018.
- It will be funded and managed by a Defence Innovation Organization (DIO).
- It will function as the executive arm of DIO, carrying out all the required activities while DIO will provide high level policy guidance to iDEX.
- It aims at creation of an ecosystem to foster innovation and technology developmentin Defence and Aerospace.

The objectives of iDEX are:

- Facilitate rapid development of new, indigenized, and innovative technologies for the Indian defence and aerospace sector, to meet needs for these sectors in shorter timelines;
- Create a culture of engagement with innovative startups, to encourage co-creation for defence and aerospace sectors; and
- Empower a culture of technology co-creation and co-innovation within the defence and aerospace sectors

About Defence Innovation Organisation (DIO)

- It is formed as a "not for profit□ company as per Section 8 of the Companies Act 2013.
- Its primary objective is to fund and manage the Innovations for Defence Excellence (iDEX).
- It will provide high level policy guidance to iDEX.
- The CEO of iDEX will be selected and recruited by the DIO and will be a professional person of sound technical, scientific and engineering background.
- The CEO of iDEX would also be CEO of DIO thereby providing the linkage between the high level policy guidance given by DIO and its implementation in a professional manner through iDEX.

Significance of budgetary support to iDEX-DIO

- It will provide a big boost to the 'Aatmanirbhar Bharat Abhiyan' as iDEX–DIO has the primary objective of self-reliance and indigenisation in defence & aerospace sector of the country.
- It is aimed at providing financial support to nearly 300 start-ups/MSMEs/individual innovators and 20 partner incubators under the DIO framework.
- It will support increased awareness in the Indian innovation ecosystem about defence needs.
- It will support increased awareness in the Indian Defence establishment about the potential of the Indian innovation eco-system to deliver innovative solutions to meet their needs.

Unified District Information System for Education Plus report (UDISE+)

Why in the news?

- Union Minister of Education, released the 2019-2020 Unified District Information System for Education Plus report (UDISE+). The UDISE+ report revealed key information regarding the Indian school education system, both favourable and negative.

What is UDISE+?

- It is Unified Information System for Education Plus for School Education.
- It has been developed by Department of School Education and Literacy (DoSEL) and introduced with reference year 2018-19.
- It is hosted in the server of the National Informatics Centre (NIC) in order to eliminate the problems related to coordination, supervision, monitoring and security.
- It is one of the largest Management Information Systems on School Educationinitiated in in 2012-13 integrating DISE for elementary and secondary education.
- It is a much improved version compared to the offline U-DISE application such as:
  - A centralized module has been developed for generating UDISE codes for all States/UTs;
  - Real time checking and rectification/ revision of school details;
  - Data Capture of UDISE+ DCF through various User Friendly Application User Interfaces from School/CRC/Block level with School Data Certification;
  - Data certification from all level of users, starting from the principal/ teacher-in-charge of the school, followed by concerned State/UT officers; and
  - Data Visualization Dashboard to visually present various key performance indicators (KPI) and metrics of School Education

Key Advantages of UDISE+

- The UDISE+ data can be revised only at the school level due to direct online data entry from schools.
- The cloud based infrastructure with proper data recovery mechanism of NIC ensures that there is no data loss even if there is some interference during data entry.
- It has a number of entry level checks built-in the data entry module at all levels in real time.
- The online data entry module has a huge positive environmental impact in the form of significant reduction in cost of printing blank DCFs as well as reduction in data entry errors.

Key Highlights

Enrolment of Students

- The total enrolment in schools has increased in 2019-20 compared to 2018-19 by 1.6%.
- In 2019-20, enrolment of girls from primary to higher secondary is more than 12.08 crore.
- It is a substantial increase by 14.08 lakh compared to 2018-19.

Number of Teachers

- The total number of teachers in 2019-20 was 96.87 lakh, an increase of more than 2.5 lakh over total teachers in 2018-19 (94.3 lakh).
- The percentage of teachers teaching only primary (37% in 2019-20 from 42% in 2018-19) and only upper primary (23% in 2019-20 from 27% in 2018-19) has reduced.

School Infrastructure

- The report shows a remarkable improvement in the number of schools with functional electricity, with functional computers, internet facility in 2019-20 over the previous year.
- In year 2019-20, more than 90% schools in India had hand wash facility as compared to only 36.3% in 2012-13.

Gross Enrolment Ratio (GER), Gender Parity Index (GPI) and Pupil Teacher Ratio (PTR)

- The Gross Enrolment Ratio (GER) at all levels of school education has improved in 2019-20 compared to previous year 2018-19.
- The Pupil Teacher Ratio (PTR) has improved at all levels of school education.
- The Gender Parity Index (GPI) at both Secondary and Higher Secondary levels have improved between 2012-13 and 2019-20.

INDIA INEQUALITY REPORT

Reports & Indices

Why in the news?

- Recently, the Oxfam India has released the 2021 edition of the India Inequality Report. It provides a comprehensive analysis of the health outcomes across different socioeconomic groups to gauge the level of health inequality that persists in the country.

Key Highlights

Health Inequalities

- It stated that India's low spending on public healthcare systems and focus on supporting private healthcare has led to serious inequalities in access to healthcare.
- It highlighted that the states that have for the past few years been reducing inequalities, such as inequalities to access to health between the general category and SC and ST populations, have less confirmed cases of COVID.
- It also highlighted that the states that have had higher GDP expenditure on health have higher recovery rates of COVID cases.
- It stated that those in higher income brackets, and with access to health infrastructure, had to face less visits to hospitals and Covid centres than those belonging to lower income groups.
- It found out that people belonging to lower income groups also faced five times more discrimination on being found Covid-positive than those in higher income groups.
- It highlighted that India's low spending on public healthcare has left the poor and marginalized with two difficult options i.e. suboptimal and weak public healthcare or expensive private healthcare.

Child Immunization

- The rate of immunization of girls continues to be below that of the male child.
- The immunization of children in urban areas is more than those in rural areas.
- The immunization of SCs and STs is behind that of other caste groups.
- The child immunization of the high-wealth quintile group is much higher than that of low-wealth quintile.

Health Status of Women

- The percentage of mothers who have received full antenatal care declined from 37 percent in 2005-06 to 21 percent in 2015-16.
- The full antenatal care for urban areas is close to two times that of rural areas, and immunization among Muslims the lowest i.e. lower than the SC/ST populations.

Recommendations under India Inequality Report 2021

- The right to health should be enacted as a fundamental right that makes it obligatory for the government to ensure equal access to timely, acceptable, and affordable healthcare of appropriate quality.
- The free vaccine policy should adopt an inclusive model to ensure that everyone, irrespective of their gender, caste, religion or location i.e. people living in hard-to-reach areas, gets the vaccine without any delay.
- Increase health spending to 2.5 percent of Gross Domestic Product (GDP) to ensure a more equitable health system in the country.
- Regions with higher concentration of marginalized population should be identified and public health facilities should be established, equipped and made fully functional as per the Indian Public Health Standards (IPHS).
- Institutionalize a centrally-sponsored scheme that earmarks funds for the provision of free essential drugs and diagnostics at all public health facilities.

Why in the news?

- New report by International Labour Organization (ILO) Global Estimates on International Migrant Workers : Results and Methodology released recently.

About the report

- The number of international migrant workers globally has risen to 169 million. The share of youth migrant workers (aged 15-24) has also increased, by almost 2 per cent, or 3.2 million, since 2017.

- **Related risk**

- Many migrant workers are often in temporary informal or unprotected jobs.This expose them to a greater risk of insecurity, layoffs and worsening working conditions. The COVID-19 crisis has intensified these vulnerabilities particularly for women migrant workers and have limited access to social protection and fewer options for support services.

- **Majority of migrant workers**

- Two-thirds of international migrant workers are concentrated in high-income countries. Of the 169 million international migrant workers, 63.8 million (37.7 per cent) are in Europe and Central Asia. 43.3 million (25.6 per cent) are in the Americas.Arab States, and Asia and the Pacific each host about 24 million migrant workers, which, in total, correspond to 28.5 per cent of all migrant workers. In Africa there are 13.7 million migrant workers, representing 8.1 per cent of the total.Majority of workers 99 million are men, while 70 million are women.

- **Women Issue**

- Women face more **socio-economic obstacles as migrant workers.**They are **more likely to migrate** as accompanying family members for reasons other than finding work. They **can experience gender discrimination in employment** and may lack networks.

- **Youth representation in the work force**

- Share of youth among international migrant workers has increased, from 8.3 per cent in 2017 to 10.0 per cent in 2019.This increase is likely to be related to high youth unemployment rates in many developing countries. The large majority of migrant workers (86.5 per cent) remain prime-age adults (aged 25–64).

- **Sector wise status**

- Majority delivering essential jobs in critical sectors like **health care, transportation, services, agriculture and food processing.**66.2 per cent of migrant workers are in services, 26.7 per cent in industry and 7.1 per cent in agriculture. Men migrant workers are more present in industry.

- International Labour Standards on Migrant workers: ILO standards on migration provide tools for both countries of origin and of destination to manage migration flows and ensure adequate protection for this vulnerable category of workers.

- **Migration for Employment Convention**

- Ratifying states to facilitate international migration for employment by establishing and maintaining a free assistance and information service for migrant workers.Also taking measures against misleading propaganda relating to emigration and immigration. Includes provisions on appropriate medical services for migrant workers and the transfer of earnings and savings. States should porovide at par in respect to a number of matters, including conditions of employment, freedom of association and social security.

- **Migrant Workers (Supplementary Provisions) Convention**

- Measures to combat illegal migration while at the same time setting forth the general obligation to respect the basic human rights of all migrant workers.Extends the scope of equality between legally resident migrant workers and national workers.It is to ensure equality of opportunity and treatment in respect of employment and occupation, social security, trade union and cultural rights, and individual and collective freedoms for persons.
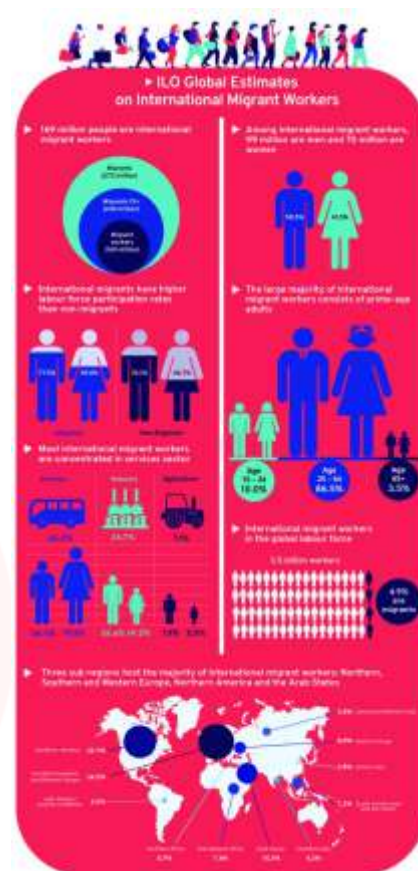
Why in the news?

- The first-ever resolution on vision has been approved the United Nations general assembly

About the resolution

- The resolution named "Vision for Everyone" has been sponsored by Antigua, Bangladesh and Ireland, and co-sponsored by more than 100 countries.
- Under this resolution UN has asked the member countries to institute a government approach towards eye care.
- UN has also called upon donors and financial institutions to provide financing for developing countries so that they can address the impact of loss of vision on social and economic development.
- The resolution states that global eye care needs are going to increase substantially as by the year 2050 half of the global population is expected to be suffering from vision impairment.
- More than 90% of the 1.1 billion people globally who are suffering from loss of vision live in low or middle income group of countries.
- 55% of all blind people are girls and women.
- Better access to services related to eye care can increase the per capita household spending by around 88%.
- Better access to eye care related service is essential to achieve the goals of UN for the year 2030 of ending hunger and poverty, ensuring quality education and healthy living and reducing inequality.

Current Status of Vision Impairment:

- The International Classification of Diseases 11 (2018) classifies vision impairment into two groups such as distance and near presenting vision impairment.
- **Limited Access:** Globally, over 2 billion people are living with vision impairment/ blindness and at least 1.1 billion people are living with vision loss due to the limited access to proper vision care for conditions like short and far-sightedness, glaucoma and cataract.
- 90 percent of those 1.1 billion people with vision loss live in low- and middle-income countries and 55 percent of them are women and girls.
- **Economic Loss:** On average, the vision impairment is estimated to cost a productivity loss of around USD411 billion each year.
- The UN expects half of the global population (especially low- and middle-income countries) to be living with vision impairment by 2050.

UPSC

Q) How far do you think naxalism is a manifestation of underlying socio-economic challenges? [10M] [150W]

Naxalism, also known as left-wing Extremism is an ideology which is against to the concept of democracy and which moves forward with the ideology of Maoist communism and members of this ideology are called as Naxali.

And the word 'Naxal' is derived from a place in West Bengal known as Naxalbari, where its first impact was seen.

There are many reasons for this to arise and they are

Naxalism - A Manifestation of socio-economic challenges:-

i) Land Alienation:-
Tribals are mostly dependent on land for their livelihood and the government take over of the land is making has made the tribals angry and helpless and this opportunity is used by Naxals and their concepts are manifested into Tribals.
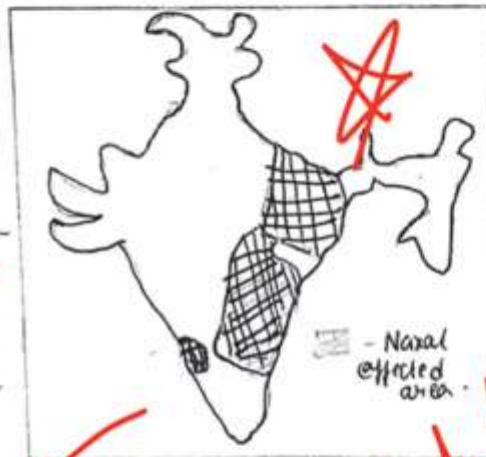

fig:-1(a)· Naxal effected areas in India.

— Naxal effected area.

ii) Unemployment: Many unemployed youth are driven towards naxalism. as they get frustrated with system and this impacts the manifestations of naxal.

iii) Social Alienation: extreme rural and Tribal regions are socially alienated from the growing society and this feeling of being ignored among these people

is also another reason for the rise of naxalism.

iv) Poverty:- This aspect also stands as a base that is driven towards naxalism, poor people frustated and unhappy with their condition of living are attracted and driven towards the violent ideology.

v) The Condescending strata of human society:- The concept of superior and inferior also has its impact to move towards naxalism, the inferior fed up with this strata and hope for a change are also driven towards naxalism.

The socio-economic challenges did manifest naxalism but they alone aren't the cause for it there are other challenges as well that manifested naxalism and they are other challenges that manifested Naxalism?

i) Lack of law and order :- This governance aspect is also a reason for naxalism, the poor and people not justified with lack in law and order are driven towards naxalism.

ii) Forest policy:- The forest policies of government like the forest conservation Act, 1980 are acting as stop spots to tribals from getting their basic needs from forests, later they are influenced into this violent concept.

iii) Political Marginalization:- No proper political representation and marginalisation of weaker sections of society is also a major reason for the emergence of naxalism.
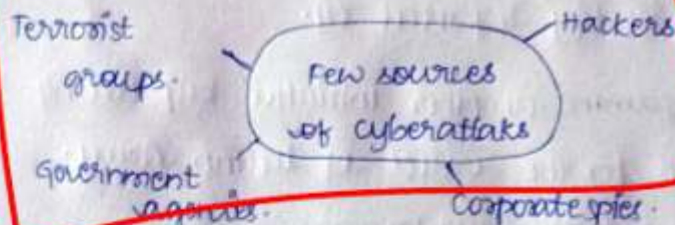
Deep rooted naxalism cannot be taken away from the society but the prospects, impacts and its emergence can be curtailed by focusing on the challenges and solutions to it.

Naxalism as an ideology is not deleterious until it amalgamates with humans.

data in intro

Digital platform being the main platform for present day Gaernance i.e., e-gaernance, it is prone to certain threats called as Cyber attack /threat. Pegasus is one such spyware which is allegedly used to spy on public figures in India.

label

Terrorist groups.   Hackers

Few sources of Cyberattacks

Government agencies.   Corporate spies.

POTENTIAL THREATS OF CYBER ATTACKS:

1. Theft of national security secrets : Information related to Government's strategies, national security can be codified using cyber attacks.

   Eg: Theft of US naval codes by chinese state intelligence agencies.

   good

2. Failure of military equipment : due to the lack of technological advancement, such failures can occur.

   Eg: UK's Trident nuclear submarines were prone to hacking.

3. Electrical blackouts : Refrigerators, washing machines etc., equipments/machines are under threat due to cyber attacks.

   Eg: 2015 power grid attack on vaccine distribution companies.

4. Theft of public personal information : A hacker can send any kind of spyware/ malware to control or look into personal information like passwords, text messages etc.,

SECURITY FRAMEWORK TO PREVENT CYBER ATTACKS:

1. National critical Information Infrastructure Protection centre (NCIIPC) is a national nodal agency to protect critical Information Infrastructure (CII), an initiative by the Government to identify & protect CII.

2. Digital Army programme, another initiative by providing a dedicated cloud for the services of Indian Army, was launched under Digital India program.

3. National cyber security strategy, 2020 was formulated to improve cyber awareness & cybersecurity through secure - Synergize - strengthen strategy.

4. Budapest convention - only multilateral treaty on cyber security, Ground zero submit are some of the Global initiatives to prevent cyber attacks.

    Apart from the above mentioned frameworks, a room should be left for more innovative methods to counterattack the cyber threats, like introducing PPP model in research & innovation sector.

(handwritten red annotations: "actual point", "good answer")

2

Q. What do you understand by Data localisation? Highlight the challenges associated with framing stringent data sovereign laws.
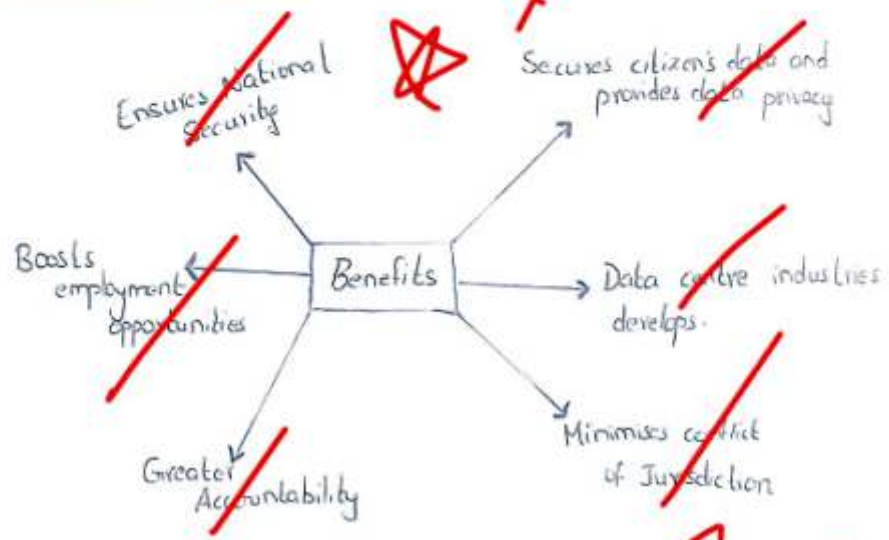
V. Sushma
D5

15/8/21

A. Data localisation means storing data on any device physically present within the borders of a country, when it is generated.

Draft National E-commerce Policy Framework recommended data localisation, proposed incentives to encourage it.

Reports suggest that cross-border data flows contributed $2.8 trillion to global economy in 2014, which is expected to touch $11 trillion by 2025.

Benefits of Data Localisation :

Ensures National security

Secures citizen's data and provides data privacy

Boosts employment opportunities

Benefits

Data centre industries develops.

Greater Accountability

Minimises conflict of Jurisdiction

Data has often been referred as the "New Oil", an economic resource, that is fuelling the fourth industrial revolution. As there are benefits, there must be some concerns included with it.

Challenges Associated With Framing Stringent Data Sovereign Laws :

① Higher cost : Maintaining multiple local data centres may lead to higher costs and investments in infrastructure for global companies.

② Lack of Infrastructure :-

Infrastructure in India for efficient data collection and management is lacking.

③ Still unsafe :-

Even data is stored in the country, the encryption keys still remain out of reach of national agencies. Hence, its still not secure.

④ Inefficiencies :-

Forced data localisation can create inefficiencies for both businesses and consumers, increasing the cost.

The Supreme Court in Puttaswamy vs Union of India case, allowed exceptions to the right to privacy of an individual under certain situations. Such exemptions must be backed by a law. Moreover, security and government access are not achieved by localisation.

Therefore, privacy could be equally protected through effective measures & also by installing international practices.

International Practices:

→ Many countries have implemented and in the process of implementing data localisation laws.

→ Europe's new data protection regime puts limits on cross border data flows to countries, that don't have data protection laws.

Personal Data protection bill is designed for striking a balance between privacy and Security. India could work towards Critical personal data to be stored and processed in India, Transfers outside the country need to be subject to safeguards, one copy of personal data need to be stored on servers within India as recommended by B.N. Srikrishna Committee to overcome challenges associated with framing data sovereign laws.

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