



TRANSFORM IAS
Transforming Lives with Education

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TRANSFORM IAS
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Current Affairs

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Chapter- 1

ART AND CULTURE

Yangli festival

Why in News

The Yangli festival of the Tiwa community of Assam concluded recently.

Important Points

- The Yangli festival, also known as the Lakshmi Puja of the Tiwa people was organised with the traditional rituals in the Guva region of the state.
- The Tiwa community mainly depends on agriculture as their main livelihood and this festival is also related to the same.
- During this festival, the people pray for a good harvest and ask the Gods to protect their crops from pests and natural calamities.
- This festival is celebrated once every five years by the members of the community.
- Rice is one of the main crops of the region and the sowing of seeds for paddy starts soon after the completion of this festival.
- According to the local traditions, the Yangli festival is the opportunity to welcome the Goddess Lakshmi to the earth and to bless them with a good harvest in the coming years.
- Ceremonious sacrifices of animals including poultry and goats are done on the eve of the puja to welcome the goddess to the “NoBaro” or the granary of the Tiwa people.
- As per the traditions of the community, the Rongkhi and Amchi people have to sacrifice one goat more than what is being offered by the other groups.

The Tiwa people

- They are a Tibeto-Burmese ethnic group primarily inhabiting the Northeast Indian states of Assam, Meghalaya, Arunachal Pradesh, Manipur and Nagaland, and some parts of neighbouring Bangladesh and Myanmar.
- They were known as Lalungs/Lalong/Laleng in the Assamese Buranjis and in Colonial literature and in the Constitution of India, though members of the group prefer to call themselves Tiwa (meaning “the people who were lifted from below”).
- Some of their neighbours still call them Lalung.
- A striking peculiarity of the Tiwa is their division into two sub-groups, Hill Tiwa and Plains Tiwas, displaying contrasting cultural features.
- The founder of Tiwa community is Pha Poroi “Indroing Dewri” who has contributed a lot to the construction of Tiwa society.
- He also wrote the Tiwa national anthem called – O Angé Tiwa Tosima.



Nagaraja Thira dance

Why in News

The ‘Nagaraja Thira’ was celebrated at the Sree Muchilottu temple at Kuthiravattom in Kozhikode, Kerala recently.

Important Points

- Thirra or Theyyam thira is a ritual dance performed in “Kaavu”(grove)& temples of the Malabar region in Kerala.

- This art form is performed by the artists of malaya (the artist who recognised for performing the art form called as a “perumalayan”) community.
- It is performed during Utsavam (annual temple festival).
- Clan deities such as Bhagavathi, Shiva are worshipped in these forms.
- Theyyam thira is main sub division of Theyyam.
- It is similar to the Theyyam dance performed in the same region, except that in Theyyam the performer is considered as the god he is representing, while in Thira the performer is considered as to be possessed by god.
- Thira brings the gods to life. Performers dress up with ceremonial facial paint and loud clothing and dance in front of the deity, the bhagavathi.
- The objective clearly is to bring a sense of awe to the proceedings. Each performer represents a particular deity and is sponsored by devotees as a prayer offering.
- These dancers are viewed as being possessed by the gods when they are in their act, with devotees queuing up to meet them to share woes and wishes.
- Toddy plays a very significant role in the proceedings, it is an offering to the gods and almost all the performers dance under the influence. This helps in creating the feeling of being “possessed”.
- The performers belong to the “Peruvannan” caste of , who are given prime importance in Thira .
- Therefore in Kerala, both upper caste Brahmins, and lower caste tribals have an important place in worship.



Teja Singh Sutantar

Why in News

Punjab Chief Minister has recently unveiled a statue of freedom fighter Teja Singh Sutantar at his native village to mark his 50th death anniversary.

Important Points

- Teja Singh Sutantar, also Swatantar, was a national revolutionary of India who fought for the independence of India from the British Empire and for the liberation of Punjab peasantry from the clutches of feudal lords.
- He was a member of the 5th Lok Sabha from Sangrur constituency as a CPI candidate.
- He also was Member of Punjab Legislative Assembly from 1937 to 1945 and member of Punjab Legislative Council from 1964 to 1969.
- He became actively involved in the revolutionary activities during the 1920s when the Ghadar Party was preparing for the second attempt for the overthrow of British government.
- Sutantar was sent to Turkey in 1924 where he joined the Turkish military academy to attain military knowledge.
- In and out of prison several times, Sutantar was among the top national Communist leaders jailed by the British administration in the Deoli Detention Centre in the early-1940's.
- Sutantar was a popular Communist leader in the Kirti Kisan Party and later Central Committee member and General Secretary of the Lal Communist Party Hind Union.
- The party published a magazine, Lal Jhanda, from 1948-1952 under the editorship of Teja Singh Sutantar, managed by Gandharv Sen.
- Sutantar was among the tallest leaders in undivided Punjab and, post-Partition, on the Indian side who led the struggles of the peasantry, along with the likes of Bhagat Singh Bilga and Baba Bujha Singh.
- In 1952 Lal Communist Party Hind Union merged into Communist Party of India. He become the president of All India Kisan Sabha from 1968 to 1973.
- He died on 12 April 1973.



The Ghadar Party

- The Ghadar Party was formed in was formed on 15 July 1913 in the United States under the leadership of Lala Har Dayal, Sant Baba Wasakha Singh Dadehar, Baba Jawala Singh, Santokh Singh and Sohan Singh Bhakna as its president.
- The movement originated with an organization of immigrants in California called the Hindustani Workers of the Pacific Coast.
- The goal of the movement was to assist in overthrowing British colonial rule in India.
- Shortly after the outbreak of World War I, many of the Ghadrates returned to India and for several months during 1915 carried on terrorist activities in central Punjab.
- After the war, the party in America split into Communist and anti-Communist factions. The party was dissolved in 1948, after India had achieved independence.

Kirti Kisan Party

- The Workers and Peasants Party (WPP) (also known as the Kirti Kisan Party) was a political party in India, which worked inside the Indian National Congress in 1925–1929.
- The party was founded in Bengal on 1 November 1925, as the Labour Swaraj Party of the Indian National Congress.
- The founding leaders of the party were Kazi Nazrul Islam, Hemanta Kumar Sarkar, Qutubuddin Ahmad and Shamsuddin Hussain.
- It became an important front organisation for the Communist Party of India and an influential force in the Bombay labour movement.
- The party was able to muster some success in making alliances with other left elements inside the Congress Party, amongst them Jawaharlal Nehru.
- However, as the Communist International entered its ‘Third Period’ phase, the communists deserted the WPP project.
- The WPP was wound up, as its leadership was arrested by the British authorities in March 1929.

Vishu festival

Why in News

Vishu, the Malayalam New Year, is a festival that is celebrated with great fervour and enthusiasm in the southern Indian state of Kerala.

Important Points

- In India this day is celebrated in different regions with different names such as Poila Baisakh in Bengal, Baisakhi in Punjab, Bohag Bihu in Assam.
- The purpose of celebrating this festival is same but the names and rituals are different according to their place.
- The whole country is going to celebrate this festival of new year with great grandeur and enthusiasm.

About the festival:

- One of the most celebrated and popular spring festivals celebrated in southern India is Vishu or Vishu Kani or Bisu or Chingam, which marks new beginnings for Keralites.
- It is also celebrated by Malayali Hindus in the adjacent areas of Tamil Nadu & Karnataka.
- Vishu day marks the Sun's transit to the Mesha Rashi as per the Indian Astrological calculations.
- It falls on the first day of the Malayalam month of Medam, which usually falls in the month of April as per the Gregorian calendar.
- The festival is marked by family time, preparing colourful auspicious items and viewing these as the first thing on the Vishu day.
- The festival has a rich history steeped in mythology and folklore.
- According to legend, Lord Krishna killed Narakasura the demon on this day while another says that it was the day when the Surya Dev returned.
- It is said that demon king Ravana did not allow the Sun God to rise from the east and Vishu marks the day after Ravana's death when the sun could finally rise from the east.



Virginia Norwood mother of satellite imaging systems

Why in News

Virginia Norwood, an aerospace pioneer has died at her home in Topanga, California.

Important News

- Landsat 1 (LS-1), formerly named ERTS-A and ERTS-1, was the first satellite of the United States' Landsat program.
- It was a modified version of the Nimbus 4 meteorological satellite and was launched on July 23, 1972, by a Delta 900 rocket from Vandenberg Air Force Base in California.
- It was the first satellite to carry a Multispectral Scanner.

Virginia Norwood:

- She was an American aerospace engineer, inventor, and physicist.
- She was best known for her contribution to the Landsat program, having designed the Multispectral Scanner which was first used on Landsat 1.
- She has been called “The Mother of Landsat” for this work.
- The scanner has been used to map and study the earth from space for more than 50 years.
- An improved seven band version, known as the Thematic Mapper was later included on Landsat 4.
- She designed the microwave transmitter that Surveyor 1 used to transmit data and images back to earth.
- In 1979, Norwood received the William T. Pecora Award. The award recognizes achievements in the scientific and technical remote sensing community, as well as contributions leading to successful practical applications of remote sensing.
- The award is sponsored jointly by the U.S. Department of the Interior and the National Aeronautics and Space Administration.
- In 2021, Norwood was given an Honorary Lifetime Achievement Award by the American Society for Photogrammetry and Remote Sensing, the highest honour that society bestows on any individual.



St Thomas shrine

Why in News

Kerala BJP Vice President trekked to a hilltop shrine in Malayattoor village of the Ernakulam district, Kerala, on the occasion of a festival held there on the first Sunday after Easter.

Important Points

St Thomas:

- He was one of Jesus's 12 original followers. He is believed to have spread Jesus's word far and wide, coming to India in the process.
- However, due to lack of documentary evidence, St Thomas's visit to India is a subject of lively debate.
- Thomas is commonly known as “Doubting Thomas” because he initially doubted the resurrection of Jesus Christ when he was told of it (as is related in the Gospel of John); he later confessed his faith (“My Lord and my God”) on seeing the wounds left over from the crucifixion.
- According to traditional accounts of the Saint Thomas Christians of modern-day Kerala in India, Saint Thomas travelled outside the Roman Empire to preach the Gospel, travelling as far as the Tamilakam which is in South India, and reached Muziris of Tamilakam (modern-day North Paravur and Kodungalloor in Kerala State, India) in AD 52.
- In 1258, some of the relics were brought to Ortona, in Abruzzo, Italy, where they have been held in the Church of Saint Thomas the Apostle.
- He is regarded as the patron saint of India among its Christian adherents, and the Feast of Saint Thomas on July 3 is celebrated as Indian Christians' Day. The name Thomas remains quite popular among the Saint Thomas Christians of the Indian subcontinent.

- Many churches in the Middle East and southern Asia, besides India, also mention Apostle Thomas in their historical traditions as being the first evangelist to establish those churches, the Assyrian Church of the East, the early church of Sri Lanka.

The Malayattoor Church:

- The St Thomas Syro Malabar Catholic International Shrine, Malayattoor (or Malayatoor Church) is one of the eight international shrines in the world, situated in Malayattoor Angamaly, Ernakulam district of Kerala.
- The church has been designated by the Vatican as one of the eight International shrines in the world.
- It is believed that St. Thomas held prayer at the place where the church is situated when he landed in Kerala.
- St. Thomas is believed to have landed at Kodungallur (Cranganore) in Kerala in AD 52.
- In AD 62, St. Thomas returns to Malankara coast via Malayatur where he establishes 'the half church' (a small Christian community dependent on the Church of Maliamkara).



GI tag to Gond painting

Why in News

Gond painting of Madhya Pradesh has received the prestigious Geographical Indication (GI) tag recently.

Important Points

Gond painting

- The word 'Gond' comes from the Dravidian expression 'Kond' which means 'green mountain'.
- Gond painting is a famous folk art of the Gond tribal community of central India.
- It is a form of painting from folk and tribal art that is practiced by one of the largest tribes in India – the Gond, who are predominantly from Madhya Pradesh, but can also be found in pockets of Andhra Pradesh, Maharashtra, Chhattisgarh, and Odisha.
- The history of the Gond people dates nearly 1400 years. Blended with mystery, pattern, blend of colours and humour, these art pieces depict a modern psyche.
- The paintings use vibrant colors like orange, yellow, blue and red, and are created with articulately drawn lines and dots as the method to bring it to life.
- Natural colors obtained from various sources like flowers, stones, etc. are used for the creation of these beautiful paintings.
- Over the years, the Gond artists have developed their own devices to work with various contemporary mediums and materials.
- They would first make dots and calculate the volume of the images. These dots would be connected to bring about an outer shape, which would then be filled with colours.
- As they respond to the immediate social situation and environment, each object they come across in life is aesthetically transformed.
- The images are tattoos or minimalist human and animal forms that include, chameleons, butterflies, elephants, cows, lions, fish, peacocks and other birds.
- Although Gond paintings have been centuries-old, with the passage of time, this art form has gradually shifted from the mud walls of the houses to canvas and papers.
- Apart from deriving inspirations from legends and myths, these paintings majorly feature nature as their main subject.
- However, there are other well-depicted themes in this painting style as well, including Hindu Gods and Goddesses (especially Ganesha), tree of life, and jungle scenes.



Bihu dance makes a Guinness World Record

Why in News

Bihu, Assam's biggest cultural festival, made it to the coveted Guinness Book of World Records recently.

Important Points

- More than 11,000 performers, including drummers and dancers, participated at the Sarusajai Stadium in Guwahati in the State Government's bid to register its world record in the Guinness Book.
- During the event, the performers included singers and those playing state's traditional instruments such as Dhol, Taal, Gogona, Toka, Pepa, and Xutuli, among others.
- They have made world records for both Bihu dance as well as Bihu dhols with 11,304 dancers and drummers.
- It is the largest Bihu dance and Bihu dhol performance in a single venue.

Bihu dance

- It is an indigenous folk dance from the Indian state of Assam related to the Bihu festival and an important part of Assamese culture.
- Performed in a group, the Bihu dancers are usually young men and women, and the dancing style is characterized by brisk steps and rapid hand movements.
- Bihu dance has been an integral part of the culture of various ethnic groups in Assam like the Deoris, Sonowal Kacharis, Moran, Borahis and others.
- Out of the three Bihu festivals in the state namely Rongali Bihu, Kongali Bihu and Bhogal Bihu, the dance is performed by young men and women during Rongali Bihu to express their joy on the arrival of the spring.
- According to Assamese history, the first ever Bihu dance performance was done in 1694 when the Ahom king Rudra Singha (1696-1714) invited Bihu dancers on the special occasion of Rongali Bihu.
- The dancers adorn the traditional mekhela chador during their performance.
- While mekhela is a cylindrically shaped outfit worn on the lower half of the body, the chador is draped like a shawl to cover the upper half.
- The attires are usually made from Muga silk, which is exclusively produced in Assam.
- Women dancers also wear ethnic heavy jewellery and beautify their braids with colourful flowers. The dance form has gained immense popularity not only in India but also in different parts of the world.
- It was a proud moment for the state when professional Bihu dancers performed at the London Olympics in 2012.



Maa Kamakhya corridor

Why in News

Prime Minister of India appreciated Assam's "landmark" Maa Kamakhya corridor initiative recently.

Important Points

About the corridor

- The project has been initiated by the state government drawing inspiration from the Kashi-Vishwanath Corridor.
- Once completed, Maa Kamakhya corridor will provide ease of access to our divyang and elderly pilgrims.
- Under the initiative, the temple's surrounding area will expand from 3,000 sq ft to about 100,000 sq ft across three levels.
- The access corridor will widen from about 8-10 ft to about 27-30 ft.
- Six major temples in the complex, which are currently hidden from the larger public view, would be restored to their original glory.
- The project includes creating space for 8,000-10,000 pilgrims to ease the crowd during major festivals like Ambubachi Mela.

About Kamakhya temple

- Located on the Nilachal Hills in Guwahati adjoining the southern bank of the Brahmaputra River, the Kamakhya temple is one of the oldest and most revered centres of Tantric practices.
- The temple is the center of the Kulachara Tantra Marga and the site of the Ambubachi Mela, an annual festival that celebrates the menstruation of the goddess.
- Another annual celebration is the Manasha Puja. Durga Puja is also celebrated annually at Kamakhya during Navaratri in the autumn.
- Structurally, the temple is dated to the 8th-9th century with many subsequent rebuildings—and the final hybrid architecture defines a local style called Nilachal.
- It is believed that the ancient demon king, Narakasura had the temple built in honour of Goddess Kamakhya.
- The temple was rebuilt under the patronage of Naranarayan, the last ruler of the undivided Kamata kingdom that straddled present-day Assam, Bangladesh, and West Bengal.
- It is also one of the oldest of the 51 pithas in the Shakta tradition. An obscure place of worship for much of history it became an important pilgrimage destination, especially for those from Bengal, in the 19th century during colonial rule.
- Originally an autochthonous place of worship of a local goddess where the primary worship of the aniconic yoni set in natural stone continues till today.
- The Kamakya Temple became identified with the state power when the Mleccha dynasty of Kamarupa patronised it first, followed by the Palas, the Koch, and the Ahoms.
- The Kalika Purana, written during the Pala rule, connected Naraka, the legitimizing progenitor of the Kamarupa kings, with the goddess Kamakhya representing the region and the Kamarupa kingdom.
- It has been suggested that historically the worship progressed in three phases—yoni under the Mlecchas, yogini under the Palas and the Mahavidyas under the Kochs.
- The main temple is surrounded in a complex of individual temples dedicated to the ten Mahavidyas of Saktism, namely, Kali, Tara, Tripura Sundari, Bhuvaneshwari, Bhairavi, Chhinnamasta, Dhumavati, Bagalamukhi, Matangi and Kamalatmika.
- Among these, Tripurasundari, Matangi and Kamala reside inside the main temple whereas the other seven reside in individual temples.
- Temples for individual Mahavidyas together as a group, as found in the complex, is rare and uncommon.
- In July 2015, the Supreme Court of India transferred the administration of the Temple from the Kamakhya Debutter Board to the Bordeuri Samaj.



Shawwal Moon

Why in News

Shawwal Crescent Moon Sighted In India, Eid Will Be Celebrated On Saturday, Know More About A Holy Islamic Festival.

Important Points

- Eid ul Fitr is an important religious festival celebrated by Muslims worldwide.
- The festival marks the end of the holy month of Ramadan, which is a period of fasting, prayer, and reflection.

Observing the New Moon or Crescent

- The traditional method of observing the new moon or crescent is done with the naked eye or telescopes. This is typically done on the 29th day of the preceding month. If the new moon is sighted, then the first day of the new month begins the next day. If not, the current month extends to 30 days, and the new month begins the day after.

The Shawwal Moon's Appearance

- The Shawwal Moon appears just a few hours after the astronomical New Moon. During the New Moon, the Earth's natural satellite gets lost in the Sun's glare and becomes completely invisible. But as it creeps

from between the Sun and Earth, its limb becomes visible. Shawwal Moon appears when the moon emerges briefly in the west just after the sunset.

Celebrations Around the World

- The start of Shawwal may differ between various Muslim communities and countries. This year, the moon was sighted in the UAE and Saudi Arabia on April 20, so several nations like the United Kingdom, Qatar, and the United States, celebrated Eid al-Fitr on April 21. However, few Muslim nations, like Indonesia and Pakistan did not spot the crescent moon on April 20. Hence, they will celebrate the first day of Eid on 22nd April.



Hun-Thadou cultural festival

Why in News

Manipur CM inaugurates Hun-Thadou cultural festival at Kangpokpi.

Important Points

- The Hun-Thadou cultural festival is an annual celebration of the Thadou community in Manipur.
- It is a time when the Thadou people come together to honor their customs, culture, and religious beliefs.
- Recently, the 5th edition of the festival was held at Thomas Ground in Kangpokpi district.
- The event was attended by dignitaries, including the Chief Minister of Manipur, state ministers, MLA, top civil and police officers.

Hun: The Most Important Festival of the Thadou Tribe:

- Hun holds immense significance for the Thadou tribe as it is considered the most important festival among all their celebrations. The word "Hun" signifies time and season according to the Thadous, and it is celebrated for seven days, making it a grand affair for the community.

Why Hun is Important for the Thadou Tribe:

- Celebration of New Year: Hun marks the arrival of the New Year for the Thadou tribe. It is a time when they bid farewell to the old year and welcome the new year with joy and enthusiasm. It is a time of new beginnings and fresh hopes for the community.
- Religious Affair: Hun is an annual religious affair for Thadou families. During the festival, the Thadou people acknowledge the existence of the all-powerful God and seek blessings for the well-being of their families and communities. It is a time of deep reverence and spirituality for the Thadou tribe.
- Peace and Well-being: On the occasion of Hun, chief and his Council of Ministers satisfy themselves that peace prevails in their chieftdom and there is no sickness. It is a time to ensure the well-being and prosperity of the community, and the festival serves as a platform for the leaders to assess the state of affairs in their chieftdom.
- Acknowledgment of Women's Labor: The labor of women is acknowledged during Hun celebrations. Women play a vital role in Thadou society, and their contributions are recognized and appreciated during this festival. It is a time to honor and appreciate the role of women in Thadou culture and society.
- Children's Joy and Respect: For children, Hun is a highly awaited occasion as they show great love and respect to their maternal grandparents during the festival. It is a time for family bonding and inculcating traditional values in the younger generation.
- Annual Village Assembly: The 7th day of Hun is significant as it is the day of the Annual Village Assembly. It is a time when the entire community comes together to discuss and address important issues, make decisions, and plan for the future. It is a platform for community governance and decision-making.



Pushkaralu festival

Why in News

The 12-day Pushkaralu festival of Telugu-speaking people commenced on April 22 in Varanasi, Uttar Pradesh.

Important Points

- The festival, in which pilgrims will worship their ancestors and the river Ganga, is being organized in Kashi this year after a gap of 12 years due to a special combination of planetary transits.
- According to astrology, every river is associated with a zodiac sign and the festival of Pushkaralu starts when Jupiter moves from one zodiac to another.
- According to the Hindu Mythology, it is believed that Pushkara is a sage who knows Jal Tatva Siddhi and who is known to be the Teerthapalaka (the ruler of holy water).
- On a request from Brahaspati (Jupiter), Pushkara decided to enter one of the 12 sacred rivers — Ganga, Yamuna, Godavari, Krishna, Kaveri, Bhima, Tapti, Narmada, Saraswati, Tungbhadra, Sindhu, and Pranhita.
- The first 12 days when Jupiter enters the zodiac sign of a particular river is known as Aadi Pushkaralu and the last 12 days when Jupiter exits from a zodiac sign is considered as Antya Pushkaralu.
- Pushkaralu is considered to be one of the most sacred periods when devotees visit different holy rivers to take a holy dip.
- It is believed that devotees who take a holy dip in Ganga river and other sacred rivers, get free from the sins committed in the past and get salvation.



The Competition (Amendment) Bill, 2023

Why in News

Lokasabha has passed the Competition (Amendment) Bill, 2023 recently.

Important Points

- One of the major changes in the amended law is that it affords the Competition Commission of India (CCI) the ability to penalise entities found engaging in anti-competitive behaviour based on their global turnover.
- So far, the penalties were decided as a percentage of erring entities' "relevant" turnover, which typically means their annual domestic turnover.
- While the new provision on global turnover will not be exclusively applicable to tech companies, they are likely to be the most aggrieved by it given the nature of their business which cuts across geographies.
- In the European Union, the penalty imposed on an entity for anti-competitive activity has been limited to 10 per cent of the overall annual turnover of the company. The 10 per cent limit can be based on the turnover of the group to which the company belongs if the parent of that group "exercised decisive influence over the operations of the subsidiary during the infringement period".
- The definition of "turnover" had been a widely debated subject in the competition law landscape, and it was in 2017 when the Supreme Court had fixed how it should be determined in such cases. On 8 May, 2017, in a landmark judgement, the top court had upheld the principle of "relevant turnover" for determination of penalties in competition law contraventions.
- In a case related to alleged contravention of the Competition Act, 2002 in the public procurement of Aluminium Phosphide tablets by the Food Corporation of India, the CCI had imposed a penalty at the rate of 9 per cent of the total turnover of the concerned tablet manufacturers, Excel Corp. Care Limited, United Phosphorus Limited, and Sandhya Organic Chemicals Private Limited.
- The Competition Appellate Tribunal (COMPAT) had however later said that the turnover will have to be "relevant" turnover, that is turnover derived from the sales of goods or services.
- Ultimately, the Supreme Court had held that the imposition of penalty adopting the criteria of "relevant turnover" will be more in tune with ethos of the Act and the legal principles which surround matters pertaining to imposition of penalties.
- The changes in the Competition (Amendment) Bill, 2023 afford the CCI a greater say in mergers and acquisitions as entities will have to seek its approval in case a deal value is worth more than Rs 2,000 crore, and both the parties have a substantial business operation in India.
- The CCI could also incentivise parties in ongoing cartel investigations in terms of lesser penalty to disclose information regarding other cartels.
- The bill has also reduced the time limit for approval of mergers and acquisitions from the existing 210 days to 150 days.
- It seeks to broaden the scope of anti-competitive agreements.
- It introduces deal value threshold as an additional criterion for notifying M&As to capture killer acquisitions in digital markets which were hitherto falling below the notification criteria due to asset and revenue-light business models of new age companies.
- It provide a limitation period of three years for filing cases relating to anti-competitive agreements and abuse of dominant position.
- It introduces a settlement and commitment framework.
- Itintends to deepen the scope of inter-regulatory consultations.
- It proposes to incentivise parties in ongoing cartel investigations in terms of lesser penalty to disclose information regarding other cartels (leniency plus).

The Himachal Pradesh Sukhashraya Act, 2023

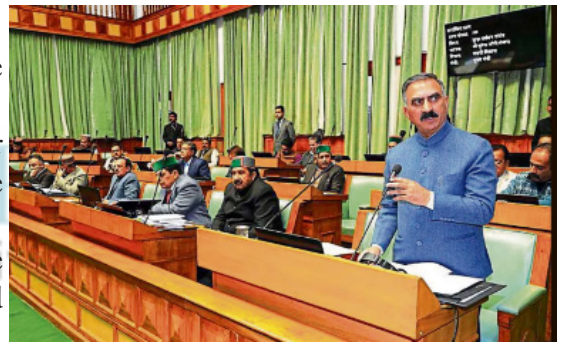
Why in News

Himachal Pradesh has passed a Bill for the welfare of orphans and persons with special needs recently.

Important Points

About the Bill:

- The Himachal Pradesh Sukhashraya (Care, Protection, and Self-Reliance of Children of the State) Act, 2023 states that orphans and persons with special needs will become 'children of the state'.
- The State government will provide financial and institutional benefits between the age of 18-27 years.
- The Act facilitates that such children and adults will be provided with vocational training, skill development, and coaching to become active members of the mainstream of society.
- The Act has defined orphans as those who are currently without biological parents or whose parents have been medically proven to be incapacitated of taking care.
- The ambit is also extended to children relinquished by guardians or parents for social, emotional, and physical factors.
- The benefits of the Act will also be given to 'children in need of care and protection' such as those found who are without a home or working in contravention of labour laws.
- Children forced to beg or whose guardians have threatened, abused, or intended physical and emotional harm, will also be taken care of by the state government.
- Children at risk of marriage before the legal age, impacted by a crime, or vulnerable to drug abuse will also be under the scope of the Act.
- As per initial estimates, more than 6,000 such persons have been identified.
- The beneficiaries will be given Rs 5,000 in summer and a similar amount in winter to buy clothes. A sum of Rs 500 will be given to the children to celebrate major festivals.
- The orphans will be allowed to take a vacation within the state and the government will sponsor train tickets and accommodation for 10 days in a 3-star hotel.
- On attaining the age of majority, the government will provide them Rs 4,000 monthly allowance for daily expenses in college.
- In institutions like ITI and other government colleges, the hostel fees of the beneficiaries will also be taken care of.
- Orphans who wish to establish their own start-ups will be given a token corpus to incentivize entrepreneurial pursuits.
- The allowance will be given to Ph.D. students too and a fixed amount of money will also be given at the time of marriage.
- The beneficiaries will also be given three biswas of land in order to build their own homes.
- The government has formed a Mukhya Mantri Sukhashraya Sahayata Kosh (fund) of Rs 101 crore to which all MLAs have contributed Rs 1 lakh.



Safeguards mentioned in the Act

- The state government shall make arrangements for ex-residents of child care institutions till the age of 21 years and in exceptional cases as may be prescribed up to the age of 23 years; and for orphans, by providing for their education, giving them employable skills and placement as well as providing them places for a stay in After Care Institutions.
- Recurring deposit accounts shall be opened for each child and orphan. The state government shall make contributions to these accounts as per prevalent rates.
- A child welfare committee will be established in each district which will look into the demands of children in need.
- The committee will overlook the admissions in aftercare institutions and carry out surveys to identify orphans.

AAP gets national party status

Why in News

Recently, the Election Commission of India accorded the status of national party to the Aam Aadmi Party while stripping the Trinamool Congress, the NCP, and the CPI of the coveted status.

Important Points

- In separate orders, the Election Commission also revoked the state party status granted to RLD in Uttar Pradesh, BRS in Andhra Pradesh, PDA (Manipur), PMK (Puducherry), RSP (West Bengal) and MPC (Mizoram).
- In its announcement, the Election Commission also said that the NCP and Trinamool Congress will be recognised as state parties in Nagaland and Meghalaya, respectively, based on their performance in the recently concluded assembly elections.

What is the national party status?

- The Election Commission lists political parties as “national party”, “state party” or “registered (unrecognised) party”.
- The conditions for being listed as a national or a state party are specified under the Election Symbols (Reservation and Allotment) Order, 1968.
- For recognition as a national party, the conditions specified under Paragraph 6B of the 1968 Order are:
 1. 6% vote share in the last Assembly polls in each of any 4 states, as well as 4 seats in the last Lok Sabha polls; or
 2. 2% of all Lok Sabha seats in the last such election, with MPs elected from at least 3 states; or
 3. Recognition as a state party in at least 4 states.
- Once recognised as a national or a state party, a political party retains that status irrespective of its performance in the next elections.
- It loses the given status only if it fails to fulfill any of the conditions for two successive Assembly and two successive Lok Sabha elections.
- An important advantage of being recognized is getting the reserved symbol, which plays a vital role in elections.
- For National Parties, the reserved symbol can be used across the country by its contesting candidates.
- The other advantages to the recognized parties are subsidized land for party offices, free air time on Doordarshan & All India Radio, supply of electoral roll copies free of cost during elections etc.

AAP new national party

THE ELECTION COMMISSION RECOGNISED AAM AADMI PARTY AS A NATIONAL PARTY WHILE THE TRINAMOOL CONGRESS, NCP AND THE CPI WERE STRIPPED OF THE COVETED STATUS

STATE PARTY STATUS REVOKED TO

- Rashtriya Lok Dal (Uttar Pradesh)
- Bharat Rashtra Samithi (Andhra Pradesh)
- People's Democratic Alliance (Manipur)
- Pattai Makkal Katchi (Puducherry)
- Revolutionary Socialist Party (West Bengal)
- Mizoram People's Conference (Mizoram)
- Nationalist Congress Party (Goa, Manipur and Meghalaya)

Parties can regain their national and State party status based on their performance in future electoral cycles as also the Lok Sabha elections due next year: say Election Commission officials

- Country now has six national parties – BJP, Congress, Bahujan Samaj Party, CPI(M), National People's Party and AAP
- NCP and TMC will be recognised as State parties in Nagaland and Meghalaya respectively based on their performance in the recently concluded Assembly elections
- Lok Janshakti Party (Ram Vilas) in Nagaland gets "recognised state political party" status
- According to sources, TMC is exploring legal options to challenge EC decision

“National party in such a short time? This is nothing less than a miracle. Many congratulations to all. Crores of people from the country have taken us here. People expect a lot from us. Today people have given us this huge responsibility. Lord, bless us to fulfil this responsibility well”

— ARVIND KEJRIWAL, AAP convener and Delhi Chief Minister

“National recognition is of course important from a technical point of view. CPI's recognition is in the hearts of the toiling masses. It is built up with the blood, sweat and tears of the fighting people. The party will intensify its battle for democracy, secularism and socialism”

— BINOY BISWAS, CPI National Secretary

What a Party Loses After Losing 'National' Status?

The Election Commission holds the authority to strip national parties of the coveted status. Once this is done –

- The party symbol will not be visible at the beginning of the EVM or ballot paper.
- The particular party may or may not be invited to attend Election Commission meetings.
- The political funding of the party may be affected.
- The party may not be allowed to connect to the masses through Doordarshan and All India Radio.
- The number of star campaigners will be reduced from 40 to 20 during elections.
- The party will have to use a separate symbol to contest elections in states.

List of National Parties in India now:

Following the rejig by the Election Commission, below is the list of national parties in India now-

1. Aam Aadmi Party.
2. Bahujan Samaj Party.
3. Bharatiya Janata Party.
4. Communist Party of India (Marxist).
5. Indian National Congress.
6. National People's Party (NPP)

UGC's National Credit Framework

Why in News

The University Grants Commission (UGC) recently released the National Credit Framework (NCrF).

Important Points

About the framework

- The National Credit Framework (NCrF) is a single meta-framework that works on the accumulation of credits earned through school education, higher education and vocational & skill education.
- Under this system credit will be assigned to academic learning and skill learning.
- It aims to integrate general (academic) education, vocational education, and experiential learning including relevant experience and proficiency/ professional levels acquired.
- The system is based on the National Education Policy, NEP 2020.
- It is developed jointly by UGC, AICTE, NCVET, NIOS, CBSE, NCERT, DGT, Ministry of Education, and Ministry of Skill Development.
- The credit system is already being followed by IITs, IIMs, NITs and other INIs.

Some of the benefits of NCrF

- To remove the separations between educational streams, General and Vocational education, Curricular & other activities.
- Establishing equivalence between general and vocational education & training/skilling.
- Mobility between and within General and vocational education & training/skilling
- Provisions for lifelong learning through multiple entry and multiple exit(ME-ME) options
- The credit framework provides for a comprehensive and practical approach to include all dimensions of learning i.e. academic education, skilling and experiential learning including relevant experience and professional levels acquired.
- The credits earned after the completion of academic education, vocational education, training & Skill education – the collected credits will be stored in the Academic Bank of Credits (ABC).

Different NCrF Credit Levels

- The NCrF has proposed that the maximum levels within this framework shall uniformly be up to level 8. The assignment of Credit levels under NCrF will be based on the cumulative number of years of learning with an assessment
- The credit level that can be attained after completion of school education i.e. grade 5th will be level 1, grade 8th will be level 2, grade 10th will be level 3 and grade 12th will be level 4.
- The higher education shall be from credit levels of 4.5 and to level 8.
- For Vocational Education, Training and Skilling, the NCrF credit levels are from level 1 to 8 wherein level 1 is of the lowest level of competence and complexity while level 8 indicates the highest level of competence and complexity.

What is a Notional Learning Hour?

- Notional hours refer to the time that the average student would need to attend all classes, study for tests and do assignments and homework.
- The total Notional Learning Hours for one year of education/ learning across school education, higher education and vocational education, training and skilling have been agreed to be 1200 Hrs per year for the purpose of assignment of credits for which the students/ learners shall be awarded 40 Credits subject to assessment.

Natural Justice and Proportionality

Why in News

In its recent judgment, the Supreme Court upheld Media One's appeal on two procedural grounds, namely, principles of natural justice and proportionality.

Important Points

What are the principles of natural justice?

- Natural justice is an expression of English common law, and involves a procedural requirement of fairness.

- The principles of natural justice have great significance in the study of Administrative law. It is also known as substantial justice or fundamental justice or Universal justice or fair play in action.
- The principles of natural justice are not embodied rules and are not codified. They are judge made rules and are regarded as counterpart of the American procedural due process.
- This principle is based on the following rules-
- No one should be a judge in his own cause.
- Justice should not only be done, but manifestly and undoubtedly be seen to be done.
- The above rules make it clear that judiciary must be free from bias and should deliver pure and impartial justice. Judges must act judicially and decide the case without considering anything other than the principles of evidence.

What did the court say on these principles?

- The bench allowed the challenge to the order of the Ministry of Information and Broadcasting (MIB) and judgment of the High Court on account of the principles of natural justice constitutionalized by its judgment in its 1978 ruling in “Maneka Gandhi vs Union of India”.
- The Court observed that “that there is an inherent value in securing compliance with the principles of natural justice independent of the outcome of the case.”
- The court held that actions which violate procedural guarantees can be struck down even if non-compliance does not prejudice the outcome of the case.
- It also stated that “the core of the principles of natural justice breathes reasonableness into procedure”.
- Additionally, the court clarified that in the present case, the burden is on the claimant to prove that the procedure followed infringes upon the core of procedural guarantees.
- In its judgment, the court also observed that the duty to act fairly that is derived from common law is not exhaustively defined in a set of concrete principles, and courts, in India and abroad, have demonstrated considerable flexibility in the application of the principles of natural justice by fine-tuning them to different situations.
- However, the court also added that such a concept of natural justice “cannot be put into a ‘straitjacket formula’” and is “incapable of a ‘precise definition’”.
- The Court asserted that Media One had proved that MBL’s right to a fair hearing “was infringed by the unreasoned order of the MIB dated 31 January 2022” and “the non-disclosure of relevant material to the appellants, and its disclosure solely to the court.”
- In such a situation, the burden shifts on the Centre to prove that the procedure that was followed was reasonable and in compliance with the requirements of Articles 14 and 21 of the Constitution, the court noted while adding that the standard of proportionality was used to test the reasonableness of the procedure in the present case.
- Finally, the court upheld its judgments in Ex-Army men’s Protection Services and Digi Cable Network to hold that while “principles of natural justice may be excluded when on the facts of the case, national security concerns outweigh the duty of fairness”, “the state has been unable to prove that these considerations arise in the present factual scenario.”
- The Court added that though confidentiality and national security are legitimate aims for the purpose of limiting procedural guarantee, a “blanket immunity from disclosure of all investigative reports cannot be granted.”



What is doctrine of proportionality?

- Doctrine of proportionality finds its place in the Administrative Law and is used at the stage of Judicial Review.
- The doctrine asserts that there must be a reasonable nexus between the desired result and the measures taken to reach that goal.
- The action taken must not be shockingly disproportionate to the consciousness of the court and the said action can then be challenged by way of judicial review.
- It can be better understood with the help of an illustration. Let’s say, if in a workplace some workers remain absent from their duty then the punishment for it must be proportional, that is, the employer may treat it as leave without pay and may warn them or may even levy a fine but to dismiss them from service permanently would be disproportional.
- Sir John Laws has described ‘proportionality’ as a principle where the court is concerned with the way in which the decision maker has ordered his priority.

Draft National Curriculum Framework for school education

Why in News

Recently, the Ministry of Education has released the pre-draft of the National Curriculum Framework (NCF) for school education for public feedback.

Important Points

Background

- As a follow-up of the NEP 2020, development of four National Curriculum Frameworks, viz., NCF for School Education, NCF for Early Childhood Care and Education, NCF for Teacher Education and NCF for Adult Education has been initiated.
- National Steering Committee under the Chairpersonship of Dr. K. Kasturirangan was set up by the Ministry of Education to undertake and guide the development of NCFs.

About the framework:

- The NCF, which was last revised in 2005 under the Congress-led UPA government, is a key document based on which textbooks are prepared. So the current set of NCERT textbooks, barring the deletions, are all based on the NCF 2005.
- Before 2005, the NCF was revised thrice, including once under the NDA government led by Atal Bihari Vajpayee.
- Under the latest round of revision, which is underway since September 2021, draft frameworks on early childhood care and education and school education have already been prepared, while work on teacher and adult education is underway.
- Apart from textbooks, the NCF, after its adoption by the CBSE and other state boards, will also restructure various other aspects of the classroom, including choice of subjects, pattern of teaching, and assessment.
- The government recently announced that textbooks based on the revised NCF will be taught in schools starting from the 2024–25 academic session. But a specific timeline on the implementation of the changes on exams, assessment and subject design has not been made available yet.

What are the proposed changes in design of subjects and exams at secondary stage?

- Among the most significant recommendations in the draft NCF on school education are about choice of subjects and exams in classes IX–XII.
- Over two years, in class IX and X, the students will have to study 16 courses.
- The suggested curricular areas are Humanities (that includes languages), Mathematics & Computing, Vocational Education, Physical Education, Arts, Social Science, Science, and Inter-disciplinary Areas.
- Students will have to clear eight board exams, each of which will assess their hold on courses they learnt in class IX and X, to obtain the final certification which will factor in their performances in exams held over two years.
- Under the current system, there are no such links between class IX– and X and students across most boards have to pass at least five subjects to clear class X.
- The committee has recommended more changes at the level of Class XI and XII, including the introduction of a semester system in class XII.
- In terms of subjects, students will be given a choice to pick 16 courses from eight curricular areas.
- Currently, in Class 12, CBSE students appear for the board exam in at least five subjects and a maximum of six and there is little scope for them to pursue multidisciplinary education.
- In other words, a student who has picked a combination of Physics, Mathematics and Chemistry cannot simultaneously study History or Political Science.
- But under the proposed system, that will be possible as the NEP envisages “no hard separation” among arts, humanities, and sciences.
- Modular Board Examinations will be offered as opposed to a single examination at the end of the year.
- The final certification will be based on the cumulative result of each of the examinations.



**National Curriculum Framework
for School Education
2023**

Animal Birth Control(ABC) Rules, 2023

Why in News

The Central Government has notified the Animal Birth Control Rules, 2023 vide G.S.R 193(E) dated 10th March, 2023 under Prevention of Cruelty to Animal Act, 1960 and after superseding the Animal Birth Control (Dog) Rules, 2001.

Important Points

- According to the World Health Organization, 36% of the world's and 65% of Southeast Asia's rabies deaths happen in India.
- The National Rabies Control Programme has recorded 6,644 clinically suspected cases and deaths of human rabies in 2012-22.
- The Animal Birth Control Rules 2001 laid down the law for the only viable dog population management mechanism but its implementation was scanty and monitoring was altogether absent over two decades.

Key rules:

- They purportedly respond to three stimuli: strays cannot be relocated, as the Supreme Court of India has held; must not face cruelty; and must be cared for.
- The 2023 Rules require strays to be caught, vaccinated, neutered, and released back.
- The 2023 Rules also ask residents' welfare associations to care for stray dogs and feed them away from the children and the elderly, at fixed intervals. This could further the dogs' homelessness, and thus susceptibility to disease, injury, and discomfort.
- In the process, the Rules also transform "stray dogs" into a new class of "community animals".
- The 2023 Rules, superseding the ABC (Dog) Rules, 2001, say that the birth control programmes for sterilisation and immunisation of stray dogs are to be carried out by the respective local bodies/ municipalities/ municipal corporations and panchayats.
- The Municipal Corporations need to implement the ABC and Anti Rabies Program jointly.
- The Rules also provides the guidelines how to deal with the human and stray dog conflicts without relocating the dogs in an area.
- One of the requirements under the Rule is that the Animal Birth Control Programme needs to be carried out by the Animal Welfare Board of India(AWBI) recognized organization specifically recognised for Animal Birth Control programme.

SALIENT POINTS OF ANIMAL BIRTH CONTROL RULES

▶ Local authority is responsible for **deworming, vaccination, and sterilization of stray dogs**

▶ Local authority to ensure adequate facilities at each animal birth control centre

▶ Resident welfare associations/Apartment owner association or local body representatives are responsible for providing necessary arrangements for feeding community animals and establishing methods for conflict resolution between animal caregivers and RWAs/AOAs or other residents

▶ Reasons for capturing stray dogs and guidelines for their sterilization, immunization and release using humane methods



▶ **Sterilization and immunization of domestic or feral cats**

▶ Guidelines for resolving complaints related to **dog bites or rabid dogs**

▶ Progress reports on capturing, sterilization and vaccination of stray dogs to be submitted on a monthly and annual basis

Cinematograph (Amendment) Bill 2023

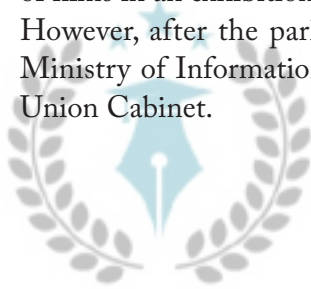
Why in News

The Union Cabinet recently approved the Cinematograph (Amendment) Bill 2023.

Important Points

- The Union Cabinet approved the Cinematograph (Amendment) Bill that proposes to introduce more categories for film certification and also brings in stricter penal provisions to prevent film piracy.
- The Bill will be presented in the Parliament in the upcoming session.
- The purpose of the Bill is to ensure that content is not affected by piracy and safeguards the interest and investments of producers and filmmakers.
- The Bill proposes imprisonment ranging from three months to three years and a fine of Rs 3-10 lakh which may extend to a sum of up to 5 per cent of the audited gross production cost of the film, to prevent film piracy.

- Under the proposed amendments pertaining to the certification of films under the ‘unrestricted public exhibition’, the Bill has introduced new film certification categories including ‘U’ or universal, ‘U/A 7+’, ‘U/A 13+’, and ‘U/A 16+’, besides an ‘A’ rating for content restricted for viewing by only adults.
- At present, under the Indian Cinematograph Act, three categories of film certification exist - unrestricted public exhibition or ‘U’, parental guidance required for children under 12 or ‘U/A’, and adult films or ‘A’.
- The proposed amendments allowing the sub-categorisation for film certification purposes, appear to be in line with the age-based restrictions recently implemented for over-the-top (OTT) content providers under the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (Intermediary Rules).
- In June 2021, the government had issued a notification seeking public comments on the Cinematograph (Amendment) Bill 2021, proposing two further amendments to the Cinematograph Act than those already proposed in 2019.
- The purpose was to make the process of sanctioning films for exhibition more effective, in tune with the changed times and curb the menace of piracy.
- These were the introduction of age-based categories for film certification and penal provisions imposed for film piracy.
- Earlier in February 2019, the Government had introduced the Cinematograph (Amendment) Bill, 2019 in Rajya Sabha, with the objective of curbing and punishing large-scale film piracy.
- Also, the 2019 version proposed prohibiting a person from using a recording device to make a copy or transmit a film, without the written authorisation of the copyright owner of the film.
- It aimed to tackle film piracy by including penal provisions for unauthorised cam-cording and duplication of films in an exhibition facility.
- However, after the parliamentary committee on IT had made a slew of changes to the 2019 bill, the Ministry of Information and Broadcasting brought its 2021 version, which has now been cleared by the Union Cabinet.



TRANSFORM IAS
Transforming Lives with Education

Ganga-India's first cloned gir calf

Why in News

Scientists of the National Dairy Research Institute (NDRI) in Karnal have achieved new milestone by producing country's first Indigenous Gir cow clone calf.

Important Points

- The female calf named Ganga was born on March 16 2023.
- To clone the Gir, oocytes are isolated from live animals using ultrasound-guided needles, and then matured for 24 hrs under control conditions.
- The somatic cells of elite cows are used as donor genomes, which are fused with OPU-derived enucleated oocytes.
- Following chemical activation and in-vitro culture, the developed blastocysts are transferred into recipient mothers to deliver the Gir calf.
- NDRI in collaboration with Uttarakhand Livestock Development Board (ULDB), Dehradun, has initiated the work on the cloning of indigenous cows such as Gir, Sahiwal, and Red Sindhi.
- It is pertinent to mention here that the institute had produced the world's first cloned Gir calf in 2010, but it could survive only for five-six days.
- Later, they had produced Garima-2 on August 22, 2010, which has so far survived for over 12 years.
- Scientists also produced the first male calf Shreshth on Aug 26, 2010, with the same technique and application of good germplasm.



Gir cows

- The Gir or Gyr is one of the principal Zebu breeds originating in India.
- The Gir cow is a famous Indian-born dairy cattle breed. Gir's cattle native tract is Gir hills and forests of Kathiawar.
- This includes Gujarat districts of Amreli, Bhavnagar, Junagadh, and Rajkot. The name of the breed comes from the forest of Gir.
- They are very hardy and well-known for their tolerance to conditions of stress and resistance to various tropical diseases.
- The average Gir Cow Milk production is 6-10 liters/day.
- Gir cattle's average lifespan is around 12-15 years. And during their lifetime, a cow develops 10-12 calves.
- Gir is becoming popular among the dairy farmers because of its docile nature and goodness of milk, adding that outside India, Gir cattle are also very popular and have been exported to Brazil, the United States, Mexico, and Venezuela for the development of zebu cows.
- Indigenous cattle breeds such as Gir, Sahiwal, Tharparkar, and Red-Sindhi, play a pivotal role in milk production and growth of the Indian dairy industry.

Salt marshes

Why in News

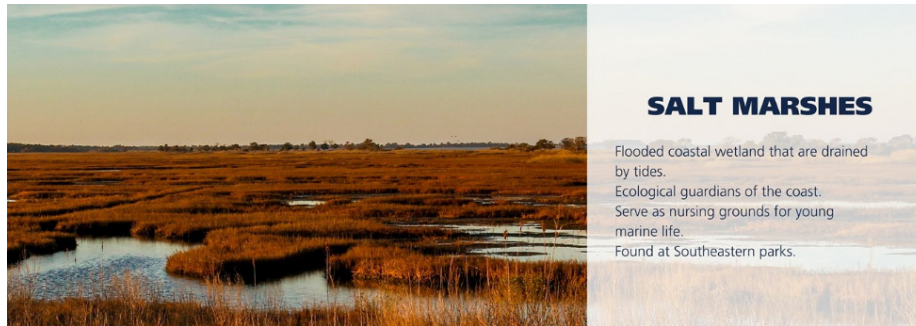
According to a new research, more than 90 per cent of these biologically productive ecosystems may soon succumb to sea level rise by the turn of the century.

Important Points

Salt Marshes

- Salt marshes are coastal wetlands that are flooded and drained by salt water brought in by the tides.
- Salt marshes are coastal wetlands that are flooded and drained by salt water brought in by the tides.

- They are marshy because the soil may be composed of deep mud and peat. Peat is made of decomposing plant matter that is often several feet thick.
- Peat is waterlogged, root-filled, and very spongy. Because salt marshes are frequently submerged by the tides and contain a lot of decomposing plant material, oxygen levels in the peat can be extremely low—a condition called hypoxia.
- Hypoxia is caused by the growth of bacteria which produce the sulfurous rotten-egg smell that is often associated with marshes and mud flats.
- Salt marshes occur worldwide, particularly in middle to high latitudes.
- Salt marshes also protect shorelines from erosion by buffering wave action and trapping sediments.
- They reduce flooding by slowing and absorbing rainwater and protect water quality by filtering runoff, and by metabolizing excess nutrients.



Important Findings

- Scientists from the Marine Biological Laboratory (MBL) have been tracking vegetative cover in Great Sippewissett Marsh in Falmouth, Massachusetts, for the last 50 years to analyse the implications of higher nitrogen levels on marsh grass species.
- The study noted that increased nitrogen favoured higher levels of vegetation and accretion of the marsh surface.
- However, these ecosystems won't be able to outpace submergence from global sea level rise.
- Even under conservative sea level estimates...more than 90 per cent of the salt marshes of the world will likely be submerged and disappear or be diminished by the end of the century.
- At some point, if the sea level continues to increase at the rates that they anticipate, there will even be no more room for the low marsh plants.
- The only choice for salt marshes then would be to migrate landward. But even this choice can be impacted by anthropogenic activities and other factors.
- Marshes all over the globe experience 'coastal squeeze,' where their movement is obstructed by sea level rise, anthropogenic activities and geographical factors.
- For instance, a seawall that protects a home from inundation will prevent a wetland from naturally migrating to higher ground.
- These barriers, whether they be geographic like a hill or a cliff, or people building along the edges of the ecosystem, constrain the potential for landward marsh migration.
- In a sea level rise scenario, the only solution left with plants will be to colonise new areas or to go uphill. But that migration may be impossible in some places.

The first International Day of Zero Waste

Why in News

The first-ever International Day of Zero Waste was observed on March 30, 2023, encouraging everyone to prevent and minimise waste and promoting a societal shift towards a circular economy.

Important Points

- The United Nations Environment Programme (UNEP) and UN Human Settlements Programme (UN-Habitat) established the day in response to the worsening impacts of waste on human health, the economy and the environment.
- The day calls upon all stakeholders, including governments, civil society, businesses, academia, communities, women and youth to engage in activities that raise awareness of zero-waste initiatives.

- The day was established through a UN General Assembly resolution that followed other resolutions on waste, including the March 2, 2022 UN Environment Assembly’s commitment to advance a global agreement to end plastic pollution.
- Waste generation has increased massively around the world in recent decades, and there are no signs of it slowing down, according to data analysis website Statista.
- The International Day of Zero Waste aims to bring these myriad impacts of waste to the world’s attention and encourage global action at all levels to reduce pollution and waste.
- By 2050, worldwide municipal solid waste generation is expected to have increased by roughly 70 per cent to 3.4 billion tonnes.
- Humanity generates more than 2 billion tonnes of municipal solid waste annually, of which 45 per cent is mismanaged, stated a press release by UNEP.
- Waste comes in all forms and sizes — including plastics, debris from mining and construction sites, electronics and food.
- It disproportionately impacts the poor, with up to 4 billion people lacking access to controlled disposal facilities.



Sarus crane

Why in News

A 35-year-old man from Mandkha, Uttar Pradesh, was booked under the Wildlife Protection Act, 1972, for “illegally” keeping and nursing an injured Sarus crane (*Grus Antigone*) he found in his village.

Important Points

About the bird

- It is a large nonmigratory crane found in parts of the Indian subcontinent, Southeast Asia, and Australia. The tallest of the flying birds, standing at a height of up to 1.8 m (5 ft 11 in), they are a conspicuous species of open wetlands in South Asia, seasonally flooded Dipterocarpus forests in Southeast Asia, and Eucalyptus-dominated woodlands and grasslands in Australia.
- The sarus crane is easily distinguished from other cranes in the region by its overall grey colour and the contrasting red head and upper neck. They forage on marshes and shallow wetlands for roots, tubers, insects, crustaceans, and small vertebrate prey.
- Like other cranes, they form long-lasting pair bonds and maintain territories within which they perform territorial and courtship displays that include loud trumpeting, leaps, and dance-like movements.
- In India, they are considered symbols of marital fidelity & it is the state bird of Uttar Pradesh, believed to mate for life and pine the loss of their mates, even to the point of starving to death.
- The main breeding season is during the rainy season, when the pair builds an enormous nest “island,” a circular platform of reeds and grasses nearly two meters in diameter and high enough to stay above the shallow water surrounding it. Increased agricultural intensity is often thought to have led to declines in sarus crane numbers, but they also benefit from wetland crops and the construction of canals and reservoirs. The stronghold of the species is in India, where it is traditionally revered and lives in agricultural lands in close proximity to humans. Elsewhere, the species has been extirpated in many parts of its former range.



What is the Wildlife Protection Act?

- The Wildlife Protection Act came into force on September 9, 1972, to “provide for the protection” of wild animals, birds and plants to ensure the “ecological and environmental security of the country.”

- It aims to conserve protected species in two main ways: firstly, by prohibiting their hunting and secondly by protecting their habitat through the creation and regulation of sanctuaries, national parks, reserves, etc.
- Further, the Act prohibits capturing or hunting any species of animals listed under Schedules I-IV, barring a few exceptions such as hunting a diseased or dangerous animal or bird constituting a threat to human life or property or for scientific research or management.
- Broadly, offences under the Act can be divided into three categories; hunting under Sections 9, 17A, and 2(16); unauthorised possession, transport, and trade under Sections 40, 42, 43, 48, 48A, 49 and Chapter VA; and offences related to protected areas or habitat destruction under Sections 27, 29-36 and 38.
- “Hunting” under Section 2 (16) of the Act includes not just the act of killing or poisoning a wild or captive animal, but even an attempt to do so.
- Additionally, it lists “capturing, coursing, snaring, trapping, driving or baiting any wild or captive animal” and attempts for the same.
- A “captive animal” is defined under the WPA as any animal, specified in Schedule I-IV, which is captured or kept, or bred in captivity.
- Even injuring or destroying any part of the animal or its eggs or nests is an offence punishable under Section 9 of the Act.

Bandipur Tiger Reserve

Why in News

Bandipur has completed 50 years as a Project Tiger Reserve on April 1, 2023.

Important Points

About Bandipur Tiger Reserve(BTR)

- Bandipur was formed as National park by including most of the forest areas of the then Venugopala Wildlife Park established under Govt. Notification dated 19th February 1941 and the area was enlarged in 1985 extending over an area of 874.20 Sq.Km.
- Biogeographically, BTR lies in one of the richest biodiversity areas of our country representing “5 B Western Ghats Mountains Biogeography Zone” (Rodgers & Panwar, 1988), surrounded by Mudumalai Tiger Reserve in the South, Wayanad Wildlife Sanctuary in the South West & on the North West Side the Kabini Reservoir separates the Bandipur and Nagarhole Tiger Reserve.
- The Northern side of the Tiger Reserve is surrounded by human dominated landscape with villages and agricultural lands.
- There were 12 tigers in Bandipur when Project Tiger was launched.
- The number of tigers utilising the park is 173 while the number of tigers within the reserve has been pegged at 126 as per the Status of Tigers Co-predators and Prey in India, 2018, published by the National Tiger Conservation Authority.
- But before the Wildlife Conservation Act, 1972, was passed, the erstwhile rulers of Mysuru had realised the imperatives of conserving the flora and fauna and the Mysore Game and Fish Preservation Act was passed in 1901.
- The Mysore Gazetteer has recorded that several forest areas were not only preserved as Game Reserves but Tiger Blocks were identified and restrictions imposed on shooting.
- Initially an area spread over 35 sq miles was declared as a Game Sanctuary in Chamarajanagar State Forest of Mysore district in 1931 and was protected for 10 years.
- However, the authorities subsequently realised that it was too small an area to constitute an ecological unit, and hence, in 1941, the Venugopal Wildlife Park was constituted extending over 800 sq km of which 82 sq miles was known as Bandipur Sanctuary within the park.
- The Gazetteer notes that the boundary extended from Moyar river forming the natural southern border towards the Nilgiris, and northwards, it stretched till Gundlupet including the 1,450 m high Himavad Gopalswamy Betta. The entire park was named after Venugopala, the deity at the temple atop the hill.
- Project Tiger was launched in 1973, Bandipur was among the first nine reserves to be brought under the flagship programme and it included most areas that were already a protected area as Venugopal Wildlife Park.

- It was upgraded to a national park and renamed as Bandipur and the adjacent reserve forests were included under it to extend its area to 874.20 sq km. At present, it has an area of 912.04 sq km while the adjoining Nugu Wildlife Sanctuary too has been incorporated under Bandipur, which is recognised as among the prime tiger habitats in the world.
- The Bandipur Tiger Reserve is an important component of the country's first biosphere reserve – Nilgiri Biosphere Reserve and the landscape spanning Bandipur, Nagarahole, Mudumalai, and Wayanad complex is home not only to the highest number of tigers in the country – about 724 – but is also to the largest Asian Elephant population.



About Project Tiger

- Launched from Jim Corbett National Park, Uttarakhand, the project is an ongoing scheme of the Ministry of Environment, Forest and Climate Change (MoEFCC).
- The centrally sponsored scheme is applicable in nine reserves of different States, namely Assam, Bihar, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Uttar Pradesh, and West Bengal.
- Project Tiger has been converted into a statutory authority, National Tiger Conservation Authority (NTCA) by providing enabling provisions in the Wild Life (Protection) Act, 1972 through an amendment, via Wild Life (Protection) Amendment Act, 2006.
- The NTCA addresses ecological and administrative concerns for conserving tigers.
- It provides a statutory basis for the protection of tiger reserves and provides strengthened institutional mechanisms for the protection of ecologically sensitive areas and endangered species.

Project Elephant completes 30 years

Why in News

President of India Droupadi Murmu has inaugurated the 'Gaj Utsav 2023' at the Kaziranga National Park in Assam to mark 30 years of Project Elephant.

Important Points

Project Elephant

- It is a project introduced by the Government of India in 1992 to provide financial and technical support to wildlife management efforts by states for their free-ranging populations of wild Asian Elephants.
- The project aims to ensure the long-term survival of the population of elephants in their natural habitats by protecting them, their habitats and migration corridors.
- Other goals of Project Elephant are supporting the research of the ecology and management of elephants, creating awareness of conservation among local people, providing improved veterinary care for captive elephants.

- Aims Project Elephant (PE) was launched by the Government of India in the year 1992 as a Centrally Sponsored Scheme with following objectives:
 1. To protect elephants, their habitat and corridors.
 2. To address issues of man-animal conflict.
 3. Welfare of captive elephants.
 4. to promote not to harm elephants for their tusks.
 5. Financial support is being provided to major elephant bearing States in the country.
 6. The Project is being mainly implemented in 16 States / UTs, viz. Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Jharkhand, Karnataka, Kerala, Maharashtra, Meghalaya, Nagaland, Orissa, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal.

Other initiatives for protection of Elephants

- MIKE programme-Project Elephant has been formally implementing MIKE (Monitoring of Illegal Killing of Elephants) programme of CITES in 10 ERs since January 2004.
- Hathi Mere Sathi-Ministry of Environment and forests (MOEF) in partnership with Wildlife Trust of India (WTI) has launched a campaign called Hathi Mere Sathi.
- The campaign aims to improve the conservation, protection and welfare of elephants in India.
- It was launched at Elephant- 8 ministerial meeting which was held in Delhi on 24th may 2011.
- The campaign Mascot Gaju- It focuses on various groups which include local people near elephant habitats, youth, policymakers and others. The scheme envisions to set up elephant centres all over the country in the elephant landscapes.
- The elephant task force (ETF) which was constituted by the Ministry of Environment and Forest has recommended the campaign to Take Gajah (the elephant) to the Prajah (the people) in order to increase public awareness and their participation in the conservation and welfare of elephants.
- Gaj Gaurav award- It is conferred for the commendable efforts of local communities, frontline staff and mahouts working at grass root level to conserve elephants in wild and captivity.
- The Indian elephant *Elephas maximus* occurs in the central and southern Western Ghats, North-east India, eastern India and northern India and in some parts of southern peninsular India.
- It is included in Schedule I of the Indian Wildlife (Protection) Act, 1972 and in Appendix I of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES).



GI tag to Cumbum grapes of Tamil Nadu

Why in News

Tamil Nadu's famous Cumbum Panneer Thratchai, also known as Cumbum grapes recently earned the Geographical Indication tag or GI tag.

Important Points

About Cumbum grapes

- The Cumbum valley also called Kambam Valley located at the Western Ghats in Tamil Nadu is known as the 'Grapes city of South India' and cultivates the Panneer Thratchai.
- The valley includes lands between Thekkadi Hills, Varusanadu Hills, and Kodaikanal Hills.
- This variety which is also known as Muscat Hamburg constitutes almost 85% of the grape-growing areas in Tamil Nadu.
- Theni district is one of the highest grapes producing areas of Panneer Thratchai.
- However, the 'Panneer' variety is chiefly associated with Cumbum Valley, where the cultivation area covers around 2,000 acres at 10 villages
- The agro climate and the soil condition of the Cumbum region is very conducive for the cultivation of the Muscat variety. This variety is popular for its quick growth and early maturity. This ensures that the crop is available in the market almost throughout the year.

- The rich soil and water of the land are said to enhance the flavor of the natural fruit. The grape bunches are medium to large in size and compact in nature.
- The grapes grown are suitable for making wine, spirit, jams, canned grape juice and raisins.
- The Panner grapes were first introduced in Tamil Nadu by a French priest in 1832.
- These grapes are rich in vitamins, tartaric acid and antioxidants and reduces the risk of some chronic diseases.
- They are also known for a superior taste apart from the purplish-brown colour.

What is GI Tag?

- According to the World Intellectual Property Organization or WIPO, a GI or Geographical Indication Tag is used for products which have specific geographical origin or have qualities that can be attributed specifically to the region.
- In addition, the qualities, characteristics or reputation of the product should be essentially due to the place of origin.
- Once a product gets this tag, any person or company cannot sell a similar item under that name.
- This tag is valid for a period of 10 years following which it can be renewed.



Environment Impact Assessment

Why in News

The Union government made over 100 changes in Environment Impact Assessment Notification in past 5 years.

Important Points

Environment Impact Assessment(EIA)

- It is a tool of environmental management forming a part of project approval and decision-making.
- The International Association for Impact Assessment (IAIA) defines an environmental impact assessment as “the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made”.
- The first country to give importance to EIA through its National Environmental Protection Act (NEPA) of 1969 was the United States .
- In India, EIA started in 1976-77 when the Planning Commission asked the Department of Science and Technology to examine the river-valley projects from an environmental angle.
- The Environment Impact Assessment (EIA) Notification, 2006 of India is the governing legal instrument to grant green clearance for establishment or expansion of an industry on the basis of the expected environmental impact of the project.
- The notification was introduced in 1994, and after several amendments, was revised in 2006.



Key changes:

- Records of the Union Ministry of Environment, Forest and Climate Change (MoEFCC) show that in the last five years, some 110 changes have been introduced in the 2006 EIA notification vide office memorandums. Office memorandums are available in public domain but the changes introduced in them do not have to undergo public consultation since they are not considered an act of change in law.
- The year 2022-23 saw the highest number of changes introduced in the 2006 notification in the last five years.
- Some of the major changes in the 2006 EIA notification introduced vide Office Memorandums over the years are:

- Rating system for state environment impact assessment authority (SEIAA):
- On January 17, 2022, the Centre rolled out a star-rating system for state environment impact assessment authorities (SEIAAs) to make them more efficient, transparent and accountable.
- A closer look, though, suggests that the rating system, instead, penalises them for adhering to the 2006 EIA notification, the blueprint for giving green nod to projects.
- The rating system, to be updated every month, is based on seven parameters that are geared towards pressurising SEIAAs to fast-track clearances, even if it means without due diligence.

The faulty compliance module:

- MoEFCC released a notification on June 14, 2022, detailing a compliance module for projects granted environmental clearance under the 2006 EIA notification.
- The module streamlines the compliance and monitoring process and avoids any delays in submission of the compliance reports to regulatory authorities.
- This notification is a step forward in streamlining the process and avoiding any gaps in the timely submission of compliance reports. However, it is not clear if these reports and supporting documents will be accessible to the public.
- Proponents upload this information on MoEFCC's Parivesh portal, using their unique credentials and, therefore, it may not be available in the public domain.
- Undermining the public hearing process:
- The 2006 EIA notification has defined the sectors that have to undergo the process of public hearing for project appraisal.
- The second component of it is "public hearing", wherein advertisement is given in the local newspapers to hold a gathering, presided over by the district magistrate/district collector/deputy commissioner, to hear the concerns of the stakeholders, especially the local residents, on the project.
- The ministry, vide an office memorandum in October 2021, allowed for 20 per cent expansion in production in mining of minor minerals (iron, manganese, bauxite and limestone) on the basis of only public consultation.
- Extra details sought are viewed as a burden: The Central and state authorities designated to give environmental clearance to the projects can seek extra and additional details from the project proponent if needed, as per the provisions of the 2006 EIA notification.

Change in coal source without amendment:

- The source of coal for combustion in a coal thermal power plant is required for estimating the emissions from transport of the coal from mine to the coal thermal power plant.
- In November 2020, the ministry allowed all coal thermal power plants to change coal source without accounting for any possible increase in emissions from its long distance transport.
- Violation cases get recognition under the 2006 EIA notification:
- In December 2017, MoEFCC made provision to grant "post-facto" clearance to the projects that are in violation of the 2006 EIA notification.
- Later, in July 2021, MoEFCC issued a standard operating procedure to regulate the projects under violations.
- However, the procedure not only gives legitimacy to the ongoing violations but also has provision to accommodate future violations, thus effectively compromising the "zero-tolerance for violation" stance.

The status of women in agrifood systems report by FAO

Why in News

Food and Agriculture Organization of the United Nations (FAO) has released a report on The status of women in agrifood systems recently.

Important Points

- The report is the first of its kind since 2010 (State of food and agriculture (SOFA) 2010–11: Women in agriculture – Closing the gender gap for development).
- It goes beyond agriculture to provide a comprehensive picture of the status of women working across agri-food systems — from production to distribution and consumption.

- The status of women in agrifood systems was prepared by a team from the Inclusive Rural Transformation and Gender Equality Division (ESP) of FAO.

What does the report say?

- Agrifood systems are a major employer of both women and men. Globally, 36 percent of working women are employed in agrifood systems, along with 38 percent of working men.
- For both women and men, this represents a decline of about 10 percentage points since 2005, driven almost exclusively by a reduction in employment in primary agricultural production.
- Globally, 21 percent of all workers in the fishery and aquaculture primary sector are women and almost 50 percent of all workers in the entire aquatic value chain (including pre- and postharvest) are women.
- Female workers are significantly more likely than male workers to work part-time or in other vulnerable positions.
- The gender gap in land productivity between female and male-managed farms of the same size is 24 percent.
- Agrifood systems are a more important source of livelihood for women than for men in many countries.
- In sub-Saharan Africa, 66 percent of women's employment is in agrifood systems, compared with 60 percent of men's employment.
- In southern Asia, 71 percent of women in the labour force work in agrifood systems versus 47 percent of men.
- Women engaged in wage employment in agriculture earn 82 cents for every dollar that men earn.
- Men have greater ownership or secure tenure rights over agricultural land than do women in 40 of 46 countries reporting on Sustainable Development Goal Indicator 5.a.1.
- The gender gap in women's access to mobile internet in low- and middle-income countries narrowed from 25 percent to 16 percent between 2017 and 2021, and the gender gap in access to bank accounts narrowed from 9 percentage points to 6 percentage points.
- While 75 percent of policy documents relating to agriculture and rural development from 68 countries recognize women's roles and/or women's challenges in agriculture and rural development, only 19 percent included policy goals related to gender.
- The gap in food insecurity between men and women widened from 1.7 percentage points in 2019 to 4.3 percentage points in 2021.
- Globally, 22 percent of women lost their jobs in the off-farm segment of agrifood systems in the first year of the COVID-19 pandemic, compared with only 2 percent of men.
- Closing the gender gap in farm productivity and the wage gap in agrifood-system employment would increase global gross domestic product by 1 percent (or nearly USD 1 trillion).
- This would reduce global food insecurity by about 2 percentage points, reducing the number of food-insecure people by 45 million.
- If half of small-scale producers benefited from development interventions which focused on empowering women, it would significantly raise the incomes of an additional 58 million people and increase the resilience of an additional 235 million people.
- A review of a portfolio of 13 agricultural development projects from nine countries in Africa and South Asia, the pro-Women's Empowerment in Agriculture Index (WEAI) indicated that the programme's impacts on empowerment were mixed.
- The projects included combinations of crops, livestock and nutrition interventions to increase income and nutritional outcomes.



Trojan asteroids

Why in News

NASA's Lucy mission is on an epic 6-billion-kilometre-long journey to study the Jupiter Trojan asteroids, and nearly one and a half years after it launched, it has finally caught a glimpse of the asteroids.

Important Points

- The Trojan asteroids are some of the more mysterious asteroids that humanity has discovered.

- These asteroids are made up of two swarms, trapped both in front of and behind Jupiter as it orbits our star.
- In 1772 the French mathematician and astronomer Joseph-Louis Lagrange predicted the existence and location of two groups of small bodies located near a pair of gravitationally stable points along Jupiter's orbit.
- Those are positions (now called Lagrangian points and designated L4 and L5) where a small body can be held, by gravitational forces, at one vertex of an equilateral triangle whose other vertices are occupied by the massive bodies of Jupiter and the Sun.
- There are currently over 4,800 known Trojan asteroids associated with Jupiter.
- About 65% of these belong to the leading group (L4) located 60° in front of Jupiter in its orbit, while the other 35% cluster around the L5 Lagrangian point and trail 60° behind Jupiter.
- Lucy will study the Trojan asteroids to discover if they are, in fact, relics of our early solar system.
- These images are the first in a series of planned observations designed to measure how the Trojan asteroids reflect light at higher angles than is observable from Earth.
- Though the asteroids are still just single points of light in these images, seen against a background of distant stars, the data will help the team choose exposure times for Lucy's close-up observations of its targets.
- Lucy will fly by these asteroids in 2027 and 2028 as the spacecraft travels through a swarm of small asteroids that lead Jupiter in its orbit around the Sun.
- Lucy is just more than a year into a 12-year voyage that entails close observation of nine of Jupiter's Trojans the first space mission ever to visit them and two main belt asteroids.



The Forest (Conservation) Amendment Bill, 2023

Why in News

The Forest (Conservation) Amendment Bill, 2023 was introduced in Lok Sabha recently.

Important Points

- The Bill amends the Forest Conservation Act, 1980 which provides for the conservation of forest land.
- The Bill adds and exempts certain types of land from the purview of the Act. Further, it expands the list of activities permitted to be carried out on forest land.
- De-reservation of forest & excluded activities
- The Act restricts the de-reservation of forest or use of forest land for non-forest purposes. Such restrictions may be lifted with the prior approval of the central government.
- Non-forest purposes include use of land for cultivating horticultural crops or for any purpose other than reforestation.
- The Act specifies certain activities that will be excluded from non-forest purposes, i.e., the restrictions on dereservation of forest or use of forest land for non-forest purposes will not apply.
- These activities include works related to the conservation, management, and development of forest and wildlife such as establishing check posts, fire lines, fencing, and wireless communication.
- The Bill adds more activities to this list such as:
 - Zoos and safaris under the Wild Life (Protection) Act, 1972 owned by the government or any authority, in forest areas other than protected areas.
 - Eco-tourism facilities.
 - Silvicultural operations (enhancing forest growth).
 - Any other purpose specified by the central government.
- Further, the central government may specify terms and conditions to exclude any survey (such as exploration activity, seismic survey) from being classified as non-forest purpose.
- Land under the purview of the Act
 - The Bill provides that two types of land will be under the purview of the Act:
 - Land declared/notified as a forest under the Indian Forest Act, 1927 or under any other law, or

- Land not covered in the first category but notified as a forest on or after October 25, 1980 in a government record.
- Further, the Act will not apply to land changed from forest use to non-forest use on or before December 12, 1996 by any authority authorised by a state/UT.

Exemption of certain types of lands

- The Bill also exempts certain types of land from the provisions of the Act such as forest land along a rail line or a public road maintained by the government providing access to a habitation, or to a rail, and roadside amenity up to a maximum size of 0.10 hectare.
- Forest land that will also be exempted includes:
- Land situated within 100 km along the international borders, Line of Control, or Line of Actual Control, proposed to be used for construction of strategic linear project for national importance or security.
- Land up to 10 hectares, proposed to be used for constructing security related infrastructure, or
- Land proposed to be used for constructing defence related project, camp for paramilitary forces, or public utility projects as specified by central government (not exceeding five hectares in a left wing extremism affected area).
- These exemptions will be subject to the terms and conditions specified by the central government by guidelines.

Assigning of land:

- Under the Act, state government or any authority requires prior approval of the central government to direct the assigning of forest land through a lease or otherwise to any organisation (such as private person, agency, authority, corporation) not owned by the government.
- The Bill provides that such assigning may be done to any organisation (such as private person, agency, authority, corporation) subject to terms and conditions prescribed by central government.
- Authority to issue directions-
- The Bill adds that the central government may issue directions for the implementation of the Act to any other authority/ organisation under or recognised by the centre, state, or union territory.

State of the Global Climate report by WMO

Why in News

The World Meteorological Organization(WMO) has published the State of the Global Climate 2022 recently.

Important Points

The India Meteorological Department (IMD) had in January said that the year 2022 was fifth warmest year on record in India since 1901 and the past decade (2012-2021 or 2013-2022) was the warmest decade on record in the country.

Key findings:

- The WMO State of the Global Climate report 2022 focuses on key climate indicators – greenhouse gases, temperatures, sea level rise, ocean heat and acidification, sea ice and glaciers. It also highlights the impacts of climate change and extreme weather.
- For global temperature, the years 2015-2022 were the eight warmest on record(in the 173-year instrumental record) despite the cooling impact of a La Niña event for the past three years.
- Record levels of three main heat trapping greenhouse gases – carbon dioxide, methane, and nitrous oxide in the atmosphere turned the past eight years (2015-22) into the warmest on record with 2022 being the “fifth or sixth” warmest year ever.
- This despite the cooling impact of a La Niña event for the past three years – a “triple dip” that has happened only three times in the past 50 year.
- Melting of glaciers and sea level rise – which again reached record levels in 2022 – will continue to up to thousands of years.
- Confirming its provisional findings of 2022, the WMO also said that the global mean temperature in 2022 was 1.15 degree Celsius above the 1850–1900 average which is closer to the target to keep the temperature rise within 1.5 degree C by the end of the century to save the world from the catastrophic effects of climate change.

- Rising global emission of greenhouse gases (GHG), however, indicates that the targeted level would be breached much earlier than the intended goal.
- The WMO underlined how droughts, floods and record breaking heat waves affected communities on every continent and cost many billions of dollars across the globe with India alone facing “significant flooding” at various stages during the monsoon season, particularly in the north-east in June last year that led to over 700 deaths from flooding and landslides, and a further 900 from lightning.
- Referring to South Asia, it noted how heatwaves in the pre-monsoon season in India and Pakistan caused a decline in crop yields last year with the period being “exceptionally hot” in both the countries.
- Though India reported its overall food-grains output at a record level of 315 million tonnes, the country had to suffer on wheat front by recording a decline of nearly 3% in production due to heat conditions.
- According to the report, China suffered from its most extensive and long-lasting heatwave on record, which extended from mid-June to the end of August.
- There were 366 locations around the country that broke their highest temperature record during the period.
- Southern regions of China suffered from a 20 to 50 per cent rainfall deficit.
- The severe drought led to the Yangtze river drying up and reaching its lowest level on record at Wuhan.
- Europe also suffered from severe heat events in all its summer months.
- The heatwaves reached their peak in mid-July when the United Kingdom recorded a maximum temperature of 40°C for the first time.
- Tunisia recorded its hottest June, while a new temperature record of 49.1°C was set at Smara (Morocco) on July 10. The Mediterranean Sea also suffered from marine heatwaves from March to December.
- The heatwaves were followed by drought in most of the European countries, with water levels in many of the major rivers such as the Rhine, Loire and Danube, falling to record low levels. Germany, France, the UK and Italy recorded their driest periods in almost 50 years.
- The ongoing intense drought in the Horn of Africa also intensified with the fourth and fifth consecutive poor rainfall seasons in Kenya, Somalia and Ethiopia.
- Droughts also continued in Chile in South America and the western and southern states in the United States.



About World Meteorological Organization (WMO):

- It is a specialized agency of the United Nations responsible for promoting international cooperation on atmospheric science, climatology, hydrology and geophysics.
- The International Meteorological Organization (IMO), whose concept dates back to the Vienna International Meteorological Congress of 1873, gave birth to the organization.
- Following the passage of the WMO convention in 1950, the organization was founded as a specialized agency of the United Nations (UN) in 1951.
- Its headquarters are in Geneva, Switzerland.
- The WMO is made up of 193 countries and territories, and facilitates the “free and unrestricted” exchange of data, information, and research between the respective meteorological and hydrological institutions of its members.
- It is governed by the World Meteorological Congress, composed of member states, which meets every four years to set policies and priorities.

5th cycle of India’s Tiger Census

Why in News

Prime Minister Narendra Modi has released the figures of the 5th cycle of India’s Tiger Census recently.

Important Points

- The National Tiger Conservation Authority, which conducts the estimation, has not released state or tiger reserve-wise tiger estimation, but has provided some state-specific insight in the overall report.
- India since 2006 has been conducting scientific tiger population estimation once every four years.

- The estimation was done in five landscapes.
- The fifth cycle revealed that tiger numbers have once again increased in the country and now stands at 3,167 in the wild as of 2022.
- The 2018 Tiger Census, released in July 2019, had established the presence of 2,967 tigers in India.
- The animal's population in the country has increased by 200 or 6.7 per cent in the past four years.
- While the tiger numbers in the country stood at 1,411 in 2006, it increased to 1,706 in 2010 and 2,226 in the 2014 cycle of evaluations.
- 75 per cent of the world's tiger population can now be found in India and tiger reserves in the country span 75,000 square kilometres.
- According to the latest tiger estimation report released by Prime Minister, the only landscape in India where the tiger population has gone down is Western Ghats, where declaring of the ecologically sensitive zone has been hanging since 2010.
- The overlap between “wildlife and humans” because of developmental activities has led to a fall in the tiger population in this area.
- The Western Ghats tiger landscape is 1,600-km long and covers an area of about 1,40,000 square km and contains 12 tiger Reserves, 20 National Parks, and 68 Wildlife Sanctuaries.
- The Nilgiri cluster that is Nagarahole to BRT Hills in Karnataka is the largest tiger population in the world, and has contributed significantly to colonisation of tigers in neighbouring areas, the survey shows a decline in tiger numbers there.
- The report said while tiger populations within the protected areas have either remained stable or increased, the occupancy outside of the reserves significantly decreased in areas such as the Wayanad landscape, BRT Hills, and the tiger areas on Goa-Karnataka border.
- Most of the decline in tiger population is in Karnataka, where the majority of Western Ghats fall.
- The report also said that tiger populations have also declined in the central Indian states of Jharkhand, Odisha, Chhattisgarh, Andhra Pradesh and Telangana, even though tigers have been spotted for the first time in Himachal Pradesh and in new areas in Madhya Pradesh and Maharashtra.
- Population increase is substantial in Shivalik & Gangetic flood plain which is followed by Central India, North Eastern Hills and Brahmaputra flood plains and Sundarbans while Western Ghats population showed decline with major populations being stable.
- Of the four other landscapes, the report said the population increase is substantial in Shivalik and Gangetic floodplain, which is followed by central India, northeastern hills and Brahmaputra flood plains and Sundarbans.
- The report identified Himachal, Suhelwa in Uttar Pradesh and Valmiki in Bihar as new potential tiger areas.
- Despite the number of tigers increasing in the central Indian landscape, most in Madhya Pradesh and Maharashtra, the local tiger population has become extinct in Sri Venkateswara National Park and tiger reserves in Kawal, Satkosia and Sahyadri.
- International Big Cat Alliance
- During the same event PM also inaugurated the International Big Cat Alliance in Karnataka's Mysuru, the first of its kind in the country, organised to mark 50 years of Project Tiger.
- The three-day conference focuses on protection and conservation of seven major big cats of the world – tigers, lions, leopards, snow leopards, pumas, jaguars and cheetahs.

Piezometers

Why in News

Ministry of Jal Shakti is Planning for network of groundwater sensors to monitor quality, contamination levels.

Important Points

- Currently, such information is only measured a handful of times a year and communicated via reports of the Central Groundwater Board(CGB).
- The CGB currently relies on a network of about 26 thousand groundwater observation wells that require technicians to manually measure the state of groundwater in a region.
- The CGWB is in charge of the National Aquifer Mapping Program (NAQUIM), that as of March has mapped the country's aquifers at a resolution of 1:50000 and under the second phase of the programme – expects to improve the resolution by five times in the country.
- So far, an area of 25.15 lakh square km has been covered under the NAQUIM studies.

Piezometers: the new initiative:

- Under the new initiative, around 16,000-17,000 digital water level recorders will be connected to piezometers in the wells. Piezometers measure groundwater levels, the recorders will transmit the information digitally.
- In the next three years, the CGWB aims to increase its network from the existing 26,000 to about 40,000.
- When combined with similar networks possessed by other institutions – State bodies, agriculture and meteorology departments – India will have about 67,000 digitally recordable units to monitor groundwater dynamics.
- Establishing a network that will continuously measure groundwater quality, feed it into a centralised network such as that of the National Water Informatics Centre (NWIC) and available for monitoring would make groundwater visible much the same way as air quality, meteorological variables –air pressure, moisture, precipitation.
- It can potentially provide groundwater forecasts to farmers that would be useful for sowing, and updated advisories that can influence groundwater extraction policies by States.
- Except for information on water flow governed by international treaties, most of this information will be publicly accessible.

Nitrate contamination in some regions:

- In the latest Ground Water Resource Assessment-2022, the total annual groundwater recharge in the country has been assessed as 437.60 billion cubic metres (BCM).
- The annual extractable groundwater resource has been assessed as 398.08 bcm, with actual extraction of 239.16 bcm.
- The average stage of groundwater extraction for the country as a whole works out to be about 60.08%.
- Anything above 70% is considered “critical” though there are regions in Punjab, Haryana, Delhi and Rajasthan with groundwater blocks with over 100% extraction.
- Reports over the years suggest that 85% of rural India uses groundwater for drinking and domestic purposes.
- In cities with a population of over 10 lakh, about 40% have seen water levels in monitored wells either stay stable or drop.
- Groundwater contamination, the CGWB says, is mostly “geogenic” (natural) and hasn’t significantly changed over the years.
- However, nitrate contamination – a result of the use of nitrogenous fertilisers has been observed.
- Sections of nearly 409 districts have been confirmed with fluoride contamination and parts of 209 districts have noted arsenic contamination.



India and Malaysia to trade in Indian rupees

Why in News

Recently, India and Malaysia have agreed to settle trade-related payments in Indian rupees.

Important Points

- Trade between India and Malaysia can now be settled in Indian Rupee (INR) in addition to the current modes of settlement in other currencies,
- India International Bank of Malaysia (IIBM), based in Kuala Lumpur, has operationalised this mechanism by opening a special Rupee Vostro account through its corresponding bank in India that is Union Bank of India.
- Vostro accounts are used to make payments in domestic currency.
- The Union Bank of India in a statement said that it has become the first bank in India to operationalise this option by opening a Special Rupee Vostro Account through its “corresponding bank” in Malaysia — India International Bank of Malaysia.
- In March 2023, banks from eighteen countries were allowed by the Reserve Bank of India (RBI) to open Special Rupee Vostro Accounts (SRVAs) to settle payments in Indian rupees. Malaysia was one of the eighteen countries.
- The 18 countries are: Fiji, Germany, Guyana, Israel, Kenya, Malaysia, Mauritius, Myanmar, New Zealand, Oman, Russia, Seychelles, Singapore, Botswana, Sri Lanka, Tanzania, Uganda, and the United Kingdom.
- The move follows the decision by the Reserve Bank of India in July 2022 to allow settlement of international trade in Indian currency.
- RBI’s initiative is aimed at facilitating the growth of trade and supporting the interests of the global trading community in the Indian rupee.

India and Malaysia trade relations

- With strengthening bilateral economic and commercial relations, Malaysia has emerged as 13th largest trading partner for India while India figures among the ten largest trading partners for Malaysia which is also our 3rd largest trading partner in ASEAN.
- A bilateral Comprehensive Economic Cooperation Agreement (CECA) covering goods, services and investment has come into effect from 1 July 2011.
- India’s major export items to Malaysia are mineral fuels, mineral oils; aluminum and articles thereof, meat and edible meat offal, iron and steel, copper and articles thereof, organic chemicals, nuclear reactors, boilers, machinery and mechanical appliances; electrical machinery and equipment; etc.
- India’s major import items from Malaysia are palm oil, mineral fuels, mineral oils, electrical machinery and equipment; animal or vegetable fats and oils and their cleavage products; nuclear reactors, boilers, machinery and mechanical appliances; copper and articles thereof, wood; wood charcoal, aluminum, organic chemicals, iron and steel and miscellaneous chemical products.
- The first Indian joint venture, Godrej commenced operations in 1968, and in the seventies and early eighties, Malaysia hosted the largest number of Indian joint ventures in any country.
- Malaysia ranks as the 26th largest investor in India with FDI inflow of US\$ 1.12 billion during the period April 2000 to September 2021.
- The highest joint ventures and 3 Indian Public Sector Undertakings operating in investment proposals have been in the telecommunications, Malaysia.



- Their areas of operation are manufacture of textiles and yarn, followed by fuels (power and oil refinery), roads and highways.
- India-Malaysia bilateral trade touched \$19.4 billion during 2021-22.
- Malaysia is the third largest trading partner of India in the ASEAN region, after Singapore and Indonesia that account for \$30.1 billion and \$26.1 billion bilateral trade with India respectively.

Foreign Trade Policy (FTP) 2023

Why in News

The Union Minister of Commerce and Industry has launched the Foreign Trade Policy 2023 recently.

Important Points

- Foreign Trade Policy (2023) is a policy document which is based on continuity of time-tested schemes facilitating exports as well as a document which is nimble and responsive to the requirements of trade.
- It is based on principles of 'trust' and 'partnership' with exporters.
- In the FTP 2015-20, changes were done subsequent to the initial release even without announcement of a new FTP responding dynamically to the emerging situations.
- Hereafter, the revisions of the FTP shall be done as and when required.
- Incorporating feedback from Trade and Industry would also be continuous to streamline processes and update FTP, from time to time.
- New foreign trade policy reiterates the government's focus on self-reliance or Atmanirbhar Bharat.
- It seeks to boost the country's exports to USD 2 trillion by the year 2030 and focuses on international trade settlement in rupees.
- The earlier Foreign Trade Policy 2015-20, which was to end in March 2020 was extended due to the Covid-19 pandemic and volatile geo-political scenario.



The Key Approach to the policy is based on these 4 pillars:

1. Incentive to Remission.
 2. Export promotion through collaboration – Exporters, States, Districts, Indian Missions.
 3. Ease of doing business, reduction in transaction cost and e-initiatives and
 4. Emerging Areas – E-Commerce Developing Districts as Export Hubs and streamlining SCOMET policy.
- India is placing more emphasis on the “export control” regime as its integration with export control regime countries strengthens.
 - There is a wider outreach and understanding of SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies) among stakeholders, and the policy regime is being made more robust to implement international treaties and agreements entered into by India.
 - A robust export control system in India would provide access of dual-use High end goods and technologies to Indian exporters while facilitating exports of controlled items/technologies under SCOMET from India.
 - The FTP 2023 aims at process re-engineering and automation to facilitate ease of doing business for exporters.
 - It also focuses on emerging areas like dual use high end technology items under SCOMET, facilitating e-commerce export, collaborating with States and Districts for export promotion.
 - The FTP aims at building partnerships with State governments and taking forward the Districts as Export Hubs (DEH) initiative to promote exports at the district level and accelerate the development of grassroots trade ecosystem.
 - In line with “Vivaad se Vishwaas” initiative, the new FTP is introducing a one-time Amnesty Scheme for exporters to close the old pending authorizations and start afresh.
 - This scheme is intended to provide relief to exporters who have been unable to meet their obligations under EPCG and Advance Authorizations, and who are burdened by high duty and interest costs associated with pending cases.

- The FTP 2023 encourages recognition of new towns through “Towns of Export Excellence Scheme” and exporters through “Status Holder Scheme”.
- Four new towns, namely Faridabad, Mirzapur, Moradabad, and Varanasi, have been designated as Towns of Export Excellence (TEE) in addition to the existing 39 towns.
- The TEEs will have priority access to export promotion funds under the MAI scheme and will be able to avail Common Service Provider (CSP) benefits for export fulfillment under the EPCG Scheme.
- The FTP 2023 is facilitating exports by streamlining the popular Advance Authorization and Export Promotion of Capital Goods (EPCG) schemes, and enabling merchanting trade from India.
- The EPCG Scheme, which allows import of capital goods at zero Customs duty for export production, is being further rationalized. Some key changes being added are:
 - Prime Minister Mega Integrated Textile Region and Apparel Parks (PM MITRA) scheme has been added as an additional scheme eligible to claim benefits under CSP(Common Service Provider) Scheme of Export Promotion capital Goods Scheme(EPCG).
 - Dairy sector to be exempted from maintaining Average Export Obligation – to support dairy sector to upgrade the technology.
 - Battery Electric Vehicles (BEV) of all types, Vertical Farming equipment, Wastewater Treatment and Recycling, Rainwater harvesting system and Rainwater Filters, and Green Hydrogen are added to Green Technology products – will now be eligible for reduced Export Obligation requirement under EPCG Scheme.
- Various estimates suggest e-commerce export potential in the range of \$200 to \$300 billion by 2030.
- FTP 2023 outlines the intent and roadmap for establishing e-commerce hubs and related elements such as payment reconciliation, book-keeping, returns policy, and export entitlements.
- As a starting point, the consignment wise cap on E-Commerce exports through courier has been raised from Rs 5Lakh to Rs 10 Lakh in the FTP 2023.
- To develop India into a merchanting trade hub, the FTP 2023 has introduced provisions for merchanting trade.
- Merchanting trade of restricted and prohibited items under export policy would now be possible.
- Merchanting trade involves shipment of goods from one foreign country to another foreign country without touching Indian ports, involving an Indian intermediary.
- India’s overall exports, including services and merchandise exports, has already crossed US\$ 750 Billion and is expected to cross US\$ 760 Billion in 2023.

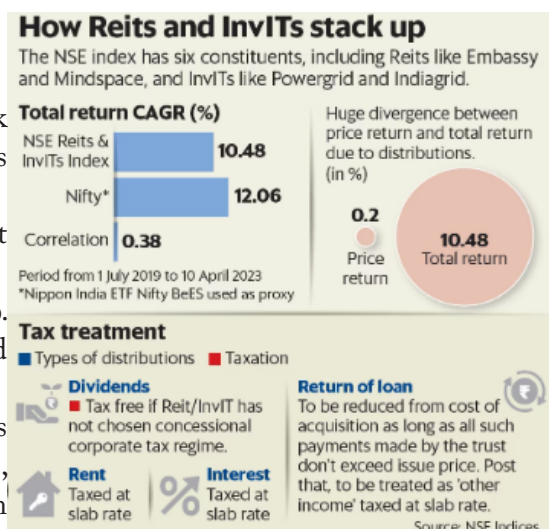
India’s first-ever REITs and InvITs Index

Why in News

NSE Indices Limited has launched India’s first-ever Real Estate Investment Trusts (REITs) & Infrastructure Investment Trusts (InvITs) Index called the Nifty REITs & InvITs Index recently.

Important Points

- It comprises six listed REITs and InvITs. The index will track the performance of publicly listed or traded REITs and InvITs at the National Stock Exchange.
- The securities’ weights within the index are based on their free-float market capitalization, subject to a security cap of 33% each.
- The aggregate weight of the top three securities is capped at 72%.
- The Nifty REITs & InvITs Index has a base date of July 1, 2019, and a base value of 1000. It will be reviewed and rebalanced quarterly.
- According to data released by NSE, the Nifty REITs & InvITs Index’s price return has been -4.13% quarter-to-date (QTD), and the total return is -2.17% QTD. The one-year price return has been -8.97%, and the total return for the year is -1.74%.
- However, the index has shown a total return of 10.48% since inception including dividends, with a price return of 0.22% since its inception. The price-to-earnings (P/E) ratio of the index is 49.07; and its dividend yield is as high as 8.17%.



- The index comprises three sectors: realty, power, and services. The realty sector has the highest weight, accounting for 57.52% of the index, followed by power with 35.61% and services with 6.87%.
- The Index comprises six companies: Embassy Office Parks REIT with a weight of 32.95%, POWERGRID Infrastructure Investment Ltd. with 20.27%, Mindspace Business Parks REIT with 15.35%, India Grid Trust with 15.34%, Brookfield India Real Estate Trust with 9.22%, and IRB INVIT Fund with 6.87%.
- The launch of the Nifty REITs & InvITs Index provides investors with more options to diversify their portfolios and take advantage of the growth potential of the real estate and infrastructure sectors in India.

National Stock Exchange of India Limited

- It is one of the leading stock exchanges in India, based in Mumbai.
- It was incorporated in the year 1992 to bring about transparency in the Indian equity markets.
- NSE was set up at the behest of the Government of India, based on the recommendations laid out by the Pherwani committee in 1991 and the blueprint created by Ravi Narain, RH Patil and SS Nadkarni in 1992,
- NSE is under the ownership of various financial institutions such as banks and insurance companies.
- It is the world's largest derivatives exchange by number of contracts traded and the third largest in cash equities by number of trades for the calendar year 2022.
- It is one of the largest stock exchanges in the world by market capitalization.
- NSE's flagship index, the NIFTY 50, a 50 stock index is used extensively by investors in India and around the world as a barometer of the Indian capital market.
- The NIFTY 50 index was launched in 1996 by NSE.
- NSE Indices Limited is a subsidiary of the National Stock Exchange.

RBI issues framework for Green Deposits

Why in News

Reserve Bank of India has recently issued detailed guidelines for acceptance of 'green deposits' by banks and NBFCs wherein the funds could be used for financing activities like renewable energy, green transport and green buildings.

Important Points

What is a green deposit?

- A green deposit is an interest-bearing instrument received by banks for a fixed period, the proceeds of which are earmarked for green-financing, such as funding of renewable energy projects.

About the framework

- As per the RBI framework, banks will offer the deposits as cumulative/ non-cumulative deposits.
- On maturity, the green deposits would be renewed or withdrawn at the choice of the depositor.
- The green deposits shall be denominated in rupees only.
- Banks and NBFCs shall put in place a comprehensive board-approved policy on green deposits, laying down all aspects in detail for the issuance and allocation of green deposits and a copy of the policy on 'green deposits' shall also be made available on their websites.
- Some banks are already accepting green deposits and the framework is intended to formalise the instrument. Housing Development Finance Corp (HDFC), IndusInd Bank, Federal Bank and DBS Bank offer such deposits.
- For less than Rs 2 crore amount of deposits, Federal Bank has a green deposit scheme of 2,222 days where it offers up to 6.6% interest. DBS Bank India, meanwhile, announced the launch of its green deposit programme for corporate clients in 2022.
- The framework applies to all scheduled commercial banks and small finance banks (except for regional rural banks and local area banks) and non-banking finance companies (including housing finance companies).
- Both corporate and individual customers can invest in green deposits.



Greening Bank Deposit:
RBI releases
Framework for Green
Deposits

The review of the deployment of green deposit proceeds

- The allocation of funds raised through green deposits during a financial year shall be subject to an independent Third-Party Verification (TPV) on an annual basis.
- The lenders have also been tasked with impact assessment. With the assistance of external firms, they must “annually assess the impact associated with the funds lent for or invested in green finance activities/projects.
- In case (they) are unable to quantify the impact of their lending/investment, they shall disclose, at the minimum, the reasons, the difficulties encountered, and the time-bound future plans to address the same.
- Further, a review report shall be placed by the lenders before their Boards within three months of the end of the financial year, covering amount raised under green deposits in the previous fiscal, list of green activities, details of projects to which proceeds have been allocated, among others.

Difference between Green and Fixed deposits

- While banks offer nearly similar interest rates on both green deposits and fixed deposit schemes, the end-use of the funds is different.
- While a bank may use capital raised via fixed deposit to lend or invest in even carbon-heavy sectors, they cannot use proceeds from green deposits for non-environment friendly projects.
- New or existing extraction, production and distribution of fossil fuels, nuclear power, waste incineration, alcohol, weapons, tobacco, gaming, landfills, and palm oil industries will be excluded from green deposit funding .
- The proceeds from green deposits can be used to fund projects in 9 sectors — renewable energy, energy efficiency, clean transportation, climate-change adaptation, sustainable water and waste management, pollution prevention and control, green buildings, management of living natural resources, and biodiversity conservation.

Dabba Trading

Why in News

National Stock Exchange (NSE) has recently issued a string of notices naming entities involved in ‘dabba trading’.

Important Points

- The bourse cautioned retail investors to not subscribe (or invest) using any of these products offering indicative/assured/guaranteed returns in the stock market as they are prohibited by law. It added that the entities are not recognised as authorised members by the exchange.

About dabba trading:

- Dabba (box) trading refers to informal trading that takes place outside the purview of the stock exchanges.
- Traders bet on stock price movements without incurring a real transaction to take physical ownership of a particular stock as is done in an exchange.
- In simple words, it is gambling centered around stock price movements.
- For example, an investor places a bet on a stock at a price point, say 1,000. If the price point rose to Rs 1,500, he/she would make a gain of 500.
- However, if the price point falls to 900, the investor would have to pay the difference to the dabba broker. Thus, it could be concluded that the broker’s profit equates the investor’s loss and vice-versa.
- The equations are particularly consequential during bull runs or bear market.
- The primary purpose of such trades is to stay outside the purview of the regulatory mechanism, and thus, transactions are facilitated using cash and the mechanism is operated using unrecognised software terminals.
- Other than this, it could also be facilitated using informal or kaccha (rough) records, sauda (transaction) books, challans, DD receipts, cash receipts alongside bills/contract notes as proof of trading.
- Since there are no proper records of income or gain, it helps dabba traders escape taxation. They would not have to pay the Commodity Transaction Tax (CTT) or the Securities Transaction Tax (STT) on their transactions.

Parallel Market

Why people book dabba trades?

TO SAVE on statutory levies, taxes exchange charges & higher broking commission	NO KYC needed; references will do
LOWER MARGIN requirements	UNREGULATED MARKETS, cash dealings allowed

JEWELLERS, SPOT commodity traders use the dabba market to hedge inventories cheaply



- The use of cash also means that they are outside the purview of the formal banking system. All of it combined results in a loss to the government exchequer.
- In 'dabba trading', the primary risk entails the possibility that the broker defaults in paying the investor or the entity becomes insolvent or bankrupt.
- Being outside the regulatory purview implies that investors are without formal provisions for investor protection, dispute resolution mechanisms and grievance redressal mechanisms that are available within an exchange.
- Since all activities are facilitated using cash, and without any auditable records, it could potentially encourage the growth of 'black money' alongside perpetuating a parallel economy. This could potentially translate to risks entailing money laundering and criminal activities.
- 'Dabba trading' is recognised as an offence under Section 23(1) of the Securities Contracts (Regulation) Act (SCRA), 1956 and upon conviction, can invite imprisonment for a term extending up to 10 years or a fine up to Rs25 crore, or both.

Mission 50K-EV4ECO of SIDBI

Why in News

Small Industries Development Bank of India (SIDBI) recently announced Mission 50K-EV4ECO to boost the electric vehicle (EV) ecosystem in the country.

Important Points

- The pilot phase of 'Mission 50K-EV4ECO' aims at strengthening the EV ecosystem, including uptake for two, three and four-wheelers through direct and indirect lending.
- The pilot scheme, which is the precursor to EVOLVE scheme by SIDBI-World Bank, has two components – direct lending(to MSME) and indirect lending(to NBFCs).
- This pilot scheme will be followed by scaling up support to the ecosystem from multilateral support.
- It focuses on increasing the uptake of electric two-wheelers, three-wheelers and four-wheelers through direct and indirect lending support to vehicle aggregators, fleet operators and leasing companies.
- Under Mission 50K-EV4ECO, SIDBI will directly provide loans to eligible small and medium enterprises (SME) for the purchase of EVs and developing charging infrastructure, including battery swapping.

Small Industries Development Bank of India(SIDBI):

- SIDBI is the apex regulatory body for overall licensing and regulation of micro, small and medium enterprise finance companies in India.
- It is under the jurisdiction of Ministry of Finance , Government of India headquartered at Lucknow.
- The SIDBI was established on April 2, 1990, by Government of India, as a wholly owned subsidiary of IDBI Bank . It was delinked from IDBI w.e.f. March 27, 2000.
- Its purpose is to provide refinance facilities to banks and financial institutions and engage in term lending and working capital finance to industries, and serves as the principal financial institution in the Micro, Small and Medium Enterprises (MSME) sector.
- SIDBI also coordinates the functions of institutions engaged in similar activities.
- SIDBI is one of the four All India Financial Institutions regulated and supervised by the Reserve Bank of India; other three are India Exim Bank, NABARD and NHB.
- But recently NHB came under government control by taking more than 51% stake.
- They play a statutory role in the financial markets through credit extension and refinancing operation activities and cater to the long-term financing needs of the industrial sector.
- In order to increase and support money supply to the MSE sector, it operates a refinance program known as Institutional Finance program.
- Under this program, SIDBI extends Term Loan assistance to Banks, Small Finance Banks and Non-Banking Financial Companies. Besides the refinance operations, SIDBI also lends directly to MSMEs.



Multilateral Development Banks

Why in News

Under the aegis of India's G20 Presidency, a G20 Expert Group on Strengthening Multilateral Development Banks (MDBs) has been constituted.

Important Points

The objectives of the Expert Group are:

- A roadmap for an updated MDB ecosystem for the 21st century, with milestones and timelines, touching upon all aspects of MDB evolution, including but not limited to vision, incentive structure, operational approaches and financial capacity so that MDBs are better equipped to finance a wide range of SDG and transboundary challenges such as climate change and health.
- An evaluation of various estimates regarding the scale of funding required by and from MDBs for addressing their and member countries' increased financing needs for SDG and transboundary challenges, taking into account the additional capacity that can be derived from the CAF recommendations alongside other important sources such as the private sector and public sector funds (AND)
- Mechanisms for coordination among MDBs for them to address and finance global development and other challenges more effectively.

About Multilateral Development Bank(MDB)

- It is an international financial institution chartered by two or more countries for the purpose of encouraging economic development in poorer nations.
- Multilateral development banks consist of member nations from developed and developing countries.
- MDBs provide loans and grants to member nations to fund projects that support social and economic development, such as the building of new roads or providing clean water to communities.
- Multilateral development banks are subject to international law.
- They and other international financial institutions, such as the International Monetary Fund (IMF), originated in the waning days of World War II when the United States and its allies established the Bretton Woods institutions to rebuild war-ravaged nations and stabilize the post-war international financial system.
- The World Bank, which has been semi-officially dominated by the U.S. since its founding, is one of these institutions.
- Unlike commercial banks, MDBs do not seek to maximize profits for their shareholders. Instead, they prioritize development goals, such as ending extreme poverty and reducing economic inequality.



CBDT enters into a record 95 Advance Pricing Agreement

Why in News

The Central Board of Direct Taxes (CBDT) has entered into a record 95 Advance Pricing Agreements (APAs) with Indian taxpayers in the fiscal year 2022-23.

Important Points

- Out of 95, 63 agreements are Unilateral APAs (UAPAs), and the remaining 32 are Bilateral APAs (BAPAs).
- As a result, the total number of APAs has now increased to 516 since the initiation of the APA programme. Out of these, 420 are UAPAs, and 96 are BAPAs.
- In 2023, CBDT recorded the highest ever APA signings in any financial year since the launch of the APA programme, signing a total of 95 APAs.
- The BAPAs were signed as a consequence of entering into Mutual Agreements with India's treaty partners namely Finland, the UK, the US, Denmark, Singapore, and Japan.
- A record of the largest number of single day signings in the history of the programme was also created with a total of 21 APAs signed on March 24, 2023.

What are Advance Pricing Agreements(APA)?

- An advance pricing agreement is an ahead-of-time agreement between a taxpayer and a tax authority on an appropriate transfer pricing methodology for a set of transactions at issue over a fixed period of time.
- The Government has introduced the APA Scheme through Finance Act, 2012 and Income Tax (Tenth Amendment) Rules, 2012
- Such agreement is entered into by the CBDT with the approval of the Central Government, with the taxpayers on the transfer price of international transactions between associated entities.
- The signing of bilateral APAs additionally provides the taxpayers with protection from any anticipated or actual double taxation.
- The APA Scheme endeavours to provide certainty to taxpayers in the domain of transfer pricing by specifying the methods of pricing and determining the arm's length price of international transactions in advance for a maximum of five future years.
- Further, the taxpayer has the option to rollback the APA for four preceding years, as a result of which, tax certainty is provided for nine years.

CPCB revised the financial grants for biomass pellet manufacturing units

Why in News

The Central Pollution Control Board (CPCB) revised the financial grants for biomass pellet manufacturing units.

Important Points

What are biomass pellets?

- Biomass pellet is one kind of biofuel resource. Bio-pellets is commonly made by biomass pellet machine with the biomass materials.
- Biomass pellets are of two kinds — torrefied and non-torrefied.
- Biomass, if processed at 250-350°C in the absence of oxygen, leads to the formation of torrefied biomass.
- Whereas, in the case of non-torrefied pellets, biomass is shredded, grinded and sent to a pellet reactor, where it is compressed into pellet form with the help of binders such as sawdust, bagasse, molasses, starch and others.
- In India, it is mandatory to use biomass or agricultural residue as combustion fuel along with coal in coal-fired thermal power plants.
- The biomass used for co-combustion in the power plants is processed and refined into pellets with a calorific value comparable to coal.

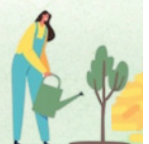
Raw Material for Bio-pellets

- Agricultural waste: Crop stalk and straw material, rice husk, cotton stalk, coffee husk, alfalfa straw, coconut shell, palm shell, sugarcane bagasse, etc.
- Forestry residue: Sawmill residue, branches, bark, leaves, etc.
- Solid waste: Junk paper, waste plastic, cardboard, etc.

The CPCB grants

- It has increased the budget for manufacturing non-torrefied biomass pellets to 28 lakhs from 14 lakhs, as mentioned in the guidelines issued in October, 2022.
- The cost of machinery with a production capacity of one TPH is approximately Rs 1 crore, said industry experts. This implies that grants would cover only 28 per cent of the capital investment on machinery as opposed to the claim by the CPCB to fund 40 per cent of the capital cost.
- The revised guidelines have pitched the capital for setting up a palletisation unit at Rs 70 lakhs with machinery costing Rs 35 lakhs and the remaining Rs 35 lakhs for air pollution control device and automation unit.
- In the case of manufacturing torrefied biomass, no changes are introduced in the fund allocation in the revised CPCB guidelines.
- As previously, these units are entitled to receive Rs 28 lakhs per TPH of production capacity.

CPCB Guidelines for financial support for Establishing pelletisation and torrefaction plants



Global Unicorn Index 2023 by Hurun

Why in News

Hurun has published the Global Unicorn Index 2023 recently.

Important Point

- The Global Unicorn Index is designed to give an insight into the economy of tomorrow, by listing out the world's most successful startups.
- Start-ups are classified as
 - Unicorns –start-ups founded after the year 2000 with a valuation of US\$1bn.
 - Gazelles– start-ups that are most likely to go Unicorn in the next two years, and
 - Cheetahs –start-ups that could go Unicorn in the next four years.
- According to the Global Unicorn Index, India continues to be the world's third-largest country with the highest number of unicorns(68 unicorns), following the US and China.
- Among these, foodtech platform Swiggy, fantasy gaming company Dream11 and edtech firm BYJU'S are the top unicorns in the country.
- It said that the USA, especially Silicon Valley, attracted the most unicorn founders from abroad, followed by Europe.
- It revealed that India led the way for emigrant unicorn founders, followed by China, Israel and Russia.
- As per the Index, BYJU'S is also one of the top 10 unicorn startups worldwide that experienced a significant increase in valuation since the pre-COVID-19 era, with a valuation of \$22 billion.
- Meanwhile, Swiggy and Dream11 are both valued at \$8 billion each, according to the list.
- The report mentioned that the number of Indian unicorns established outside of India is higher than those located within India.
- The list further disclosed that India has a total of 138 unicorns, out of which 70 were established by Indian co-founders but have their headquarters located outside India, while 68 are based in India.
- Hurun's report also revealed that India ranks third in terms of the number of gazelles, which are startups established in the 2000s and valued at over \$500 million, not yet listed, and likely to become unicorns within three years.
- However, when it comes to the Hurun Global 500 companies, which is a list of the most valuable non-state-controlled businesses globally, India ranks fifth.
- According to the report, China and India have a higher proportion of gazelles and unicorns, which is expected to result in a higher number of Hurun Global 500 companies over the next five years.
- Conversely, countries such as France, Canada, and Australia, with a lower proportion, are likely to lose their positions on the Hurun Global 500 list.
- In terms of unicorn investors, Sequoia Capital, Tiger Global Management, and SoftBank are the top three, having invested in 238, 179, and 168 unicorn startups, respectively.



Logistic Performance Index (LPI) 2023

Why in News

The World Bank's Logistic Performance Index (LPI) 2023 report has been released recently.

Important Points

- The LPI covers 139 countries, and measures the ease of establishing reliable supply chain connections and the structural factors that make it possible, such as the quality of logistics services, trade and transport-related infrastructure, and border controls.

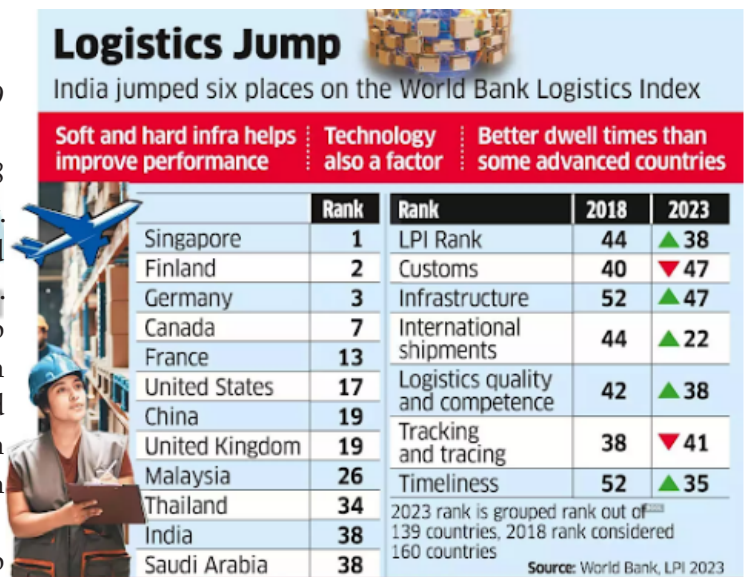
- The 2023 LPI for the first time measures the speed of trade with indicators derived from big datasets tracking shipments.
- The 2023 edition includes an extended dataset consisting of (i) the survey-based Logistics Performance Index (LPI), which results from the traditional LPI survey of logistics professional and (ii) new key performance indicators (KPI) measuring the actual speed of trade around the world.
- The new KPI are derived from large global tracking datasets (Big Data) covering shipping containers, air cargo, and parcels.

The LPI considers 6 parameters to evaluate logistics performance, namely:

- o Customs performance.
- o Infrastructure quality.
- o Ease of arranging shipments.
- o Logistics services quality.
- o Consignment tracking and tracing.
- o Timeliness of shipments.
- o According to LPI 2023, end-to-end supply chain digitalization, especially in emerging economies, is allowing countries to shorten port delays by up to 70% compared to those in developed countries.
- Moreover, demand for green logistics is rising, with 75 percent of shippers looking for environmentally friendly options when exporting to high income countries.

India's ranking:

- As per LPI India now ranking 38th in the 139 countries index.
- India was ranked 44th on the index in 2018 and has now climbed to 38th in the 2023 listing.
- India's performance has drastically improved from 2014, when it was ranked 54th on the LPI.
- According to the report, India's rank moved up five places in infrastructure score from 52nd in 2018 to 47th in 2023. It climbed to the 22nd spot for international shipments in 2023 from 44th in 2018 and moved four places up to 48th in logistics competence and equality.
- In timelines, India witnessed a 17-place jump in rankings, whereas it moved up three places in rank in tracking and tracing to 38th. The report quotes modernisation and digitalisation as a reason for emerging economies, like India, to leapfrog advanced countries.
- According to the report, the average dwell time for containers between May and October 2022 was three days for India and Singapore, much better than in some of the industrialised countries. The dwell time for the U.S. was seven days and for Germany, it was 10 days.
- Dwell time is how long a vessel spends at a specific port or terminal. It may also refer to the amount of time that a container or cargo spends at a port or terminal before being loaded onto a vessel or after being unloaded from a vessel. Shipping container vessels operate on schedules and delays in any particular port are felt across the service.
- The shorter the dwell time, the lower the vessel and marine-terminal operating costs.
- Driving forces behind improvement in India's rank:
- Government of India had announced PM Gati Shakti initiative, a National Master Plan for multimodal connectivity, in October 2021 to reduce logistics cost and boost the economy by 2024-25.
- In 2022, the Prime Minister launched the National Logistics Policy (NLP) to ensure quick last-mile delivery, end transport-related challenges, save time and money of the manufacturing sector and ensure desired speed in the logistics sector.
- These policy interventions are fructifying, which can be seen in India's jump in LPI and its other parameters.



The Markets in Crypto Assets (MiCA)

Why in News

The European Parliament has recently approved the world's first set of comprehensive rules that is MiCA to bring largely unregulated cryptocurrency markets under the ambit of regulation by government authorities.

Important Points:

- The MiCA legislation will apply to 'cryptoassets', which are broadly defined in the text as "a digital representation of a value or a right that uses cryptography for security and is in the form of a coin or a token or any other digital medium which may be transferred and stored electronically, using distributed ledger technology or similar technology". This definition implies that it will apply not only to traditional cryptocurrencies like Bitcoin and Ethereum but also to newer ones like stablecoins.
- Stablecoins are digital tokens that aim to stay pegged in value with a more stable asset, a fiat currency like the U.S. dollar or other stable cryptocurrencies.
- MiCA will establish new rules for three types of stablecoins — asset-referenced tokens, which are linked to multiple currencies, commodities, or cryptocurrencies, e-money Tokens, which are linked to a single currency and utility tokens, which are intended to provide access to a good or service that will be supplied by the issuer of that token.
- As for the assets that will be out of MiCA's scope, it will not regulate digital assets that would qualify as transferable securities and function like shares or their equivalent and other crypto assets that already qualify as financial instruments under existing regulation.
- It will also, for the most part, exclude nonfungible tokens (NFTs).
- MiCA will also not regulate central bank digital currencies issued by the European Central Bank and digital assets issued by national central banks of EU member countries when acting in their capacity as monetary authorities, along with cryptoassets-related services offered by them.
- It will come into force after formal approval by member states.

What are the new rules?

- MiCA will impose compliance on the issuers of crypto assets, who are defined as the legal person who offers to the public any type of crypto-assets.
- It will apply to crypto-asset service providers (CASPs) providing one or more of these services.
- The regulation prescribes different sets of requirements for CASPs depending on the type of cryptoassets.
- The base regime will require every CASP to get incorporated as a legal entity in the EU.
- They can get authorised in any one member country and will be allowed to conduct their services across the 27 countries.
- They will then be supervised by regulators like the European Banking Authority and the European Securities and Markets Authority, who will ensure that the companies have the required risk management and corporate governance practices in place.
- Another legislation passed with MiCA requires crypto companies to send information of senders and recipients of cryptoassets to their local anti-money laundering authority, to prevent laundering and terror financing activities.

Regulation of Crypto in India:

- India is yet to have a comprehensive regulatory framework for crypto assets.
- A full-fledged regulation aside, the Indian government has taken certain steps to bring cryptocurrencies under the ambit of specific authorities and taxation.
- In the Union Budget for 2022, the Finance Ministry has imposed a 30% tax on income from the "transfer of any virtual digital asset."
- In March 2023, the government placed all transactions involving virtual digital assets under the purview of the Prevention of Money Laundering Act (PMLA).
- India is now calling for consensus in the G20 grouping, where it currently holds the presidency, to have a globally coordinated policy response on crypto assets that takes into consideration the full range of risks, including those specific to emerging markets and developing economies.

ISRO's reusable Launch Vehicle

Why in News

The Indian Space Research Organisation and its partners successfully demonstrated a precise landing experiment for a Reusable Launch Vehicle at the Aeronautical Test Range (ATR), Chitradurga, Karnataka.

Important Points

- Reusable space vehicles have been in existence for a long time with NASA space shuttles carrying out dozens of human space flight missions.
- The use case for reusable space launch vehicles has revived with the private space launch services provider Space X demonstrating partially reusable launch systems with its Falcon 9 and Falcon Heavy rockets since 2017.
- SpaceX is also working on a fully reusable launch vehicle system called Starship.
- Several private launch service providers and government space agencies are working on developing reusable launch systems in the world alongside ISRO.

Reusable Launch Vehicle(RLV):

- The RLV Autonomous Landing Mission (RLV LEX) test was the second of five tests that are a part of ISRO's efforts to develop RLVs, or space planes/shuttles, which can travel to low earth orbits to deliver payloads and return to earth for use again.
- The experiment was carried out nearly seven years after the technology demonstration of an RLV and the first experiment was conducted successfully by ISRO in 2016, on the RLV-TD (HEX) mission.

ISRO's RLVTD project:

- According to ISRO, the series of experiments with the winged RLV-TD are part of efforts at developing essential technologies for a fully reusable launch vehicle to enable low-cost access to space.
- The RLV-TD will be used to develop technologies like hypersonic flight (HEX), autonomous landing (LEX), return flight experiment (REX), powered cruise flight, and Scramjet Propulsion Experiment (SPEX).
- In the future, this vehicle will be scaled up to become the first stage of India's reusable two-stage orbital (TSTO) launch vehicle.
- ISRO's RLV-TD looks like an aircraft. It consists of a fuselage, a nose cap, double delta wings, and twin vertical tails.
- The 2016 experiment involved sending a winged spacecraft on a rocket powered by a conventional solid booster (HS9) engine used by ISRO into space.
- The spacecraft traveled at a speed of Mach 5 (five times the speed of sound) when re-entering the earth's orbit and traveled a distance of 450 km before splashdown in the Bay of Bengal.
- When the first experiment was done in 2016, ISRO officials described it as a "baby step" in the development of an RLV.
- A rocket carrying the 1.75 tonnes RLV-TD was launched into space for 91.1 seconds and reached a height of about 56 km, when the RLV-TD separated from the rocket and climbed to a height of about 65 km.
- From this height, the RLV-TD began its return to earth and entered the atmosphere at a speed of around Mach 5 and was navigated by the vehicle's own systems to a predetermined landing spot in the Bay of Bengal, around 450 KM from the launch site at Sriharikota.
- The RLV was tracked during the flight from ground stations at Sriharikota and a terminal on a ship. While the re-entry into the earth's atmosphere happens at a velocity of 8 km/sec the RLV TD HEX1 was tested at a much lower velocity of 1.7 km/sec to 2 km/sec.

About the second experiment:

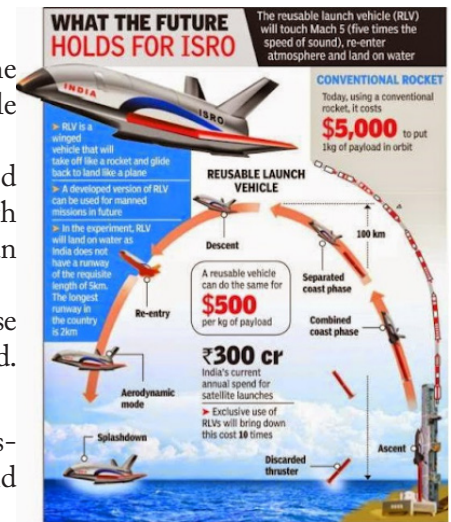
- The RLV LEX recent test involved a Chinook Helicopter of the Indian Air Force lifting the RLV LEX to a height of 4.5 km and releasing the RLV, based on a command from Mission Management Computer.
- After midair release, the RLV carried out an autonomous landing under the exact conditions of a Space Re-entry vehicle's landing — high speed, unmanned, precise landing from the same return path — as if the vehicle arrived from space.

What was the difference in the two tests?

- According to ISRO, the first test with RLV-TD (HEX1) involved the vehicle landing on a hypothetical runway over the Bay of Bengal while the recent LEX experiment involved a precise landing on a runway.
- The LEX mission achieved the final approach phase that coincided with the re-entry return flight path exhibiting an autonomous, high speed (350 km per hour) landing. With LEX, the dream of an Indian Reusable Launch Vehicle arrives one step closer to reality.
- Three more experiments return flight experiment (REX), powered cruise flight, and Scramjet Propulsion Experiment (SPEX) have to be conducted.

Advantages:

- With the costs acting as a major deterrent to space exploration, a reusable launch vehicle is considered a low-cost, reliable, and on-demand mode of accessing space.
- By using RLVs the cost of a launch can be reduced by nearly 80 percent of the present cost.



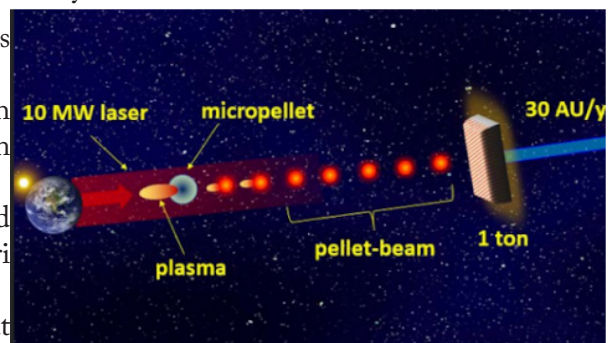
Pellet-beam propulsion

Why in News

The concept, known as 'pellet-beam' propulsion, was awarded an early-stage US\$175,000 NASA grant for further development recently.

Important Points

- This system could theoretically beam a heavy spacecraft to outside the confines of our Solar System in less than 5 years – a feat that took the historic Voyager 1 probe 35 years to achieve.
- The concept currently doesn't exist much beyond calculations on paper.
- The pellet-beam concept was partly inspired by the Breakthrough Starshot initiative, which is working on a 'light-sail' propulsion system.
- With the help of millions of lasers, a tiny probe would theoretically be able to sail to neighboring Proxima Centauri in just 20 years.
- The new proposal starts with a similar idea, throw fuel at a rocket instead of blast it out of one but it looks at how to shift larger objects.
- To work, the conceptual propulsion system requires two spacecraft – one that sets off for interstellar space, and one that goes into orbit around Earth.
- The spacecraft orbiting Earth would shoot a beam of tiny microscopic particles at the interstellar spacecraft.
- Those particles would be heated up by lasers, causing part of them to melt into plasma that accelerates the pellets further, a process known as laser ablation.
- Those pellets could reach 120 km/second (75 miles/second) and either hit the sail of the interstellar spacecraft or repel a magnet within it, helping to propel the spacecraft to huge speeds that would let it whizz out of our heliosphere – the bubble of solar wind around our Solar System.
- With the pellet-beam, outer planets can be reached in less than a year, 100 AU [astronomical unit] in about 3 year and solar gravity lens at 500 AU in about 15 years.
- For context, an AU, which stands for 'astronomical unit', roughly represents the distance between Earth and the Sun, or around 150 million km (93 million miles).



- It took the Voyager 1 probe 35 years of travel to cross into interstellar space back in 2012, at roughly 122 AU away.
- According to the current projections, a pellet-beamed spacecraft weighing 1 ton could do the same in under 5 years.

Supermassive black hole

Why in News

The earliest known black hole in the universe has been spotted by the James Webb Space Telescope (JWST), and it could tell us about the origin of supermassive black holes that formed much later.

Important Points

About supermassive black hole:

- Observations collected through the James Webb Space Telescope have revealed an active supermassive black hole 10 million times the mass of the Sun one that is actively growing as it slurps up matter from the space around it.
- At just 570 million years after the Big Bang, this is the earliest growing supermassive black hole detected yet, although scientists are hoping it won't remain the record-holder for long.
- The black hole was found inside one of the earliest galaxies ever detected, previously known as EGSY8p7 though since renamed CEERS_1019.
- Its discovery could help with one of the biggest head-scratchers of the early Universe: how the black holes in the Cosmic Dawn grew to such large sizes in such a short amount of time.

What are blackholes?

- A black hole is a space where gravity pulls so much that even light is unable to come out. The gravity is so strong due to the squeezing of matter into a small space.
- A black hole is an object with an escape velocity greater than the speed of light – escape velocity is the speed required to escape from its gravitational grip.
- Because no light can escape, black holes are invisible.



NASA's TEMPO device

Why in News

A SpaceX Falcon 9 rocket successfully launched from Florida recently, carrying a new NASA device that can track air pollution over North America.

Important Points

- The Tropospheric Emissions Monitoring of Pollution (TEMPO) instrument will allow scientists to monitor air pollutants and their emission sources from space more comprehensively than ever before, down to the neighborhood level.
- It will measure pollution and air quality across greater North America on an hourly basis during the daytime, all the way from Puerto Rico up to the tar sands of Canada.
- The data will be used by the US Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Administration (NOAA) and other agencies responsible for tackling atmospheric pollution.
- A unique feature of TEMPO, which is about the size of a washing machine and has been described as a chemistry laboratory in space, is that it will be hosted on an Intelsat communications satellite in geostationary orbit.
- Existing pollution-monitoring satellites are in low Earth orbit, which means they can only provide observations once a day at a fixed time.



- TEMPO will be able to measure atmospheric pollution down to a spatial resolution of 4 square miles (10 square kilometers), or neighborhood level.
- Geostationary orbit is a common orbit for weather satellites and communications satellites, but an air quality instrument measuring gases hadn't been there yet.
- In a geostationary orbit 22,236 miles (35,786 kilometers) above the equator, TEMPO will match the rotation of the Earth, meaning it will stay over the same location North America at all times.
- TEMPO will have multiple applications from measuring levels of various pollutants to providing air quality forecasts and helping the development of emission-control strategies.
- Among the pollutants tracked by TEMPO will be nitrogen dioxide, produced from the combustion of fossil fuels, formaldehyde and ozone.
- The data will be made available online for members of the public to monitor air quality information in their local area.

Indian Space Policy 2023

Why in News

The Union Cabinet has recently approved the Indian Space Policy, 2023.

Important Points

About the policy

- The policy seeks to institutionalise and mostly facilitate the access of private sector participation in the space sector for India.
- The policy delineates responsibility to ISRO, New Space India Limited (NSIL, a space sector PSU), and Indian National Space Promotion and Authorization Center (IN-SPACe).
 1. NSIL: Strategic activities related to the space sector will be carried out by NSIL, a public sector undertaking under the Department of Space, which will work in demand-driven mode.
 2. INSPACe: this recently created agency will be the interface between Indian Space Research Organisation and non-governmental entities.
- The policy also spells out the framework for the private sector to use ISRO facilities for a small charge and also encourages them to invest in creating new infrastructure for the sector.
- It states that ISRO will not do any operational and production work for the space sector and focus its energies on developing new technologies, new systems and research and development.
- The operational part of ISRO's missions will be moved to the NewSpace India Limited, a public sector undertaking under the Department of Space.
- It also allows the private sector to take part in end-to-end space activities that include building satellites, rockets, and launch vehicles, data collection and dissemination.



JUICE Mission

Why in News

The European Space Agency (ESA) is all set to launch the Jupiter Icy Moons Explorer, or Juice, mission from its spaceport in French Guiana on an Ariane 5 launcher.

Important Points

Juice mission

- The mission will launch to the biggest planet in the solar system in search of signs of life on its three biggest moons.

- During its voyage, the spacecraft will complete fly-bys of Venus, Earth, and the Earth–Moon system to arrive at its destination in 2031.
- It will observe Jupiter and its three largest moons: Callisto, Europa, and, in particular, Ganymede.
- The moon's buried oceans could tell us whether life can arise in different environments across the cosmos.
- The objective is to explore the moons for habitability and to explore if it is possible to live around giants.
- The spacecraft will characterise the oceans, icy shells, compositions, surfaces, environments, and activity of Ganymede, Europa, and Callisto and the wider Jupiter system, characterising Jupiter's atmosphere, magnetic environment, ring system, and other satellites.
- After its first arrival in the Jovian system, the spacecraft will go on to spend many months orbiting Jupiter, completing fly-bys of Europa, Ganymede, and Callisto, and finally conducting an orbital tour of Ganymede.
- The spacecraft will be powered by 10 solar panels that will be deployed as two distinctive cross-shaped arrays. These total an area of about 85 square meters.
- Juice has been equipped with 0 state-of-the-art instruments, comprising the most powerful remote sensing, geophysical, and in situ payload complement ever flown to the outer Solar System.
- The mission has a remote sensing package that includes imaging and spectral imaging capabilities, a geophysical package that comprises a laser altimeter (GALA), and a radar sounder (RIME) for exploring the moon's surface and subsurface.
- The in situ package contains a powerful suite of instruments to study the particle environment (PEP), a magnetometer (J-MAG), and a radio and plasma wave instrument (RPWI).
- Juice has a 2.5-meter-long High Gain Antenna to talk to Earth.



First test flight of SpaceX's big Starship

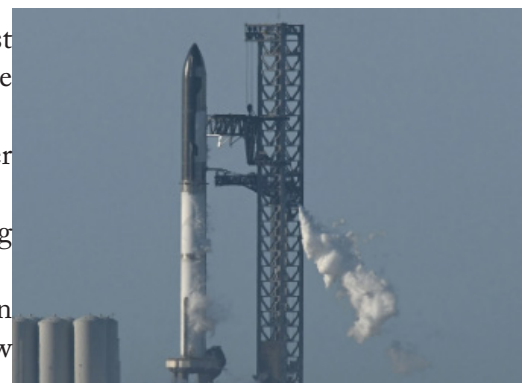
Why in News

SpaceX is planning to launch the first orbital test mission of its huge Starship vehicle on April 17 2023.

Important Points

About Starship:

- Starship is a super heavy-lift launch vehicle developed by SpaceX.
- Standing at 119 m tall, it is designed to be the tallest and most powerful launch vehicle ever built, and the first intended to be fully reusable.
- The Starship launch vehicle is made up of the first-stage booster and the Starship second stage.
- The second stage functions as a self-contained spacecraft for carrying crew or cargo once in orbit.
- Both stages are powered by Raptor engines that burn liquid oxygen and liquid methane propellants in a highly efficient full-flow staged combustion power cycle.
- Both rocket stages are designed to be reused by landing vertically at the launch pad.
- It is designed to send astronauts to the Moon and Mars and beyond.
- It is designed to be fully and rapidly reusable.
- The U.S. space agency NASA has picked the Starship spacecraft to ferry astronauts to the Moon in late 2025 — a mission known as Artemis III — for the first time since the Apollo program ended in 1972.
- Starship consists of a 164-foot (50-meter) tall spacecraft designed to carry crew and cargo that sits atop a 230-foot tall first-stage Super Heavy booster rocket.
- Collectively referred to as Starship, the spacecraft and the Super Heavy rocket have never flown in combination together, although there have been several sub-orbital test flights of the spacecraft alone.



- Starship, which has six engines of its own, will continue to an altitude of nearly 150 miles, completing a near-circle of the Earth before splashing down in the Pacific Ocean about 90 minutes after launch.
- It generates 17 million pounds of thrust, more than twice of that of the Saturn V rockets used to send Apollo astronauts to the Moon.

National Quantum Mission

Why in News

The Union Cabinet has recently approved the National Quantum Mission (NQM) at a total cost of Rs.6003.65 crore from 2023-24 to 2030-31 to scale-up scientific & industrial R&D for quantum technologies.

Important Points

- It aims to seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative eco-system in Quantum Technology (QT).
- The new mission targets developing intermediate scale quantum computers with 50-1000 physical qubits in 8 years in various platforms like superconducting and photonic technology.
- Satellite based secure quantum communications between ground stations over a range of 2000 kilometres within India, long distance secure quantum communications with other countries, inter-city quantum key distribution over 2000 km as well as multi-node Quantum network with quantum memories are also some of the deliverables of the Mission.
- The mission will help develop magnetometers with high sensitivity in atomic systems and Atomic Clocks for precision timing, communications and navigation.
- It will also support design and synthesis of quantum materials such as superconductors, novel semiconductor structures and topological materials for fabrication of quantum devices.
- Single photon sources/detectors, entangled photon sources will also be developed for quantum communications, sensing and metrological applications.
- Four Thematic Hubs (T-Hubs) will be set up in top academic and National R&D institutes on the domains –
 1. Quantum Computing
 2. Quantum Communication.
 3. Quantum Sensing & Metrology and
 4. Quantum Materials & Devices.
- The hubs which will focus on generation of new knowledge through basic and applied research as well as promote R&D in areas that are mandated to them.
- NQM can take the technology development eco-system in the country to a globally competitive level.
- The mission would greatly benefit communication, health, financial and energy sectors as well as drug design, and space applications.
- It will provide a huge boost to National priorities like digital India, Make in India, Skill India and Stand-up India, Start-up India, Self-reliant India and Sustainable Development Goals (SDG).

Physicists discover new uranium isotope

Why in News

In pursuit of a 'magic number', physicists have recently discovered a new uranium isotope.

Important Points

About new uranium isotope:

- While studying the atoms of heavy elements, physicists in Japan discovered a previously unknown isotope of uranium, with atomic number 92 and mass number 241, i.e. uranium-241.
- There is particular interest in 'magic number' nuclei: containing a number of protons or neutrons such that the resulting nucleus is highly stable.
- There is particular interest in 'magic number' nuclei: containing a number of protons or neutrons such that the resulting nucleus is highly stable.

- The heaviest known ‘magic’ nucleus is lead (82 protons). Physicists have been trying to find the next such element.
- The researchers accelerated uranium-238 nuclei into plutonium-198 nuclei at the KEK Isotope Separation System (KISS). In a process called multinucleon transfer, the two isotopes exchanged protons and neutrons.
- The resulting nuclear fragments contained different isotopes. This is how the researchers identified uranium-241 and measured the mass of its nucleus.
- The team used time-of-flight mass spectrometry to estimate the mass of each nucleus depending on the time it took to reach a detector.



Significance of new isotope matter:

- The arrangement of protons and neutrons in an atomic nucleus follows some rules. We know what these rules are based on the nuclei’s properties and structure.
- In general, an atom’s mass is slightly lower than the sum of the masses of protons, neutrons, and electrons.
- So systematically measuring the mass of uranium and its neighbourhood elements yields essential nuclear information to understand the synthesis of such heavy elements in explosive astronomical events.
- The discovery of a new neutron-rich uranium isotope is the first since 1979.
- The finding refines our understanding of nuclear physics. What shapes the large nuclei of heavy elements take and how often (or rarely) defines the boundaries of models that physicists use to design nuclear power plants and models of exploding stars.

Union Cabinet approves LIGO-India

Why in News

Recently, the Union government has given the final go-ahead to India’s Laser Interferometer Gravitational-Wave Observatory, or LIGO, project.

Important Points

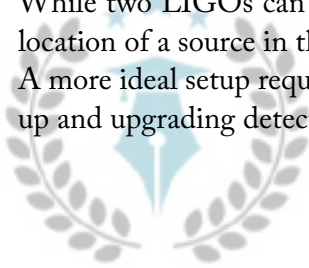
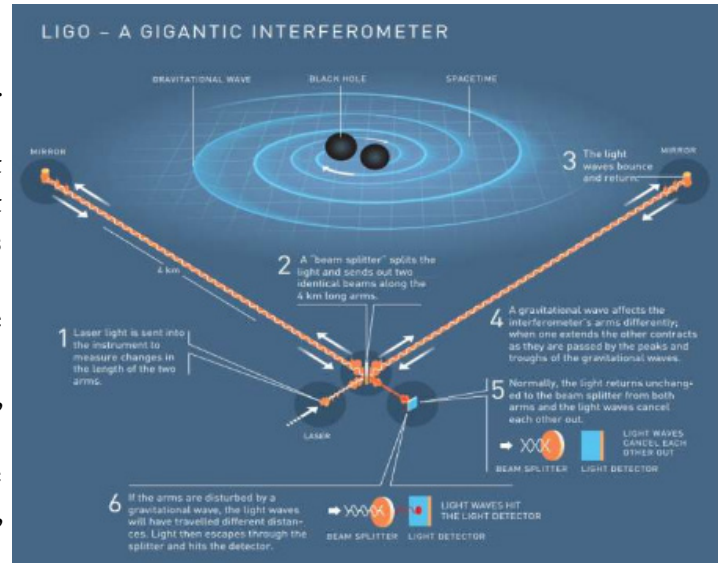
About the Project:

- The Union Cabinet’s approval to set up a gravitational-wave detection facility in Maharashtra, a 2,600 crore project.
- It is one that will consist of a detector called the Laser Interferometer Gravitational-wave Observatory (LIGO), to be built in the image of the twin LIGO instruments already operational in the U.S.
- The facility’s construction is expected to be completed by 2030.
- The observatory will be the third of its kind, made to the exact specifications of the twin Laser Interferometer Gravitational-wave Observatories (LIGO), in Louisiana and Washington in the U.S. LIGO-India will work in tandem with them.
- US 1A third detector is being built in India as part of the LIGO-India collaboration in order to improve the detectors’ collective ability to pinpoint sources of gravitational waves in the sky.
- The Cabinet’s approval throws up two opportunities: first, India could become a global site of gravitational physics research, aiding training and the handling of precision technologies and sophisticated control systems, ultimately, cementing a reputation for successfully running an experimental Big Science project.
- Second, LIGO-India can demonstrate an ability to reckon intelligently with Indian society’s relationship with science, using the opportunities that Big Science affords.
- India has had a contested relationship with such projects, including, recently, the Challakere Science City and the stalled India-based Neutrino Observatory (INO).
- The project is jointly funded by the department of science and technology and the department of atomic energy.
- The mega-science project in astronomy promises breakthrough research, development of cutting-edge technology and opportunities for students and researchers.

- LIGO-India will be built by the Department of Atomic Energy and the Department of Science and Technology, with a memorandum of understanding with the U.S. National Science Foundation and several national and international research institutions.
- The U.S. will provide key components for the lab worth around Rs 560 crore.

LIGO & Gravitational waves

- The LIGO is a giant L-shaped instrument. Each arm of the 'L' is 4 km long.
- Two laser pulses are shot through each arm at the same time, and they bounce off a mirror at the end to return to the vertex. A detector checks whether the pulses return at the same time.
- When a gravitational wave passes through the detector, the pulses are slightly out of time.
- Researchers use this and other signals to detect, record, and study gravitational waves
- Gravitational waves are emitted by very massive objects in the universe in extreme environments, such as when black holes collide.
- Just as light emitted by an object can be used to probe its electromagnetic properties, gravitational waves can be used to probe the gravitational features of the source.
- While two LIGOs can study gravitational waves, a third observatory is required to better triangulate the location of a source in the sky.
- A more ideal setup requires four observatories to record the same wave. To this end, researchers are setting up and upgrading detectors in Italy and Japan.



TRANSFORM IAS
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Chapter- 6

SOCIAL ISSUES

Why in News

Kudmi community has recently demanded Scheduled Tribe (ST) status and the inclusion of their language in the Eighth Schedule of the Constitution.

Important Points

- The Kudumi Mahato are a community found in states of Jharkhand, West Bengal and Odisha of India.
- They are also known as Kurmbi, Kudmi, Kurmi Mahto/Mahato (not to be confused with Kurmi) or Kudumi Mohanta/Mahanta.
- The Kudumi were classified as a Notified Tribe by the British Raj under the terms of the Indian Succession Act introduced in 1865 as they have customary rules of succession.
- Subsequently, in 1913, they were classified as a Primitive Tribe. Despite being a tribe, they were omitted from the list of communities listed as tribes in the 1931 census.
- Again, they were omitted from the Scheduled Tribe list drawn up in 1950, for reasons that are unknown.
- In 2004 the Government of Jharkhand recommended that they should be listed as a Scheduled Tribe rather than Other Backward Class.
- Kurmali is an Indo-Aryan language spoken in Eastern India. Kurmali is generally linked to the Kudumi Mahato (also known as Kurmi, Mahanta or Mohanta) community of Jharkhand, Odisha & West Bengal.
- Kudmali is also spoken by the Kudumi people of Assam, and was brought to the tea gardens from Bihar, Odisha and West Bengal.
- Chait Parab, Karam, Jitiya, Badna, Tusu are the major festival of Kudmi.
- They worship Budhabaap in Madapthan and Garam at gramthan. Jhumar and Chhau are their folk dance.



Promissory estoppel under contract law

Why in News

Advocate Prashant Bhushan has recently argued that instead of implementing the new recruitment scheme (Agnipath), the government should complete the old process and cited the doctrine of promissory estoppel.

Important Points

What does promissory estoppel under contract law mean?

- Promissory estoppel applies when the promisor has made a promise to the promisee.
- The promisee must have relied on the promise and suffered a loss due to non-performance of the contract.
- The doctrine prevents the promisor or enterprise from going back on their word or promise.
- The doctrine of promissory estoppel is an equitable doctrine. Like all equitable remedies, it is discretionary, in contrast to the common law absolute right like right to damages for breach of contract.
- The doctrine has been variously called 'promissory estoppel', 'equitable estoppel', 'quasi estoppel' and 'new estoppel'.
- It is a principle evolved by equity to avoid injustice and though commonly named 'promissory estoppel', it is neither in the realm of contract nor in the realm of estoppel.



- This rule is applied by the Courts of Equity in England, as estoppel is a rule of equity.
- In India, however, as the rule of estoppel is a rule of evidence, the ingredients of section 115 of the Indian Evidence Act, 1872, must be satisfied for the application of the doctrine.
- The doctrine of promissory estoppel does not fall within the scope of section 115 as the section talks about representations made as to existing facts whereas promissory estoppel deals with future promises.
- The application of the doctrine would negate the constitutional provision, as under Article 299, which affords exemption from personal liability of the person making the promise or assurance.

Protection of Plant Varieties and Farmers' Rights Authority

Why in News

The Ministry of Agriculture and Farmers' Welfare has designated Kerala Agricultural University as a centre of the Protection of Plant Varieties and Farmers' Rights Authority.

Important Points

- The objective is to protect the rights of Kerala farming communities over the traditional plant varieties.
- Any person, group of persons or any governmental or non-governmental organization can file the claim for compensation on behalf of those communities who have contributed significantly in the evolution of any registered plant variety.
- If any farmer or farmers cluster in Kerala have a claim on contribution in the evolution of any registered variety, they can approach Kerala Agricultural University.
- Kerala Agricultural University will verify the claims relating to field crops, fruits, vegetables, trees, spices, flower crops and plantation crops in the State and report to PPV and FR Authority and no fee will be claimed from the farmer or farming communities for such claim.
- The move is expected to boost the efforts to protect the State's traditional plant varieties and prevent bio-piracy.
- Among the policy interventions to aid agricultural development, the enactment of the Protection of Plant Varieties and Farmers Rights Act 2001, which ensured the legal protection of intellectual property rights in the agricultural sector, including that of farmers.
- The protection ensured the commercial possibilities of innovations not only for the private sector but also for the public sector and the farmers.
- The law ensures the farmer's rights as a conserver of traditional varieties apart from that as a developer of new varieties.

Heatstroke

Why in News

Due to Heatstroke, more than ten people have died in Maharashtra recently.

Important Points

- It occurs when the body can no longer control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down.
- It is a potentially life-threatening condition that occurs when the body's internal temperature rises to a dangerous level, typically above 40°C or 104°F.
- The classic symptoms of having a heat stroke includes a high body temperature, hot and dry skin, rapid heartbeat, headache, dizziness, nausea, confusion, and unconsciousness.

Heatwave in India

- In India Heat waves typically occur from March to June, and in some rare cases, even extend till July. On an average, five-six heat wave events occur every year over the northern parts of the country. Single events can last weeks, occur consecutively, and can impact large population.



What is criterion for declaring heat wave in India?

- Heat wave is considered if maximum temperature of a station reaches at least 40°C or more for Plains and at least 30°C or more for Hilly regions.

- Based on Departure from Normal Heat Wave: Departure from normal is 4.50°C to 6.40°C Severe Heat Wave: Departure from normal is >6.40degree C
- Based on Actual Maximum Temperature Heat Wave: When actual maximum temperature $\geq 450^{\circ}\text{C}$ Severe Heat Wave: When actual maximum temperature ≥ 47
- If above criteria met at least in 2 stations in a Meteorological sub-division for at least two consecutive days and it declared on the second day.
- What is a criterion for describing Heat Wave for coastal stations in India?
- When maximum temperature departure is 4.50°C or more from normal, Heat Wave may be described provided actual maximum temperature is 370°C or more. The peak month of the heat wave over India is May.

India Ransomware Report 2022 by CERT-In

Why in News

India's national cyber agency CERT-In has released the India Ransomware Report 2022

Important Points

- India saw a 53 per cent increase in ransomware incidents in 2022 (year-over-year) and IT and ITeS was the majorly impacted sector followed by finance and manufacturing.
- Ransomware players targeted critical infrastructure organisations and disrupted critical services in order to pressurise and extract ransom payments in 2022.
- Variant wise, Lockbit was a majorly seen variant in the Indian context followed by Makop and DJVU/Stop ransomware.
- Many new variants were observed in 2022 such as Vice society, BlueSky etc.
- In 2022, a massive ransomware attack disrupted the systems at the All India Institute of Medical Science (AIIMS), crippling its centralised records and other hospital services.
- According to the CERT-In report, at the large enterprise level, Lockbit, Hive and ALPHV/BlackCat, Black Basta variants became major threats, whereas Conti, which was very active in the year 2021, became extinct in the first half of the year 2022.
- Makop and Phobos ransomware families mainly targeted medium and small organisations.
- At individual level, Djvu/Stop variants continued dominance in attacks over the past few years.
- Most of the ransomware groups are exploiting known vulnerabilities for which patches are available.
- Some of the product wise vulnerabilities being exploited are in tech companies like Microsoft, Citrix, Fortinet, SonicWall, Sophos, Zoho. and Palo Alto etc.
- Ransomware gangs are commonly using Microsoft Sysinternals utilities such as PsExec for lateral movements.
- On an average, the restoration time is about 10 days for infections in reasonably large infrastructure networks.



India becomes most populous country-UNFPA

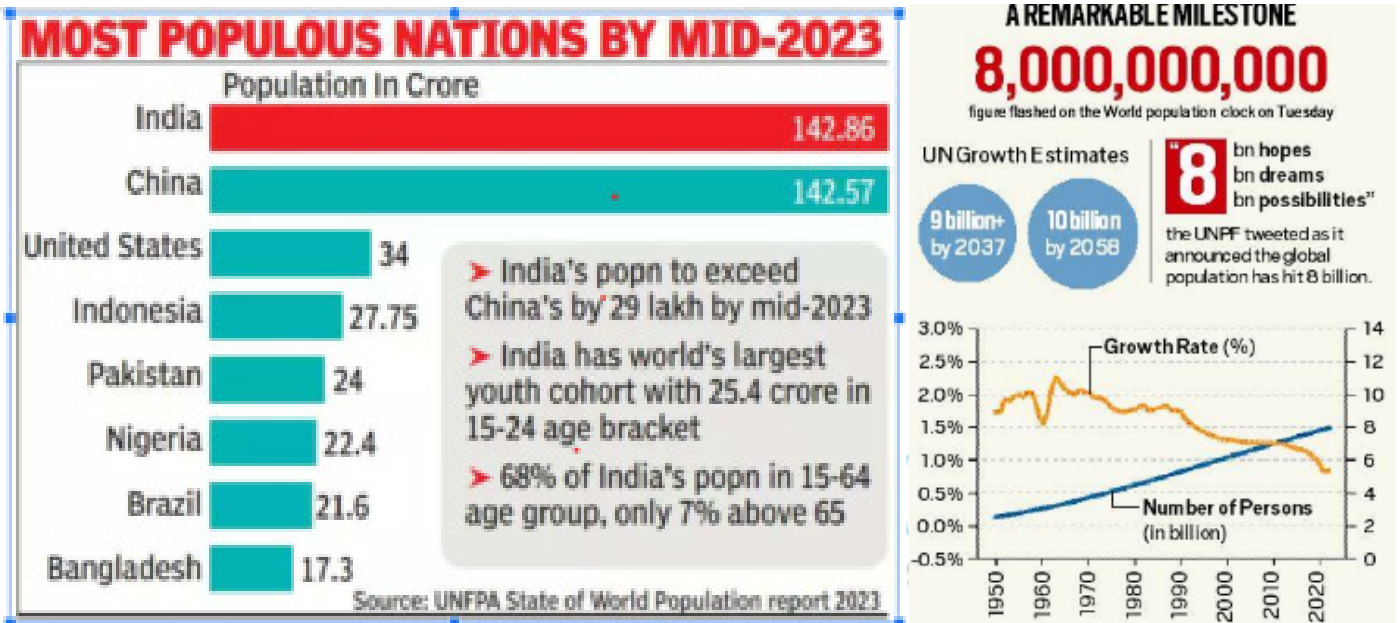
Why in News

As per United Nations Population Fund (UNFPA) the State of World Population Report, 2023 India's population surpassed 1.428 billion while China stood at 1.425 billion.

Important Points

- India's population is pegged to reach 142.86 crore against China's 142.57 crore.
- There is a difference of 2.9 million people between India and China. Half of the population is under the age of 30 in India.
- India's population is expected to touch 1.668 billion by 2050. While China's population is expected to contract to about 1.317 billion.
- The latest figures were given under the category of 'Demographic Indicators' in the report.
- It will be the first time that India's population will overtake China's since 1950 when the UN began to collect and release population data.

- The UNFPA report said 25% of India's population is in the age group of 0-14, 18% in 10-19, 26% in 10-24, 68% in 15-64, and 7% above 65.
- The corresponding figures for China are 17%, 12%, 18%, 69%, and 14%, which means the country has nearly 200 million above the age of 65.
- According to the report, China is doing better than India in the context of life expectancy, which in the case of women is 82 and 76 that of men. The figures for India are 74 and 71.
- China's population decreased by 850,000 people in 2022, the first such decline since 1961.
- The world's population hit the 800-crore mark in November 2022.
- Just eight countries will account for half the projected growth in global population by 2050 — the Democratic Republic of Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, the Philippines and the United Republic of Tanzania.
- While two-thirds of people now live in a country where lifetime fertility corresponds with zero growth.



The United Nations Population Fund (UNFPA)

- The United Nations Population Fund UNFPA, formerly the United Nations Fund for Population Activities, is a UN agency aimed at improving reproductive and maternal health worldwide.
- UNFPA was created in 1969, the same year the United Nations General Assembly declared “parents have the exclusive right to determine freely and responsibly the number and spacing of their children.”
- Mission: To deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled.
- Its work includes developing national healthcare strategies and protocols, increasing access to birth control, and leading campaigns against child marriage, gender-based violence, obstetric fistula, and female genital mutilation.
- It advises against reactionary policy responses, which can be extremely harmful if they violate rights, health and choices.
- It calls for prioritizing reproductive health and rights for all through access to information and services in the face of fertility and demographic shifts.

Indigenous Idu Mishmis

Why in News

The announcement that the Dibang Wildlife Sanctuary in Arunachal Pradesh would soon be notified as a tiger reserve has caused disquiet among the area's Idu Mishmi people.

Important Points

Idu Mishmis

- The Idu Mishmi is a sub-tribe of the larger Mishmi group (the other two Mishmi groups are Digaru and Miju) in Arunachal Pradesh and neighbouring Tibet.

- Known for their weaving and craftsmanship skills, the Idu Mishmis primarily live in Mishmi Hills, bordering Tibet.
- Their ancestral homelands are spread over the districts of Dibang Valley and Lower Dibang Valley as well as parts of Upper Siang and Lohit.
- The tribe is estimated to comprise around 12,000 people (as per census 2011), and their language (also called Idu Mishmi) is considered endangered by UNESCO.
- Traditionally animists, the tribe has strong ties with the region's rich flora and fauna.
- Animals such as the hoolock gibbons and tigers have deep cultural relations with the Idu Mishmi.
- Tigers are especially important to the Idu Mishmis, according to Idu mythology, they were born to the same mother, and thus, tigers are their "elder brothers".
- While hunting has traditionally been a way of life, the Idu Mishmis also follow a strict belief system of myths and taboos 'iyu-ena' that restrict them from hunting many animals, including a complete prohibition on killing tigers.

Dibang Wildlife Sanctuary:

- It is one of the eight wildlife sanctuaries of Arunachal Pradesh.
- It is located in the Upper Dibang Valley district covering an area of 4,149 km².
- Its a biodiversity hotspot home to rare Mishmi takin, musk deer, goral Black bear, Red Panda, Monal, Tragopan, Kalij, Pheasants as well as clouded leopards, snow leopards and tigers.
- A new species of a flying squirrel has been recently discovered from the edge of this sanctuary.
- It has been named the Mishmi Hills giant flying squirrel (*Petaurista mishmiensis*). Dibang Wildlife Sanctuary is located fully or partly within Dihang-Dibang Biosphere Reserve
- It was notified in 1998, plans to declare it as a tiger reserve have been afoot for a while now.
- In April 2021, at the 20th NTCA meeting held at the state's Pakke Tiger Reserve, under the chairmanship of Union Minister for environment, members accorded final approval to declare the wildlife sanctuary as a tiger reserve.



India Justice Report (IJR) 2022

Why in News

The third edition of India Justice Report (IJR) has been released recently.

Important Points

About India Justice Report

- The India Justice Report (IJR) was initiated by Tata Trusts in 2019.
- The foundation's partners include the Centre for Social Justice, Common Cause, Commonwealth Human Rights Initiative, DAKSH, TISS-Prayas, Vidhi Centre for Legal Policy and How India Lives, IJR's data partner.
- It compiles and categorises data of states and UTs, based on "four pillars" of justice delivery—the police, judiciary, prisons, and legal aid.
- Each pillar is analysed through the prism of budgets, human resources, workload, diversity, infrastructure, and trends (intention to improve over a five-year period), against the state's own declared standards and benchmark.
- It separately assesses the capacity of the 25 State Human Rights Commissions as well.

Key findings:

- The IJR 2022, like the previous two, has tracked the performance of States in capacitating their Justice delivery structures to effectively deliver mandated services.
- Although states have increased budget allocation for legal aid, legal aid clinics reduced by 44 per cent between 2019 to 2021, the India Justice Report (IJR) 2022 stated, while adding that all states and Union Territories contributed more than 60 per cent to their legal aid budgets.

- The report mentions that India's justice system as a whole remains plagued by low budgets. This could be due to the fact that except for two union territories, Delhi and Chandigarh, no state spends more than 1 per cent of its total annual expenditure on the judiciary.
- The report further reasons that most states have not fully utilised the funds given to them by the Centre and their own increase in spending on the police, prisons, and judiciary has not kept pace with the overall increase in state expenditure.
- Despite this, the national per capita spending on police significantly increased from Rs 912 in 2017-18 to Rs 1151 in 2020-21.
- Concerning budgets, the report states the national per capita spend on legal aid, including the expenditure of the National Legal Services Authority (NALSA) and the state/UT governments themselves, is a "meagre Rs 4.57 per annum".
- The report flags the issue of "vacancy" in areas like the police, prison staff, judiciary, and legal aid.
- When it comes to the judiciary, it highlights that India has about 20,076 judges for a population of 1.4 billion, indicating a vacancy of 22 per cent among the sanctioned posts.
- Among high courts, there is a 30 per cent vacancy of judges, it says, adding that only 13% of High Court judges and 35% of Subordinate Court judges are women.
- On the aspect of workload in the judiciary, the report said that in 28 states, one in every four high court cases is pending for more than five years.
- Further, the report states that as of December 2022, India had only 19 judges per one million people (when calculated against the sanctioned strength), which falls behind the Law Commission's 1987 target of reaching 50 judges per million population in a decade.
- The report also brings to the forefront the current backlog of 4.8 crore cases in the judiciary.
- On the subject of prisons, the report said that prisons are over-occupied at over 130%, with more than two-thirds or 77.1% of the prisoners still awaiting the completion of investigation or trial.
- Moreover, around 25% of the police stations in India do not have a single CCTV.
- It also said that the representation of women in prison staff is 13%. Despite this, the share of jails with video conferencing increased to 84% as opposed to the previous 60% in 2020.
- When it comes to the "police", the report flags the issue of inadequate women representation in the police, which currently stands at 11.75%, despite their numbers doubling in the last decade.
- Moreover, about 29% of the officer positions are vacant%. The police-to-population ratio is 152.8 per lakh, whereas the international standard is 222, the report also mentions.
- On the subject of diversity, the IJR states that Karnataka remains the only state to consistently meet its quota for SC, ST and OBC positions, both among Police officers and the constabulary, whereas in the judiciary, at the Subordinate/District Court level, no state met all the three quotas.
- Only Gujarat and Chhattisgarh met their respective SC quotas. Arunachal Pradesh, Telangana, and Uttarakhand met their respective ST quotas.
- Kerala, Sikkim, Andhra Pradesh, Maharashtra, Tamil Nadu, Chhattisgarh, and Telangana met OBC quotas.



State's rankings

- In IJR 2022 the State of Karnataka has achieved the top rank among the 18 large and mid-sized States with populations over one crore, as per the justice delivery namely Police, Judiciary, Prisons, and Legal Aid.
- The State of Tamil Nadu has ranked in second position and Telangana in Third. The State of Uttar Pradesh is at rank 18 which is the lowest.
- The State of Gujarat has got the fourth position and Andhra Pradesh is at slot five.
- The list of Seven Small States with a population less than one crore each, was topped by Sikkim which was ranked second in 2020.
- Sikkim has been followed by Arunachal Pradesh which was at rank 5 in 2020 [2020 and Tripura is at rank three].
- Tripura was at the rank one in 2020. In this list, the State of Goa is at rank Seven which is the lowest.

Thales Data Threat Report 2023

Why in News

Ransomware Attacks Surge and Human Error Exposes Cloud Data

Important Points

- A recent Thales Data Threat Report reveals that there has been a significant increase in ransomware attacks and human error-driven cloud data breaches in India and worldwide.
- In India, 52% of IT professionals reported an increase in ransomware attacks in the past 12 months, higher than the global figure of 48%.
- Surprisingly, less than half (48%) of enterprises surveyed in India have a formal ransomware plan.

Cloud Assets and IoT Devices Under Fire

- The report also identifies cloud assets and IoT devices as the primary targets for cyber-attacks. In India, 53% of respondents claimed that their IoT devices were the biggest targets, followed by cloud-based storage (41%) and cloud-delivered applications (SaaS) (40%). These figures highlight the growing risks associated with the rapid shift towards cloud-based workloads and the need for enterprises to prioritize data security.

Human Error: The Leading Cause of Cloud Data Breaches

- Human error, misconfiguration, and other mistakes are identified as the leading cause of cloud data breaches in the report. In India, 52% of respondents who suffered a data breach in the past 12 months cited human error as the primary cause. The report emphasizes the importance of identity and access management (IAM) as the most effective tool to mitigate these risks, with 28% of global respondents identifying IAM as their top choice.

Ransomware Impact Declining, but Data Loss Remains a Concern

- Although the severity of ransomware attacks appears to be declining, data loss from these attacks remains a significant concern for enterprises in India. A staggering 82% of Indian respondents reported data loss from ransomware attacks, compared to 67% globally.

Digital Sovereignty and Quantum Computing: Emerging Threats on the Horizon

- Data sovereignty is becoming an increasingly pressing concern for data privacy and security teams, with 82% of Indian respondents expressing concerns over data sovereignty. Additionally, the emergence of quantum computing presents a potential threat to classical encryption schemes. The report highlights that “Harvest Now, Decrypt Later” (HNDL) and future network decryption are the most significant security concerns globally from quantum computing, with 62% and 55% reporting concerns, respectively.

Time to Implement Robust Security Measures

- With the increasing number of ransomware attacks and cloud data breaches, Ashish Saraf, VP and Country Director, Thales – India, calls for businesses to focus on implementing robust security measures to protect against these evolving threats. He emphasizes the importance of maintaining better control over data in an increasingly cloud-first world, where cloud-based storage is perceived as one of the biggest targets for cyber-attacks.



Same-sex marriage

Why in News

SC limits case to recognition of union within Special Marriage Act

Important Points

- The Supreme Court five-judge Constitution bench began hearing a case on legal recognition of same-sex marriages with the government questioning the Court's right to hear the case.
- The court decided to limit the scope of the case to develop the notion of a civil union which finds recognition within the Special Marriage Act.

- The Central government has consistently opposed the pleas and gone so far as to state that same-sex marriage is an issue of urban elites and not that of rural India.
- The government stated in its petition the Centre has argued that marriage is a socio-legal institution which can be created, recognised, conferred with legal sanctity, and regulated only by Parliament under Article 246 of the Constitution.
- While hearing the petitioners, the bench decided that it would not touch the Hindu Marriage Act or any personal laws and instead focus on the maintainability of including same-sex unions under the Special Marriage Act.
- The people are in same-sex relations have the same rights under the Constitution as the heterosexual group of people.
- The court had removed the Section 377, which was a stumbling block on our equal rights.
- A marriage under the Special Marriage Act, 1954, uses the term ‘spouse’ within its definition.
- Section 4 of the SMA states that at the time of marriage, “neither party has a spouse living”.
- Especially in a country like India, where the family unit and social connections are highly valued, denying homosexual couples the right to the same seems like a huge discrimination.
- Thus, the issue of legalisation of same-sex marriage paves the way to much larger societal changes leading to a milieu of a much more accepting and diverse community.

A step towards LGBTQIA+ rights

- Research shows that the financial, psychological and physical wellbeing of gay individuals is enhanced by marriage and that the children of same-sex parents benefit from being raised by married same-sex couples within a marital union recognised by law and supported by societal institutions.
- Studies in social science indicate that the exclusion of homosexuals from marriage stigmatises and invites public discrimination against them, further leading to their ‘othering’ and violation of human rights.
- The gender roles are not watertight. Be it providing emotional fondness by the mother or physical security by the father — these are interchangeable, as we see in the case of single parents.
- Hence, this cannot be an argument against same-sex marriages.
- Further, generational expansion is one of but not the only offshoots of a marriage.
- It’s every couple’s right to decide whether they want an offspring.
- The Indian Psychiatric Society — the largest professional body of psychiatrists in India — recently gave a press release reiterating that homosexuality is not a disorder and LGBTQIA+ individuals should have as many rights as any other citizen of India towards marriage, adoption, education and employment.
- The release also highlighted the absolute lack of evidence that same-sex parents are any different from others in adopting or parenting their children.
- Legalising same-sex marriages is a welcome step to provide legal rights to these couples to cohabit, marry, adopt and build a family life, which many desire.
- Marriage is a personal choice and is associated with reproductive rights. Respecting this choice brings about autonomy, respect, dignity and equality within any community.



Ageing, the real population bomb

Why in News

The most formidable demographic challenge facing the world is no longer rapid population growth, but population ageing

Important Points

- The total world population passed the 8 billion milestone.
- The progression from 7 billion to 8 billion people took a mere 12 years, conjuring up long-standing fears associated with rapid population growth, including food shortages, rampant unemployment, the depletion of natural resources, and unchecked environmental degradation.

- But the most formidable demographic challenge facing the world is no longer rapid population growth, but population aging. Thoughtful preparedness — combining behavioral changes, investment in human capital and infrastructure, policy and institutional reforms, and technological innovations — can enable countries to meet the challenge and take advantage of the opportunities presented by demographic change.
- The specter of a global population bomb has in reality been defused (or, rather, fizzled naturally).
- The world's rate of population growth has slowed appreciably in recent decades and is projected to continue slowing.
- Even as India is projected to surpass China in 2023 to become the most populous country in the world, its average annual rate of population growth is projected at 0.7 per cent during 2020-40, below the global average of 0.8 per cent and just half its 2000-20 rate.
- Current UN projections also signal an increase in the number of countries experiencing annual population decline, from 41 in 2022 to 88 in 2050 (with China included throughout).
- Population growth rates vary considerably across countries, income groups, and geographic regions.
- Growth is disproportionately high among low-income countries and in Africa and disproportionately low among middle- and (especially) high-income countries and in Europe.
- What is fast becoming universal is that population aging is the most pervasive and dominant global demographic trend, owing to declining fertility, increasing longevity and the progression of large cohorts into older ages.
- The population age structure has changed radically over the years.
- Global life expectancy soared from 34 years in 1913 to 72 years in 2022 and is expected to continue on that long-term trajectory.
- Meanwhile, between 1970 and 2020, fertility dropped in every country in the world.
- When the United Nations and World Health Organization (WHO) were established, there were seven times more children under age 15 than people 65 and older; by 2050, these groups will be about the same size.
- Between 2000 and 2050 alone, the global share of people 80 and older to almost 5 per cent.



Demographic preparedness:

- Demographic change is typically more evolutionary than revolutionary, certainly compared with other major influences on social and economic well-being, such as pandemics, civil and cross-national conflicts, and technological change.
- Because demographic trends are also more predictable, key stakeholders have a fairly wide window of opportunity to enact policies and encourage behaviors that shape future demographics and cushion potential adverse impacts of the demographic changes that do occur.
- Attainable goals for demographic preparedness include improving reproductive health, equipping people with the human and physical capital they need to be productive members of society, ensuring well-functioning labor and capital markets that allow people to realize their productive potential, establishing institutions and policies that limit the burdens people place on the environment, and promoting healthy aging.

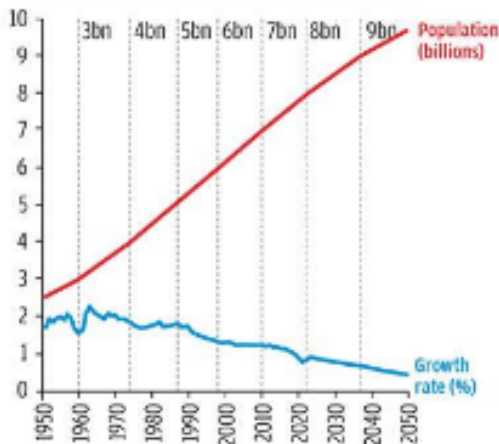
WHO Recommendations:

- A vital behavioral change centers on increasing physical activity.
- The WHO calls for 150–300 minutes of moderate aerobic physical activity a week for adults ages 18–64.
- In terms of healthy aging, the WHO recommends that adults 65 and older augment physical activity with balance and strength training three days a week.
- However, one in four adults worldwide fails to meet these standards.
- Meanwhile, the WHO's recommendation for adolescent physical activity, 60 minutes a day, is unmet by more than 80 per cent of the population.
- Proposed initiatives include policies to support travel on foot or by bicycle, as well as an alliance of schools, communities, workplaces, health systems, and governments to provide incentives and safe spaces for greater

physical activity. Encouraging healthier diets (low in sugar, sodium, saturated fat, and calories) and reducing the consumption of tobacco and the unsafe consumption of alcohol could also yield significant and lasting returns to the healthy aging effort.

POPULATION BOOM FIZZLING

Even as global population passes 8 billion, the rate of growth continues to decline

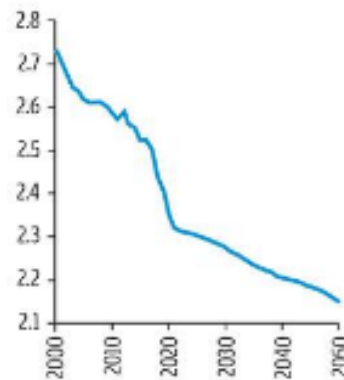


Sources: United Nations Department of Economic and Social Affairs, Population Division, World Population Prospects, 2022 Revision

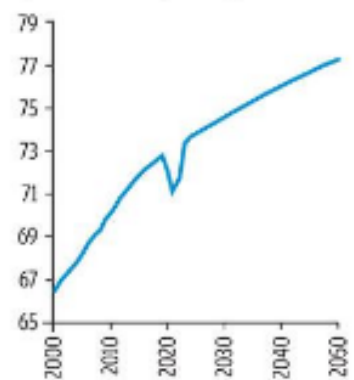
AGEING POPULATION

People are living longer and having fewer children, leading to a greater proportion of elderly in the population

Total fertility rate, worldwide (births per woman)



Life expectancy at birth, worldwide (years of life expectancy)



Sources: United Nations Department of Economic and Social Affairs, Population Division, World Population Prospects, 2022 Revision

- Human capital investment initiatives should focus on sustaining per capita economic growth despite declines in the share of the working-age population.
- Reinforcement of training and skills programs would ideally aim not only to increase the productivity of those already in the workforce but also to encourage workforce participation of underrepresented groups, such as mothers and older people.
- Also desirable are investments in primary and secondary education that shore up teaching of critical skills and, whenever possible, focus on cultivating innovators from a broad swath of society.

Chapter- 7

INTERNATIONAL RELATION

India elected to the United Nations Statistical Commission

Why in News

India has been elected to the UN Statistical Commission for a four-year term.

Important Points

About the United Nations Statistical Commission:

- It is the highest body of the global statistical system bringing together 24 member states from around the world.
- It was established in 1947.
- It is the highest decision-making body for international statistical activities, responsible for setting of statistical standards and the development of concepts and methods, including their implementation at the national and international level.
- It oversees the work of the United Nations Statistics Division (UNSD) and it is a Functional Commission of the UN Economic and Social Council.
- The Commission consists of 24 member countries of the United Nations elected by the United Nations Economic and Social Council on the basis of an equitable geographical distribution according to the following pattern:
 1. Five members from African States.
 2. Four members from Asia-Pacific States.
 3. Four members from Eastern European States.
 4. Four members from Latin American and Caribbean States.
 5. Seven members from Western European and other States.
- The term of office of members is four years.
- The officers of the Commission, also referred to as the Bureau, are the Chairman, 3 Vice-chairmen and the Rapporteur.
- The current members from the Asia-Pacific States are Japan (2024), Samoa (2024) as well as Kuwait and Republic of Korea, whose terms are ending in 2023.
- India secured an overwhelming 46 out of 53 votes. A second candidate is yet to be decided between South Korea and China for electing the remaining Asia Pacific States member.
- India was elected by secret ballot while Argentina, Sierra Leone, Slovenia, Ukraine, the United Republic of Tanzania and the United States of America were elected by acclamation for a four-year term of office beginning January 1, 2024.



UN Democracy Fund

Why in News

Recently India said that it has no objections to the UN Democracy Fund(UNDEF) giving grants to NGOs funded by George Soros, while he is put on the watchlist in India underlines a contradiction.

Important Points

About UN Democracy Fund

- It was established in 2005 as a United Nations General Trust Fund to strengthen global participation in democratisation efforts.
- The UNDEF has funded several significant projects over the years, including empowering civil society, promoting human rights, and encouraging participation of all groups in democratic processes.

- UNDEF projects are two years long, with project grants ranging from \$100,000 to \$300,000.
- It also backs a number of major global and regional projects with a normative and policy focus.
- UNDEF works entirely on voluntary contributions from governments around the world.
- UNDEF provides financial support for the projects depending on the six thematic areas, including-



1. Rule of law and human rights.
2. Women's empowerment.
3. Youth engagement.
4. Strengthening civil society interaction with government.
5. Media and freedom of information, and
6. Electoral processes.

- The Fund supports projects that strengthen the voice of civil society, promote human rights, and encourage the participation of all groups in democratic processes.
- India considers the Fund to be an effective instrument for the promotion of democratic values and processes
- India and the US were prime movers behind the UN Democracy Fund in 2005, when they were negotiating the civilian nuclear co-operation deal.
- India also handed over a voluntary contribution of US \$150,000 to the UN Democracy Fund for the year 2022–23.
- India is a founding partner of the UNDEF and has contributed over US\$ 32 million to the fund since its inception.
- Presently, the United States (first) followed by Sweden (second) top the contributor chart, respectively and India is in third position.

Germany shuts down its last three nuclear reactors

Why in News

Recently, Germany has shut its final three nuclear plants, marking the end of the country's end of nuclear era that has spanned more than 60 years.

Important Points

- Germany shut three plants– Emsland, Isar 2, and Neckarwestheim, representing the culmination of a plan set in motion more than 20 years ago.
- During the 1970s, a strong anti-nuclear movement emerged in Germany.
- The movement gave birth to the green party, which is now part of governing coalition.
- However, it was in the 2000s the German government pledged to phase out nuclear power and start shutting down plants.
- But in 2009, a new government came to power and it seemed brief as if nuclear would get a reprieve as a bridging technology to help the country move to renewable energy.
- Then Fukushima happened. In 2011, an earthquake and tsunami caused three reactors of the Fukushima Daiichi power plant to melt down.
- Three days later then-Chancellor Angela Merkel who was previously pro-nuclear, announced Germany would accelerate a nuclear phase-out, with older plants shuttered immediately.



Other countries walking the same way:

- Germany isn't the only country committed to walking away from nuclear — Italy gave up the technology in 1990, and Lithuania recently struck a deal to dismantle its Soviet-era reactors, which have sat idle for over a decade.

Nuclear is experiencing a resurgence:

- On 16th April 2023, Finland started regular power production at Europe's newest and biggest reactor.
- The 1,600-megawatt Olkiluoto-3 unit that faced years of delays had been planned to enter commercial production recently.
- France is planning to build at least six new reactors by 2050 as well as experiment with smaller, modular ones.
- The UK has similar ambitions. And even in Japan, after a decade of paralysis following the nuclear accident in Fukushima, the public is warming up to the use of nuclear power.
- The Japanese government wants to restart reactors that have sat idle since the disaster and to extend the lifespan of existing units.

What is Fukushima nuclear disaster?

- On 11 March 2011, a nuclear accident occurred at the Fukushima Daiichi Nuclear Power Plant in Ōkuma, Fukushima, Japan.
- The proximate cause of the disaster was the Tōhoku earthquake and tsunami, which remains the most powerful earthquake ever recorded in Japan.
- The earthquake triggered a powerful tsunami, with 13- to 14-meter-high waves damaging the nuclear power plant's emergency diesel generators, leading to a loss of electric power.
- The result was the most severe nuclear accident since the Chernobyl disaster in 1986, classified as level seven on the International Nuclear Event Scale (INES) after initially being classified as level five, and thus joining Chernobyl as the only other accident to receive such classification.

Jerusalem's Al-Aqsa mosque

Why in News

A recent raid by Israeli police on Jerusalem's Al-Aqsa mosque has triggered a furious reaction from Palestinians across the occupied West Bank and the wider Arab and Muslim world.

Important Points

About Al-Aqsa mosque:

- It lies at the heart of Jerusalem's Old City on a hill known to Jews as Har ha-Bayit, or Temple Mount, and to Muslims internationally as al-Haram al-Sharif, or The Noble Sanctuary.
- Muslims regard the site as the third holiest in Islam, after Mecca and Medina.
- Al-Aqsa is the name given to the whole compound and is home to two Muslim holy places: the Dome of the Rock and the Al-Aqsa Mosque, also known as the Qibli Mosque, which was built in the 8th century AD.
- The compound overlooks the Western Wall, a sacred place of prayer for Jews, for whom the Temple Mount is their most sacred site.
- Jews believe biblical King Solomon built the first temple there 3,000 years ago. A second temple was razed by the Romans in AD 70.
- Israel captured the site in the 1967 Middle East war and annexed it with the rest of East Jerusalem and adjoining parts of the West Bank in a move not recognized internationally.
- Jordan, whose ruling Hashemite family has custodianship of the Muslim and Christian sites, appoints members of the Waqf institution which oversees the site.



It is the core point of the Israeli-Palestinian conflict:

- The Al-Aqsa compound has long been a flashpoint for deadly violence over matters of sovereignty and religion in Jerusalem.
- Under the longstanding "status quo" arrangement governing the area, which Israel says it maintains, non-Muslims can visit but only Muslims are allowed to worship in the mosque compound.

- Jewish visitors have increasingly prayed more or less openly at the site in defiance of the rules, and Israeli restrictions on Muslim worshippers' access to the site have led to protests and outbreaks of violence.
- Clashes at the site in 2021 contributed to setting off a 10-day war with Gaza.
- In 2000, the Israeli politician Ariel Sharon, then opposition leader, led a group of Israeli lawmakers onto the Temple Mount/al-Haram al-Sharif complex. Palestinians protested, and there were violent clashes that quickly escalated into the second Palestinian uprising, also known as the Al-Aqsa Intifada.

Finland joins NATO

Why in News

Finland has recently joined NATO as 31st member upon depositing its instrument of accession to the North Atlantic Treaty with the United States at NATO Headquarters in Brussels.

Important Points

- To join the US-led NATO, the small Nordic country, which shares a 1,340-km border with Russia, has ended more than 70 years of military non-alignment.
- In fact, in the Cold War years, a policy of neutrality between the Soviet Union and the West was known as 'Finlandisation', and Finlandisation had been one of the options discussed for Ukraine before Russia invaded it.
- Finland's membership represents a major change in Europe's security landscape: The country adopted neutrality after its defeat by the Soviets in World War II.
- NATO Allies signed Finland's Accession Protocol on 5 July 2022, after which all 30 national parliaments voted to ratify the country's membership.



About the North Atlantic Treaty Organization (NATO):

- NATO is an intergovernmental military alliance between more than thirty North American and European countries.
- The organization implements the North Atlantic Treaty that was signed on 4 April 1949.
- NATO's purpose is to guarantee the freedom and security of its members through political and military means.
- POLITICAL – NATO promotes democratic values.
- MILITARY – NATO is committed to the peaceful resolution of disputes. If diplomatic efforts fail, it has the military power to undertake crisis-management operations.
- NATO's Headquarters are located in Evere, Brussels, Belgium, while the headquarters of Allied Command Operations is near Mons, Belgium.
- Members: NATO has 31 members, mainly in Europe and North America.
- The most recent members state to be added to NATO were North Macedonia on 27 March 2020 and Finland in April 2023.
- All decisions of NATO are taken by consensus.

Global Buddhist Summit

Why in News

The Prime Minister Shri Narendra Modi inaugurated the first Global Buddhist Summit on 20th April 2023

Important Points

- The Ministry of Culture along with the International Buddhist Confederation (IBC), a global Buddhist umbrella body, headquartered in New Delhi, recently held a successful international meet of experts from the Shanghai Cooperation Organization (SCO) nations on Shared Buddhist Heritage in order to re-establish trans-cultural links, seek out commonalities, between Buddhist art of Central Asia, art styles, archaeological sites and antiquity in various museums' collections of the SCO countries.

About the summit:

- The Ministry of Culture in collaboration with its grantee body International Buddhist Confederation (IBC) will be hosting the Global Buddhist Summit (GBS).
- The theme of summit is “Responses to Contemporary Challenges : Philosophy to Praxis”.
- Delegates from almost 30 countries participated in this summit and around 171 delegates from foreign countries and 150 delegates Indian Buddhist organizations.
- The discussions will fall under the following four themes:
 - Buddha Dhamma and Peace.
 - Buddha Dhamma: Environmental Crisis, Health and Sustainability.
 - Preservation of Nalanda Buddhist Tradition.
 - Buddha Dhamma Pilgrimage, Living heritage and Buddha Relics: a resilient foundation to India’s centuries-old cultural links to countries in South, Southeast and East Asia.
- The prime vision of the Summit is to look into the teachings of the Shakyamuni Buddha that have been continuously enriched over the centuries with the practice of Buddha Dhamma.
- The aim is to set up a forum for the lay Buddhist scholars and Dharma Masters.
- It will also delve into Buddha’s message for Peace, Compassion and Harmony with the objective of working towards Universal Peace and Harmony, in accordance with the core values of Dharma and produce a document for further academic research, to study its viability for use as a tool for the conduct of international relations on the global stage.

**International Buddhist Confederation(IBC)-**

- Founded in 2013, IBC is the biggest religious Buddhist confederation, based in Delhi, India.
- The architect of the International Buddhist Confederation is Lama Lobzang.
- This confederation is named as the first organization which unites Buddhists from the whole worlds.

The language friendship bridge**Why in News**

The Indian Council for Cultural Relations has envisaged a special project called ‘The Language Friendship Bridge’ which plans to create a pool of experts in 10 languages from some neighbouring countries and others who share a cultural heritage with India.

Important Points**About the language friendship bridge:**

- Looking to expand its cultural footprint in nations with whom it has historical ties, including those in its immediate neighbourhood, India is planning to create a pool of experts in languages spoken in neighbour countries to facilitate better people-to-people exchanges.
- As of now, the ICCR has zeroed in on 10 languages: Kazakh, Uzbek, Bhutanese, Ghoti (spoken in Tibet), Burmese, Khmer (spoken in Cambodia), Thai, Sinhalese and Bahasa (spoken in both Indonesia and Malaysia).
- In India, the language learning focus till now has been on European languages like Spanish, French and German, along with the languages of major Asian economies like China and Japan.
- Though a number of universities and institutes offer courses in these languages, only a handful teach any of the 10 languages on the ICCR list. Sinhala, for example, is taught at the Banaras Hindu University and the School of Foreign Languages (SFL) under the Ministry of Defence. The SFL also has courses in Bahasa, Burmese and Tibetan.
- The idea is to enable India to translate its epics and classics, as well as contemporary literature, into these languages so that people in both countries can read them.
- The Indian Council for Cultural Relations:
 - It is an autonomous organisation of the Government of India, involved in India’s global cultural relations, through cultural exchange with other countries and their people.
 - It was founded in 1950 by Maulana Abul Kalam Azad, independent India’s first Education Minister.

- The move has since sparked outrage from its arch-rival Yerevan which has called it a “gross violation” of the 2020 ceasefire agreement.
- Azerbaijan set up the checkpoint after claims of border shootings by both Azeri and Armenian forces.
- The region in question is internationally recognised as part of Azerbaijan, however, is home to predominantly ethnic Armenians.
- The conflict in 2020 ended after a Russia-brokered ceasefire where Azerbaijan is required to guarantee safe passage on the Lachin corridor which is also patrolled by Moscow’s peacekeepers.
- However, Baku has argued that it had to establish the checkpoint on the road leading to Karabakh for what is seemingly suggested was Armenia’s use of the road to transport weapons.
- Nagorno-Karabakh, known as Artsakh by Armenians, is a landlocked mountainous area in the South Caucasus within the mountainous range of Karabakh, lying between Lower Karabakh and Syunik, and covering the southeastern range of the Lesser Caucasus mountains.
- It was claimed by both Azerbaijan and Armenia after the fall of the Russian Empire in 1917 and has remained a point of tension ever since.
- It is internationally recognised as part of Azerbaijan, but its 120,000 inhabitants are predominantly ethnic Armenians and the region broke away from Baku in a war in the early 1990s.
- Since the end of the war in 1994, representatives of the governments of Armenia and Azerbaijan have been holding peace talks mediated by the OSCE Minsk Group on the region’s disputed status.

Russia urges both countries to comply with ceasefire agreement

- Addressing the situation with arose over the 2020 ceasefire agreement, Russia expressed “serious concerns” over the escalating tensions between the two countries.
- Kremlin spokesman Dmitry Peskov told reporters, there was “no alternative” to the agreement and said it was working with both Baku and Yerevan over the “really difficult” situation.



Armenia, Azerbaijan blame each other

- In recent months, several servicemen have been killed from both sides amid clashes.
- Armenia’s defence ministry said a soldier named Artyom Poghosyan was killed when Azeri forces opened fire on an Armenian position in.
- On the other hand, Azerbaijan denied the attack and later said it was responding to enemy fire by Armenian soldiers fired on Azeri units in the Lachin district. The claim has since been denied by Armenia.

Chapter- 8

GOVERNMENT SCHEME

Sagar-Setu app

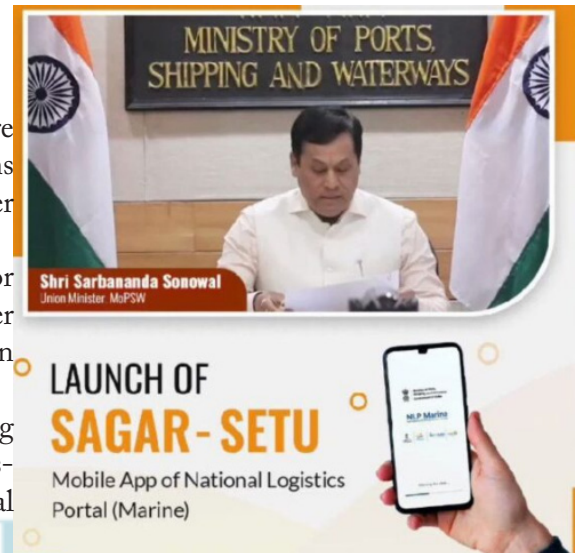
Why in News

Union Minister for Ports, Shipping and Waterways has recently launched the App Version of National Logistics Portal (Marine) 'Sagar-Setu'.

Important Points

About the app

- It will provide real-time information of activities that are generally not in reach of the importer, exporter, and customs broker including vessel-related information, gate, container freight stations and transactions on fingertips.
- It also enables digital transactions for payments required for the clearance process of import and export like container freight station charges, shipping line charges, transportation charges, etc.
- It is pertinent to add that the Ministry of Ports, Shipping Waterways and Ministry of Commerce & Industry envisaged this one-stop digital platform National Logistic Portal Marine in the month of January 2023.



Benefits for Traders

- Improve convenience with reduced turnaround time for approval and compliances.
- Increase visibility of operations and tracking.

Benefits for Service Providers

- Help in tracking of records and transactions offered.
- Receive notification of service requests.

Government launches Animal Pandemic Preparedness Initiative (APPI) and World Bank-funded AHSSOH

Why in News

Union Minister for Fisheries, Animal Husbandry and Dairying has recently launched the APPI and World Bank-funded Animal Health System Support (AHSSOH) for One Health to enhance India's preparedness and response to potential animal pandemics, in line with the One Health approach.

Important Points

About the APPI:

- This initiative aims to enhance India's preparedness and response to animal pandemics, with a focus on zoonotic diseases that pose a threat to both animal and human health.
- This initiative will help to improve veterinary services and infrastructure, disease surveillance capabilities, early detection and response, build the capacity of animal health professionals, and awareness among farmers through community outreach.

About the AHSSOH:

- It aims at creating an ecosystem for a better animal health management system using the One Health approach covering five (05) states in India.
- The five states are—Assam, Odisha, Madhya Pradesh, Maharashtra, and Karnataka.
- It seeks to strengthen district laboratories, provide mobile veterinary units in remote and high-risk areas, upgrade dispensaries and hospitals, train veterinarians and private diagnostic labs.

Tamil Nadu announces Universal Basic Income scheme

Why in News

State government of Tamil Nadu has announced Universal basic income of Rs 1,000 for women beneficiaries.

Important Points

- The scheme is named “Magalir Urimai Thogai Thittam” (Women’s Right to Income Scheme), which is the government’s recognition of women’s hard work.
- Two primary objectives of the scheme are to recognise the life-long relentless selfless work of women and to eradicate poverty by complementing their livelihood with an annual aid of 12,000 and further to ensure their self-respect and improve their standard of living in the society.
- The Rs 1,000 monthly payout would be directly deposited in the bank accounts of beneficiaries, who shall be the women who need it.
- Beneficiaries of the scheme include: Road-side women vendors, fisherwomen, those into construction work, workers in minor commercial establishments, domestic helps employed in multiple households.
- About one crore women across Tamil Nadu would benefit from the scheme and the monthly aid of 1,000 would be deposited to deserving women directly in their bank accounts.
- The scheme would be implemented from September 15, 2023. In the Budget, the government set apart Rs 7,000 crore for the scheme.

What Is Universal Basic Income (UBI)?

- It is a government program in which every adult citizen receives a set amount of money regularly.
- The goals of a basic income system are to alleviate poverty and replace other need-based social programs that potentially require greater bureaucratic involvement.
- The idea of universal basic income has gained momentum in the U.S. as automation increasingly replaces workers in manufacturing and other sectors of the economy.

Sangathan Se Samridhhi campaign of DAY-NRLM

Why in News

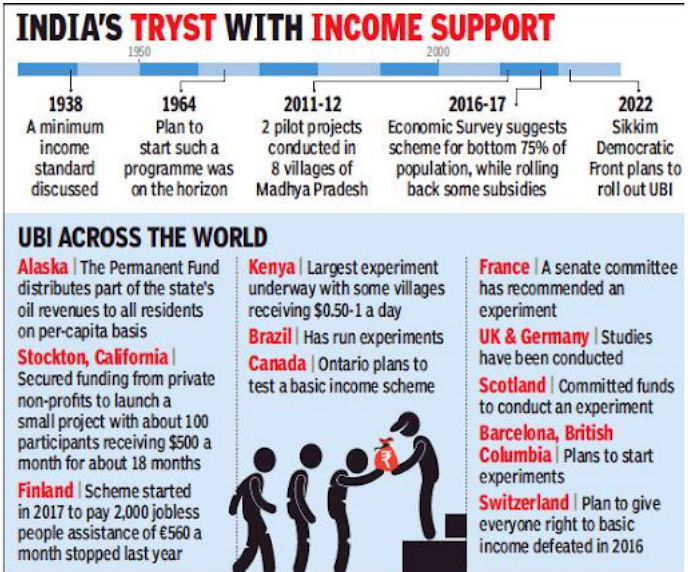
The Ministry of Rural Development’s Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) recently launched “Sangathan Se Samridhhi– Leaving no Rural Woman Behind”, a national campaign under Azadi Ka Amrit Mahotsav Samaveshi Vikaas.

Important Points

- It aims at mobilizing 10 crore women from eligible rural households.
- This special drive will go on till June 30th 2023 and aspires to bring all the vulnerable and marginalized rural households under the Self-Help Group (SHG) fold to enable them to draw benefits provided under the programme.
- The campaign’s primary objective is to mobilize disadvantaged rural communities unaware of the benefits of the DAY-NRLM program.
- The campaign will be organized in all states, with the expectation of forming more than 1.1 lakh SHGs during the period.

About DAY-NRLM

- The Ministry of Rural Development (MoRD), Government of India launched the National Rural Livelihood Mission (NRLM) by restructuring Swarnajayanti Gram Swarajgar Yojana (SGSY) in 2013.
- NRLM was renamed as DAY-NRLM in 2016 and is the flagship program of Govt. of India for promoting poverty reduction through building strong institutions of the poor, particularly women, and enabling these institutions to access a range of financial services and livelihoods services.



- The Mission aims at creating efficient and effective institutional platforms of the rural poor enabling them to increase household income through sustainable livelihood enhancements and improved access to financial services.
- It adopts a demand-driven approach, enabling the States to formulate their own State-specific poverty reduction action plans.
- The blocks and districts in which all the components of DAY-NRLM would be implemented, either through the SRLMs or partner institutions or NGOs, would be the intensive blocks and districts, whereas the remaining would be non-intensive blocks and districts.

SATHI (Seed Traceability, Authentication and Holistic Inventory) Portal

Why in News

Agriculture and Farmers Welfare Minister has recently launched the SATHI Portal and Mobile App to deal with the challenges of seed production, quality seed identification, and seed certification.

Important Points

About the portal:

- It is a Centralized Online System for seed traceability, authentication and inventory designed to deal with the challenges of seed production, quality seed identification and seed certification.
- It has been developed by the National Informatics Centre (NIC) in collaboration with the Union Ministry of Agriculture and Farmers Welfare on the theme of 'Uttam Beej – Samriddh Kisan'.
- It will ensure quality assurance system, identify the source of seed in the seed production chain.
- The system will consist of integrated 7 verticals of the seed chain – Research Organisation, Seed Certification, Seed Licensing, Seed Catalogue, Dealer to Farmer Sales, Farmer Registration and Seed DBT.
- Seeds with valid certification can only be sold by valid licensed dealers to centrally registered farmers who will receive subsidy through DBT directly into their pre-validated bank accounts.
- There will be a QR code under this system, through which the seeds can be traced.



State Energy Efficiency Index

Why in News

The Union Minister of Power and New & Renewable Energy has released the fourth edition of State Energy Efficiency Index (SEEI) 2021-22.

Important Points

About the Index:

- The index developed by the Bureau of Energy Efficiency (BEE), a statutory body under the Ministry of Power, in association with Alliance for an Energy-Efficient Economy (AEEE).
- SEEI 2021-22 assesses the Energy Efficiency progress of the 36 states and UTs for FY 2020-21 and 2021-22 using 50 indicators across 7 sectors namely: buildings, industry, municipal services, transport, agriculture, distribution companies (DISCOMs), and cross-sector initiatives.
- Programme-specific indicators have been introduced for the first time in SEEI 2021-22 to evaluate the efforts and achievements in implementing EE programmes across states/UTs in all sectors. The maximum score for the index is 100.
- The index is designed to help track progress on state goals for energy savings and reduction in emission intensity and outlines the following recommendations to help states drive change in EE which will contribute towards the fulfillment of SDGs and NDC:

		Sectors							
Categories		Cross sector	Buildings	Industry	Municipal Services	Transport	Agriculture	DISCOMs	Total
Policy									
Finance									
Institutional Capacity									
Adoption of EE Measures									
Energy Savings									
Sector weights		12	25	21	10	16	6	10	100
Indicator Weights	Common	12	10	4	3	8	2	6	45
	Programme	15	17	7	8	4	4	55	

- Enabling fiscal assistance for energy efficiency in the focus sectors.
- Developing institutional capacity in states and UTs to address emerging needs and challenges in energy efficiency implementation.
- Enhancing cross-functional collaborations across financial institutions, energy service companies, and energy professionals in large-scale energy efficiency implementation in states.
- Mainstreaming energy data reporting and monitoring across sectors.
- The SEEI improves data collection, enables cross-state collaboration, and develops energy efficiency program ideas.
- It helps states identify areas for improvement, learn from best practices, and adopt an economy-wide approach to energy efficiency implementation.
- By prioritizing energy efficiency, it aims at driving decarbonisation efforts and achieve a more sustainable future.

States rankings in SEEI 2021-22:

- Five states are in the Front Runner category (>60 points) – Andhra Pradesh, Karnataka, Kerala, Rajasthan and Telangana.
- Four states are in the Achiever category (50-60 points)- Assam, Haryana, Maharashtra, and Punjab.
- Further, Karnataka, Andhra Pradesh, Assam and Chandigarh are the top-performing states in their respective state groups.
- Telangana and Andhra Pradesh showed the most improvement since the last index.

About BEE:

- The Government of India set up the Bureau of Energy Efficiency (BEE). on 1st March 2002 under the provisions of the Energy Conservation Act, 2001.
- The mission of the Bureau of Energy Efficiency is to assist in developing policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001 with the primary objective of reducing the energy intensity of the Indian economy.
- BEE coordinates with designated consumers, designated agencies and other organizations and recognise, identifies and utilise the existing resources and infrastructure, in performing the functions assigned to it under the Energy Conservation Act.
- The Energy Conservation Act provides for regulatory and promotional functions.

100 Food Streets

Why in News

The Ministry of Health has proposed the operationalization of '100 food streets across 100 districts' in the country to promote safe and hygienic food practices.

Important Points

- In a significant and innovative move, Union Health Ministry in collaboration with Ministry of Housing & Urban Affairs has requested states/UTs to develop 100 food streets in 100 districts across the country.
- This initiative is being taken up as a pilot project to create an example for other such streets to come up across the country for ensuring hygienic and safe food practices.
- The aim of this project is to encourage safe and healthy food practices among food businesses and community members, thus, reducing foodborne illnesses and improving the overall health outcomes.
- Safe food practices not only promote “eat right campaign” and food safety, but will improve hygiene credibility of local food businesses, boost local employment, tourism and in turn, economy.
- It also leads to a cleaner and greener environment.”
- Street foods have traditionally been an integral part of Indian society and are present all across the Country.
- They represent the rich local tradition of cuisine.
- Street foods not only provide daily diet at affordable prices to millions but also provide direct employment to a large number of people and also support the tourism industry.



- Food Safety and Hygiene at street food outlets & hubs remain a matter of concern.
- With rapid urbanization, while these hubs have led to easy access to food, this has also aggravated the issue of food contamination & associated health issues due to unhygienic and unsafe food practices.
- This unique initiative will be implemented through National Health Mission (NHM) in convergence with Ministry of Housing and Urban Affairs & with technical support from FSSAI.
- The financial assistance for the initiative to States/UTs in the form of Rs.1 crore per food street/districts will be given to fill up critical gaps. 100 such food streets will be opened up in 100 districts across the country.
- This assistance will be provided under National Health Mission (NHM) in the ratio of 60:40 or 90: 10 with the condition that standard branding of these food streets will be done as per FSSAI guidelines.
- Municipal Corporations/Development Authorities/ District Collectors at the state level will take major initiatives to ensure convergence in terms of financial resources & physical infrastructure.
- Various other initiatives such as training of food handlers, independent third party audits, and certification of Eat Right Street Food Hubs ‘SOP for Modernisation of Food Streets’, have been taken to enhance food safety standards.
- Schemes like “Support to Urban Street Vendors (SUSV)”, a component of Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAYNULM), Ministry of Housing and Urban Affairs have also been taken up.
- In addition, States/UTs can also conduct training programmes for street vendors to orient them on aspects vis. food safety, maintenance of hygiene, and waste disposal.

A Breakthrough For People and Planet: Effective And Inclusive Global Governance for Today And The Future Report

Why in News

The United Nations’ High-Level Advisory Board on Effective Multilateralism recently launched a new report titled “A Breakthrough For People and Planet: Effective And Inclusive Global Governance for Today And The Future”.

Important Points

The report emphasizes the need to redesign the global governance system to address current and future challenges, such as the climate crisis, rising security threats, and digital transition.

The 10 Constituent Principles of Effective Multilateralism

- The report drafted 10 constituent principles of effective multilateralism, which are essential for addressing crises such as rising inequality, lack of finance for sustainable development, gender divide, and threats to democracy. The principles are people-centric, representative, transparent, equitable, networked, mission-focused, flexible, accountable, and future-oriented.

The Six Transformative Shifts

- The report outlines six transformative shifts that align with the United Nations’ Sustainable Development Goals (SDGs) and “Our Common Agenda,” the UN Secretary-General’s vision for global cooperation. The shifts aim to rebuild trust in multilateralism, ensure sustainable finance for all, support a just digital transition, strengthen governance for current and emerging transnational risks, and regain balance with nature by providing clean energy for all.

The Overall Goal

- The report’s overall goal is to secure a more sustainable, just, and peaceful world for people and the planet. The report argues that effective multilateralism is only possible if the SDGs on gender equality and the empowerment of all women and girls are fully implemented, and the gender equality is ensured in all institutions and processes of global governance.

Dissemination and Discussion of the Report’s Recommendations

- The recommendations of the report will be disseminated and discussed via an information campaign targeting key constituencies and stakeholders over the next 18 months. Policymakers, non-governmental organizations, businesses, and civil society groups are likely to be the primary targets of the campaign.



Summit of the Future

- The report was launched on April 18, 2023, ahead of the Summit of the Future, scheduled to be held on September 22-23, 2024, in New York. The recommendations of the report will be an important discussion point at the summit, which will bring together policymakers, business leaders, and civil society representatives to discuss global challenges and identify solutions.

Nine Campaigns on Inclusive Development

Why in News

Launch of the Inclusive Development (Samaveshi Vikaas) campaign by the PM during the National Panchayati Raj Day Programme.

Important Points

- Prime Minister Shri Narendra Modi will launch these nine campaigns under the theme Inclusive Development (समावेशी विकास) as part of Azadi Ka Amrit Mahotsav on the 24th April 2023 during the National Panchayati Raj Day at Rewa, Madhya Pradesh.
- The PM will also launch the Website and Mobile App “Samaveshi Vikaas” on the same day.
- The nation is observing Azadi Ka Amrit Mahotsav (AKAM) till August, 2023.
- A number of events/campaigns under various themes are being organised by the Government to celebrate the occasion by involving State Governments and the public in general.
- One of the themes under AKAM is Inclusive Development (Samaveshi Vikaas).
- Ministry of Rural Development (MoRD) is the lead Ministry for the same, with four other supporting Ministries/Departments of the Government of India.
- Out of the nine campaigns under this theme, five are under the Ministry of Rural Development viz.,
 - Samagra Awas under Pradhan Mantri Awas Yojana-Gramin (PMAY-G),
 - Financial Literacy at District Level,
 - Promoting Digital Transaction at Gram Panchayat Level and
 - Social Mobilisation of Eligible Rural Women into Self Help Group (SHG) Network,
 - Plantation Drive on River Banks under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- Four other Campaigns are being led by the partnering Ministries/Departments viz.,
 - Swastha Mahila- Samriddha Samaj (SMSS)- Ministry of Health and Family Welfare,
 - Pashudhan Jagriti Abhiyan Intensive Awareness Campaign in Aspirational Districts-Department of Animal Husbandry and Dairying,
 - SVAMITVA, Meri Sampatti, Mera Haq- Ministry of Panchayati Raj and
 - Natural Farming with SHG Women campaign-Ministry of Agriculture and Farmers’ Welfare.
- Under the Inclusive Development theme, the selection of the campaigns is focused on high-impact value and high Jan-Bhagidari potential.
- The campaigns are designed to have a “whole of society approach”, ensuring 100% outreach to the beneficiaries of the campaigns.
- The entire campaign is termed “Samaveshi Vikaas”, which finds its foundation rooted in the concept of “Convergence” and “Reaching the last mile”, aiming at targeted interventions through all States/UTs, districts and gram panchayats, focusing on selected campaigns in the areas of employment generation, health, social inclusion, social security and livelihood creation by each of the participating ministries/departments.
- In order to ensure the documentation of Jan Bhagidari and public participation, a simple and user-friendly Mobile App named “Samaveshi Vikaas” has been designed.
- Through this, the general public can share their experience and opinion/feedback about the impact and benefits these campaigns have brought along with photographs on these campaigns.

A small brief about the individual Campaigns:

(1) Samagra Awas-Convergence under PMAY-G: In this campaign, a sanction of additional 45 lakh PMAY-G houses over and above 2.50 Crore already sanctioned will be ensured along with the saturation of benefits provided in

convergence with Schemes providing electricity, LPG, water connections and toilets in all PMAY-G houses. The campaign will start in April, 2023 and will continue till August, 2023.

(2) Financial Literacy at District Level: The main purpose of this campaign is to create awareness and increase the outreach of various banking & financial services and social security schemes.

- The campaign will be carried out in 500 districts and is expected to provide need-based training and awareness to 2.0 crore SHG members. Through village-level awareness programme, about 2.5 crore SHG members will be enrolled under Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and 3.0 crore under Pradhan Mantri Suraksha Bima Yojana (PMSBY).
- During the campaign period, 750 SAKSHAM Centres will be established across states as a one-stop solution for financial awareness, service delivery and basic grievances redressal. The campaign has already started from 11th January, 2023 and will continue till August, 2023.

(3) Promoting Digital Transaction at GP level: The main purpose of this campaign is to create awareness and increase the outreach of various digital modes of transactions among women SHG members and their households.

- The nationwide campaign will be carried out to create awareness to 50,000 Gram Panchayats with 3.0 Crore number of transactions and deployment of 20,000 SHG Members as Business Correspondents Sakhi /Digipay Sakhi/ Paypoints. Apart from this, awareness camps will be organised at Gram Panchayat level also.
- This campaign started from 1st February, 2023 and will continue till August, 2023.

(4) Social Mobilisation of Eligible Rural Women in SHG Network: This Campaign aims to motivate eligible rural women to join the SHG Network, to bring eligible SHGs into VOs (Village Organisations) fold, to bring eligible VOs into Cluster Level Federations (CLFs) fold and to release capitalisation support to eligible SHGs.

- The campaign aims to mobilise a total of 10 crore rural households by end of the FY 2023-24 with an objective to bring all vulnerable and marginalised rural households under SHGs and draw benefits provided through this Government initiative.
- It is expected that 20-lakh left-out households shall be mobilised and more than 60,000 SHGs shall be formed during the period.

(5) Plantation Drive on Riverbanks: Under this campaign, plantation drive under Mahatma Gandhi NREGA will be conducted on the riverbanks. During the campaign period, around 4.0 crore plants will be planted in around 20,000 km of river banks. The campaign started on 1st March, 2023 and will continue till August, 2023.

(6) Swastha Mahila Samridhdha Samaj: This campaign is led by the Ministry of Health and Family Welfare (MoH&FW), which will promote health as a Credit-plus activity among Women SHGs in villages for making 'Wellness' a people's movement and lay emphasis on prevention and control of cancer in women – focus on screening for breast cancer and cervical cancer.

- During the campaign period, 10 lakh cancer screening/awareness camps will be organised by PRIs/NRLM units on functional HWCs across the country. It is also expected that 2.5 crore women will be screened for breast cancer & cervical cancer each (25 for cervical cancer and 25 for breast cancer per camp * 10 lakh camps) and cumulatively eight crore footfall for access to women care at AB-HWCs at the end of the campaign period.
- This campaign started on 14th January, 2023 and will continue till August, 2023.

(7) Natural Farming with SHG Women: This campaign will be led by Ministry of Agriculture and Farmers Welfare (MoA&FW).

- The campaign will ensure the restoration of soil health, including the capture of atmospheric carbon to mitigate climate change, reversal of biodiversity loss at the farm and local ecosystem levels and maintain/recycle scarce farm resources.
- During the campaign period, formation/ facilitation of 10 women-only Farmer Produce Organisations (FPOs) (One FPO has a membership of a minimum ten, which may go up to 2000 based on the availability of members) and organising special campaigns on National/International important days will be ensured.
- An awareness campaign has already been organised involving around 440 (Progressive Women farmers/ members of FPOs/RCs/SHGs and Krishi Sakhis of NRLM/SRLMs/Women Agri-preneurs This campaign started from 11th February 2023 and will continue till August, 2023.

(8) Pashudhan Jagriti Abhiyan- Intensive Awareness in Aspirational Districts: This Campaign is being led by the Department of Animal Husbandry and Dairying (DoAH&D).

- In this campaign, efforts will be made to effectively transform the 112 most under-developed districts across the country by organising around 16,000 village-level camps to spread awareness on entrepreneurship and other schemes of the Department, Scientific Management of Disease and Conducting Animal Health Camps at Aspirational districts ensuring the Jan Bhagidari.
- Two Animal Health camps per district will be organised in all aspirational districts, and in each health camp 100 farmers will be participating. The virtual camps will be disseminated on various social media platforms of the Department, and State AH district institutions will mobilise the farmers for Animal Health camps.
- In addition to this 224 Animal Health camps will be organized in all aspirational districts benefiting around 22,400 farmers. The campaign started from 22nd February, 2023 and will continue till August, 2023.

(9) SVAMITVA-Meri Sampatti, Mera Haq: This Campaign is led by Ministry of Panchayati Raj (MoPR). The campaign aims to provide 'Record of Rights' to property owners in inhabited area (abadi) of a village by the use of latest drone-based survey technology under SVAMITVA Scheme.

- It aims to generate 1.50 crore "Records of Rights"/ Property Cards under SVAMITVA Scheme by August 2023. The campaign started from 18th April, 2023 and will continue till 30th June, 2023.



TRANSFORM IAS
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Sky Canvas project

Why in News

A Tokyo-based space company, ALE, has announced it will create the world's first artificial meteor shower in 2025 under Sky canvas project – producing man-made shooting stars that could be seen from the UK.

Important Points

- The project hopes to give people all over the world the opportunity to view the world's first live human-made meteor shower.
- The project is called Sky Canvas and it is designed to collect atmospheric data in the mesosphere, which is the third layer of the atmosphere.
- Meteor showers are beautiful celestial events, peppering the sky with shooting stars.
- The Mesosphere is too low to be observed by satellites and too high for weather balloons or aircraft.
- ALE plans to do this by using a pressure-driven system of gas tanks that will shoot pellets at a speed of 8 kilometres per second.
- The satellite was initially scheduled to launch in 2020 but a malfunction in one of the satellites meant that the launch had to be delayed.
- A natural meteor shower happens when our planet passes through the trail of debris left by a comet or an asteroid.
- Meteors are chunks of rocks and ice that are ejected from comets as they orbit the Sun.
- Around 30 meteor showers that are visible to observers on Earth occur every year and some of them have been observed for centuries.
- For example, the Perseids meteor shower, which usually happens every year in August, was first observed about 2,000 years ago and was recorded in Chinese annals.
- ALE hopes to reproduce the effect of natural meteor showers by using metal “shooting star” particles that are around 1 centimetre in size.
- These grains will be taken to a low-Earth orbit about 400 kilometres above the planet by small satellites.
- Once the satellites' orbit stabilises, they will release the particles. The particles will then travel around part of the planet before entering the atmosphere at an altitude of 60 to 80 kilometres.



Extended Range Anti Submarine Rocket (ER-ASR)

Why in News

The Extended Range Anti Submarine Rocket (ER-ASR) was successfully test-fired for the first time from Navy's INS Chennai recently.

Important Points

About ER-ASR

- The ER-ASR was designed by Pune-based Armament Research and Development Establishment (ARDE) and High Energy Materials Research Laboratory (HEMRL) of the DRDO.
- It is designed to intercept submarines at specific depths.
- During the maiden tests conducted from Navy's guided missile destroyer INS Chennai, the performance of the rocket system was evaluated at the short range of 2.7 kilometers and in long range mode at 8.5 kilometers.

- The rocket system will be deployed in anti-submarine operations and will be fired from an indigenised rocket launcher mounted onboard various Indian naval ships.
- ER-ASR can be fired in single or in salvo mode depending on the tactical mission requirements.
- The maiden successful test from the ship is a step towards enhancing the capability of the Indian Navy in anti-submarine warfare and towards achieving 'Atma Nirbharta' in defence.
- ER-ASR has been designed to replace the existing Russian-origin Rocket Guided Bombs (RGBs) which are already fitted in ships.
- While the RGB has a range of five kilometers, the ER-ASR can achieve a range over eight kilometers.



Olive Crown Awards 2023

Why in News

The India Chapter of the International Advertising Association (IAA) hosted the 13th edition of its annual property, the Olive Crown Awards 2023.

Important Points

About Olive Crown Awards

- The awards were instituted in 17 different categories to commend the remarkable work of individuals and corporates who drove the message of sustainability or 'green advertising'.
- P. N. Mohan of the Rotary Club of Madras won the coveted 'Green Crusader of the Year' award for his commitment to restore seven lakes near Chennai and mobilising people and funds for the cause.
- Famous Innovations bagged 10 awards across categories, including the 'Green Agency Of The Year.'
- In the 'Corporate Crusader Of The Year' category, Kirloskar Limitless won the gold award for their work 'A Minute For Nature.'
- Livpure received gold award in the 'Green Campaign of the Year' for 'Rally for Rivers.'
- Ogilvy won a silver award for a communication named 'The Inconsiderate Planet' that they made for The Hindu.
- Chirag Rural Development Foundation and People for Animals Wildlife Rescue and Conservation Centre were given the gold award in the category 'Green NGO of the Year'.



Kongthong village

Why in News

Rajya Sabha MP Rakesh Sinha has recently presented his development report on Kongthong village in Meghalaya, India's only whistling village to Prime Minister.

Important Points

About the village

- Kongthong is located in the East Khasi Hills in Meghalaya and is popular as the 'whistling village' due to its unique tradition of 'Jingrwai Lawbei'(which means Mother's Love song) under which mothers create a tune for their newborns.
- These tunes are often used as names. Kongthong people belong to the Seng Khasi Tribe and speak Khasi language.
- They call each other with these unique tunes
- The unique tune has two stages, first by the mother and second by the child. As the child grows up, they form their own tune to call their parents or the villagers.
- According to Census 2011, the village has a population of 567, out of which 275 are males and 275 are females, and a literacy rate of 55%.

- The village was adopted by the MP village under the Sansad Adarsh Gram Yojana (SAGY).
- In 2022, the Ministry of Tourism selected Kongthong village UNWTO's (The World Tourism Organisation) 'Best Tourism Villages' award along with two other villages in the country.

World Tourism Organization

- The World Tourism Organization is a specialized agency of the United Nations mandated with the promotion of responsible, sustainable and universally accessible tourism. It is headquartered in Madrid, Spain.
- Established in November 1975.
- The official languages of UNWTO are Arabic, Chinese, English, French, Russian and Spanish.
- The UNWTO has 160 member states, six associate members.
- India is a member of the Executive council of UNWTO continuously for the last 19 years; during this period, India has been elected to the Chairmanship of the Executive Council twice.



Bengaluru to get India's 1st 3D printed post office

Why in News

L&T Construction has recently said it was constructing India's first post office in Bengaluru.

Important Points

- The project is to design and build the 1,000 square feet Halasuru Post Office using 3D printing technology within 45 days. The project scope involves structure, interior, and finishes.
- It costs around Rs23 lakh, approximately 30 to 40 per cent less than a traditional post office.



What is 3D printing?

- 3D printing, also known as additive manufacturing, is a method of creating a three dimensional object layer-by-layer using a computer created design.
- 3D printing is an additive process whereby layers of material are built up to create a 3D part.
- This is the opposite of subtractive manufacturing processes, where a final design is cut from a larger block of material.
- As a result, 3D printing creates less material wastage.

Types of 3D printing

- There are three broad types of 3D printing technology; sintering, melting, and stereolithography.
- Sintering is a technology where the material is heated, but not to the point of melting, to create high resolution items. Metal powder is used for direct metal laser sintering while thermoplastic powders are used for selective laser sintering.
- Melting methods of 3D printing include powder bed fusion, electron beam melting and direct energy deposition, these use lasers, electric arcs or electron beams to print objects by melting the materials together at high temperatures.
- Stereolithography utilises photopolymerization to create parts. This technology uses the correct light source to interact with the material in a selective manner to cure and solidify a cross section of the object in thin layers.

Bhu-Aadhaar

Why in News

Recently, Bibek Debroy said that Bhu-Aadhaar or ULPIN will digitise land records for efficient land usage but incrementally.

Important Points

- According to Access to Justice Survey by Daksh, the GDP loss to the country is estimated at ₹1.5 lakh crore due to projects being stalled over litigation involving land disputes.
- 66% of all civil suits in India are related to land or property disputes. The average time to resolve a land acquisition dispute is 20 years.
- Tenancy disputes are the most common type of litigation, closely followed by property registration disputes.
- Disputes related to property records are 13.6% of immovable property litigation.



About Bhu-Aadhaar

- ULPIN is part of the Digital India Land Records Modernisation Programme (DILRMP), a 100 per cent centrally funded scheme.
- It was earlier known as the National Land Record Modernisation Programme and was approved by the cabinet in August 2008.
- It was later revamped as DILRMP and implemented as a central sector scheme from 1 April 2016.
- By March 2024, India aims to digitise 100 per cent of its land records and the land registration process, and give a unique 14-digit alpha-numeric identity, also called Bhu-Aadhaar, to each land parcel (rural as well as urban).
- ULPIN will have longitude and latitude coordinates of the land parcel and is based on detailed surveys and geo-referenced cadastral maps.
- So far, ULPIN has already been rolled out in 26 states and Union territories.
- Except Meghalaya, which has a tradition of community ownership of land parcels, it is currently under implementation in the remaining states and Union territories.
- This project, being implemented by Department of Land Resources, Ministry of Rural Development, will be the world's largest database on land ownership.

Mircha' rice gets GI tag

Why in News

Mircha' rice of Bihar's West Champaran has been awarded the GI tag recently.

Important Points

About the rice

- The size and shape of the grain appear like that of black pepper, hence it is known as Mircha or Marcha Rice.
- It is also known as Marchaiya, Marichaetc locally.
- The grains and flakes of this rice have a unique aroma that makes it different.
- This rice is famous for its aroma, palatability and its aromatic chura (rice flakes) making qualities.
- The cooked rice is fluffy, non sticky, sweet and easily digestible with a popcorn-like aroma.
- The major growing areas of Marcha rice include Mainatand, Gaunaha, Narkatiyaganj, Ramnagar and Chanpatiya blocks of West Champaran district.
- An application for GI tag was submitted on behalf of Marcha Dhan Utpadak Pragatisheel Samuh, a registered organization of paddy cultivators.

What is GI Tag?

- According to the World International Property Organization or WIPO, a GI or Geographical Indication Tag is used for products which have specific geographical origin or have qualities that can be attributed specifically to the region.
- In addition, the qualities, characteristics or reputation of the product should be essentially due to the place of origin.
- Once a product gets this tag, any person or company cannot sell a similar item under that name.
- This tag is valid for a period of 10 years following which it can be renewed.



Global Genome Initiative for Gardens Award

Why in News

The Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) at Palode, Thiruvananthapuram has won the 2023 Global Genome Initiative for Gardens (GGI-Gardens) Award.

Important Points

- The Global Genome Initiative for Gardens (GGI-Gardens) is an international partnership of botanical gardens and arboreta focused on collecting herbarium vouchers from living collections and preserving their genome resources in biorepositories partnered with the Global Genome Biodiversity Network (GGBN).
- The GGI-Gardens Awards Program aims to promote partnership activities to preserve and understand Earth's genomic biodiversity of plants.
- This program, funded by the United States Botanic Garden, and administered through BGCI's Global Botanic Garden Fund, provided up to 6 awards of up to \$4,500 in 2023 to support sampling activities from living collections with unique families and genera of vascular plants not yet represented in GGBN biorepositories
- GGI Gardens Programme is a science-based effort to collect genomic biodiversity from around the world, preserve it in biorepositories, and make it available to researchers.

About JNTBGRI:

- It was founded in 1979 with the objective of establishing a Conservatory Botanic Garden of tropical plant resources in general and of the country and the Kerala state in particular.
- It also undertakes research programmes for the sustainable utilization of the resources.
- The idea of establishing the institute was conceived soon after the first United Nations Conference on human Environment, held in Stockholm in 1972 by the Founder Director, the late Professor A. Abraham.
- Consequently, the institute was established as an autonomous R & D organization by the Government of Kerala in 1979.
- The institute had picked several plants including the medicinal plants *Coscinium fenestratum* (tree turmeric) and *Piper barberi* (known locally in Malayalam as 'Kaatu Mulaku') for genome diversity conservation under the GGI-Gardens programme.
- The JNTBGRI holds the largest living collection of plant species in India with over 50,000 accessions of about 4,800 species in its conservatories.
- Over the years, the institute had discovered more than 800 new species of angiosperms, mushrooms and fungi.
- Under the GGI-Gardens programme, JNTBGRI will have initial priority for plant families and genus not yet represented in GGBN biorepositories. The focus of the present programme is on medicinal and aromatic plants of the Western Ghats.
- This is the second time that the institute has been honoured with this prestigious award.
- In 2023 the JNTBGRI is one of the 10 botanical gardens and arboreta across the globe to win it.

Delhi's Indira Gandhi International Airport among the world's busiest

Why in News

As per Airports Council International (ACI), Delhi's Indira Gandhi International Airport has entered the club of the world's top 10 busiest airports by passenger traffic.

Important Points

- The global trade association of airports ranked the Delhi airport at the ninth spot for 2022.
- India is the world's third-largest aviation market that is rapidly growing.
- As per ACI data, the Delhi airport handled almost 5.95 crore passengers in 2022.
- The airport was ranked as the 13th busiest for 2021 and 17th busiest for 2019.
- The Delhi airport is India's largest and the only airport from South and Southeast Asia to feature in ACI's list of the 10 busiest airports.
- The Atlanta airport in the United States retained its position as the world's busiest airport, having handled 9.37 crore passengers last year.

- In fact, five of the 10 busiest airports for 2022 are in the US. These include Atlanta, Dallas, Denver, Chicago, and Los Angeles.
- Dubai, Istanbul, and London Heathrow were the other airports in the top-10 list.
- It is worth noting that none of the Chinese airports featured in the list as the country was under strict pandemic-related curbs till late-2022.
- However, with most of the curbs on international travel to and from China now done away with, its airports could alter the rankings for 2023.
- China is the world's second-largest aviation market after the US.
- Despite being ranked as the ninth busiest airport globally, the Delhi airport did not feature among the busiest airports by international passengers handled, which means that India's resurgent domestic passenger traffic mainly contributed to the improvement in the airport's overall ranking.
- The same appears to be true for US airports as well, as none was among the top 10 airports by international passenger traffic.
- On that count, mega-hub Dubai retained the pole position as it handled almost 6.61 crore international travellers in 2022, followed by London Heathrow with 5.82 crore international flyers.
- Others in this segment included hubs like Amsterdam, Paris, Istanbul, Frankfurt, Madrid, Doha, and Singapore.



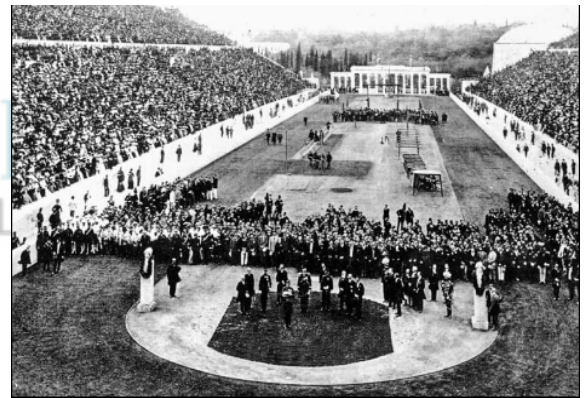
History of modern Olympics

Why in News

It was on April 6, 1896, the inaugural Olympic Games kicked off in Athens, Greece.

Important Points

- The Olympic Games, which originated in ancient Greece as many as 3,000 years ago, were revived in the late 19th century and have become the world's preeminent sporting competition.
- From the 8th century B.C. to the 4th century A.D., the Games were held every four years in Olympia, located in the western Peloponnese peninsula, in honor of the god Zeus.
- Most people know little about the genesis of the modern Games beyond the fact that it was the brainchild of French Baron Pierre de Coubertin.
- The history of the modern Olympic Games predates de Coubertin, beginning all the way back in 1830s Greece.
- However, what de Coubertin can be credited for is organising the "Congress for the Revival of the Olympic Games" in 1894 in Paris.
- This conference, which had delegates from across Europe, would last several days and it was here that the first International Olympic Games, to be held in Athens in 1896, were proposed.
- It was Evangelos Zappas, a veteran of the Greek War of Independence, had proposed to the Greek government in 1856 to hold the Olympics which he would fund from his own pocket.
- Finally, in 1859, after three years of lobbying the Greek government, Zappas's Olympics were held in a city square in Athens. A bunch of competitions were organised, including running, discus, javelin throwing, wrestling, jumping, and pole climbing – all events described to have taken place in Ancient Greek Olympics. Zappas promised cash prizes to winners.
- Zappas left his fortune for funding future Olympiads and such games were repeated in 1870, 1875, and 1888, held in the newly-built Panathenaic Stadium (again, funded by Zappas).
- The first modern Olympics took place in 1896 in Athens, and featured 280 participants from 12 nations, competing in 43 events.
- The Athens Olympics, held under the aegis of the newly founded International Olympic Committee, would be a rousing success.
- Held in the Panathenaic stadium, it was the first international sports meet of its scale to ever be organised.
- Since 1994, the Summer and Winter Olympic Games have been held separately and have alternated every two years.



Hakki Pikki community

Why in News

More than 181 members of the Hakki Pikki tribal community from Karnataka are stuck in violence-hit Sudan recently.

Important Points

- The Hakki Pikki are a semi-nomadic tribe who have travelled and lived in various parts of the country over the past few decades.
- According to SPPEL (Scheme for Protection and Preservation of Endangered Languages) established by Ministry of Education (Government of India), 'Hakki-Pikki' is one of the major tribal communities in Karnataka.
- In Kannada, the word 'Hakki' stands for 'bird' and 'Pikki' stands for the verb 'to catch'. Therefore, the community is known as the 'bird catcher,' which is their traditional occupation.
- The Hakki-Pikki community migrated from the northern India population, which is about 8,414 (2001 census), and is found in Karnataka.
- According to the 2011 census, the population of Hakki-Pikki is 11,892. After their trade of bird hunting was outlawed, they were rehabilitated in the 1970s.
- They began doing odd jobs like working in fields and sharpening knives and sickles by riding around towns on bicycles after bird-hunting was banned. They also sell the herbal remedies they extract.
- The Hakki-Pikkis are said to be a matriarchal group.
- The population is predominantly found in Shivamogga, Davanagere and Mysuru districts of Karnataka.
- Despite being surrounded by Dravidian languages and living in southern India, the community speaks an Indo-Aryan language. Their mother tongue was designated 'Vaagri' by scholars.
- They communicate in 'Vaagri' at home but speak in Kannada when conducting daily business.
- UNESCO has listed 'Vaagri' as one of the endangered languages.
- In Karnataka, the Hakki-Pikkis are renowned for their indigenous medicines.
- The community resided in the dense jungles for a long time and created its own plant and herb-based medicine systems.
- The Hakki-Pikkis have traditional medical knowledge that is in demand in several African countries. Therefore, community members have been travelling to the continent for the last many years.



India's first underwater metro route

Why in News

Recently, Kolkata has made history with India's first underwater metro line completing its inaugural test run in the city.

Important Points

- The Kolkata Underwater Metro line is a part of the East-West Metro line connecting the Sealdah(Kolkata) and Howrah stations.
- The underwater tunnel through which the trains will pass is located at a depth of more than 30 metres.
- The river tunnel is constructed underneath Hooghly River.
- Once the project is completed, Howrah will be the country's deepest Metro station at more than 30 metres below surface.
- There will be 12 metro stations along the East-West corridor route.
- After the CESC Tunnel in 1931, this is the second underwater river tunnel of Hooghly River.
- Besides, It is the biggest underwater river tunnel of South Asia and as well as India, which is made for metro rail service.
- In 1984, Kolkata became the first city in the country to get metro railway and now it has achieved another milestone.

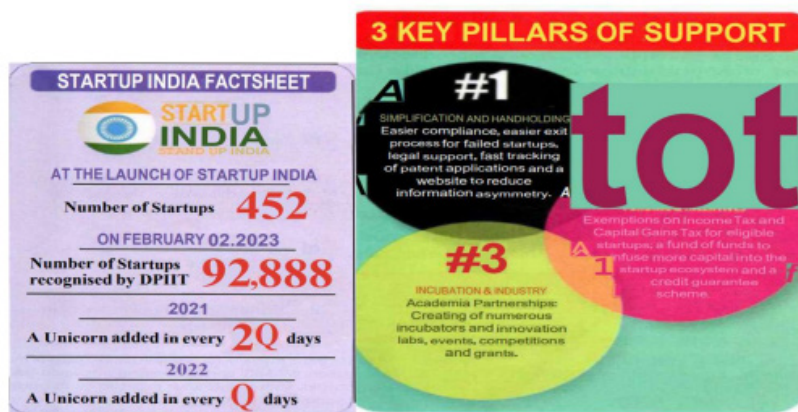
Metro Rail system in India

- First metro in India; Kolkata Metro which started its operation 24 October 1984 between Dum Dam to Tollygunge.
- It was started with the help of the Soviet Union. Largest metro rail in operation in India: Delhi Metro (390.14 km: Source DMRC as on 7 March 2022).
- It started operation on 24 December 2002. Smallest Metro: Ahmedabad metro ,6 km
- The metro rail systems in operation in India are in the cities of Ahmedabad, Bengaluru, Chennai, Delhi, Gurugram, Hyderabad, Jaipur, Kanpur, Kolkata, Kochi Lucknow, Mumbai, Nagpur, Noida, and Pune. (total 15 cities)



1: Opportunities for Youth in the Startup Ecosystem

- One of the greatest youth populations in the world resides in India. Over 356 million young people between the ages of 10 and 24 are estimated to live in India, making up more than 27% of the overall population.
- The youth populations of industrialised nations, such as the United States and Japan, which have 64 million and 22 million young people, respectively, are noticeably lower.
- This demographic advantage offers the Indian startup ecosystem a number of options.



New India: Opportunities for Youth:

- The Union government has started a number of projects to encourage innovation and entrepreneurship throughout the nation.
- The “Startup India” project, introduced in 2016, seeks to foster an atmosphere in which startups may flourish in India.
- Startups may take use of the initiative’s tax breaks, funding opportunities, and streamlined rules, among other advantages.
- Out of the \$950 billion in FDI that the 31 states and UTs have received since their independence, \$532 billion came from 162 nations in 61 industries since 2015.
- Broadband access in rural areas as a result of programmes like Digital India fostered the expansion of the startup ecosystem.
- The “MAARG” portal enables entrepreneurs and startups in distant locations to have access to vital resources and financing environments.

Knowledge based Digital Economy:

- The Union Finance Minister discussed transforming India into a knowledge-based digital economy in the Union Budget 2023–2024.
- To make government operations more centred on citizens, the Indian government is striving towards complete digitization of all activities.
- A Digital Public Infrastructure will be created under this for the nation’s farmers.
- To encourage health-based research, ICMR labs will also be made available to private medical schools and private sector R&D businesses.
- The Centre of Excellence will launch a new initiative to support pharmaceutical research and innovation.
- To implement a radical transformation in the way teachers are trained, district institutes of education and training centres will be created. Additionally, a national digital library will be created.

National logistics policy and startups in India:

- India has unveiled its National Logistics Policy, which will go into effect in 2022 and seeks to develop an effective and integrated national logistics ecosystem.
- A number of the policy's aspects may be advantageous to logistics startups.
- For instance, it promotes the creation of logistics parks and multimodal hubs, which may provide businesses access to improved facilities and infrastructure.
- Additionally, it encourages the use of technology in logistics, which might assist companies in streamlining their operations and cutting expenses.
- The strategy also underlines the value of training and skill development for the logistics industry, which might help startups by giving them access to a pool of qualified candidates.

Startups in Defense and Space Sectors:

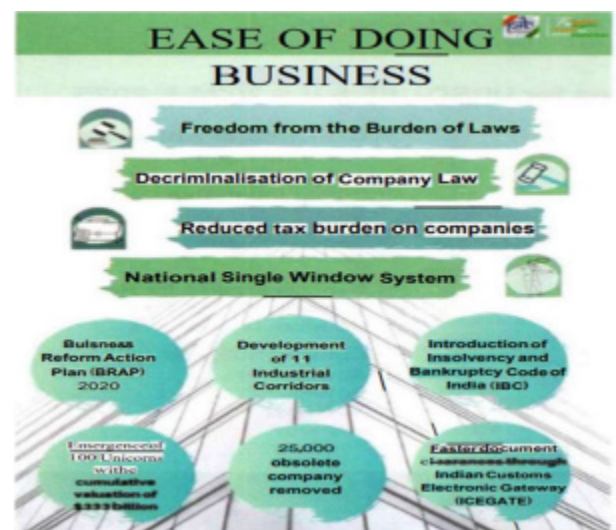
- A crucial area of national importance for India is the defence and space industries, and the government has been aggressively encouraging entrepreneurship in these industries via a number of programmes.
- Startups in the military and space industries have a big potential to contribute to innovation, technical advancement, and employment growth.
- The military India Startup Challenge (DISC), one of the major programmes, aims to inspire entrepreneurs to develop original solutions to fulfil the demands of the military industry.
- Startups can receive government financing, mentorship, and other forms of assistance through the DISC programme in order to create their goods and services.
- To aid companies in the space industry, the government has also started the Space Entrepreneurship and Enterprise Development (SEED) programme.

2: Startup India Action Plan

- India's startup ecosystem growth story—from roughly 500 companies in 2016 to over 92,000 recognised businesses in February 2023—has gained international recognition as an example of the organised growth and evolution of an ecosystem and community.
- In 2023, India will have more than 660 districts with at least one acknowledged startup that is diversified across more than 55 industries.
- The inclusion and variety of the Indian startup ecosystem are shown by the presence of at least one woman director in 47% of acknowledged businesses.

Differentiated approach:

- The Hon. Prime Minister presented the Startup India Action Plan 2016 on January 16 in recognition of the potential and significance of the startup ecosystem for the nation's economic growth.
- The conventional startup lifecycle—ideation, validation, early traction, and scaling—is where the complex opportunity of the Indian startup ecosystem lies. Different stakeholders or beneficiaries are present at each step.
- As a result, it was planned that the essential components of the Startup India Action Plan would be implemented in stages using various strategies.
- The 19 action items of the action plan cover a variety of topics, including “Simplification and handholding,” “Funding support and incentives,” and “Industry-academia partnership and incubation.”
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3: Startup20 Empowerment Group

- Startup20 aims to establish a worldwide narrative for assisting startups and fostering collaborations between them and other important ecosystem stakeholders, including corporations, investors, innovation agencies, and investors.
- On January 28 and 29, 2023, Hyderabad hosted the Startup 20 Engagement Group’s inaugural two-day meeting.
- The G20’s Startup 20 initiative is crucial for encouraging more entrepreneurs from underdeveloped countries.
- Through collaborations with enablers like incubators and governmental organisations, the group will also close the knowledge gap between the startup ecosystems of G20 member nations and emerging economies.
- In the month of July 2023, Gurugram will host the Startup 20 conference.
- The opportunity comes at a time when India’s startup ecosystem has grown to become the world’s third largest, with over 92000 startups, 108 Unicorns, and more than USD 40 billion in investment in 2022.
- During Turkey’s presidency of the G20 in 2015, there was a Task Force on Small and Medium Enterprises (SME) and Entrepreneurship. Subsequently, in Japan (2019), there was the Young Entrepreneurs’ Alliance; in Italy (2021), the Innovation League; and in Indonesia (2022), the Digital Innovation Network, which is being continued during India’s presidency.



Objectives of Startup20:

- The overarching goal of Startup20 is to propose a policy framework that achieves two objectives simultaneously:
 - (a) harmonisation of global startup ecosystems to facilitate their collaboration, and
 - (b) doing so without compromising the national ecosystems’ freedom to grow in whatever way they see fit.
- In order to achieve its objectives, Startup20 has established three Task Forces that concentrate on crucial areas essential to the growth of a strong startup ecosystem.
- Among the Task Forces are Finance, Inclusion and Sustainability, and Foundation and Alliances.
- The Foundation and Alliances Task Force aims to close the knowledge gap between G20 member nations, startup ecosystems, and developing economies. It also aims to build a worldwide community of information exchange among startup ecosystems.
- By offering finance and investment platforms that are suited to the demands of early-stage entrepreneurs, the Finances Task Force hopes to boost early-stage businesses’ access to money.
- This Task Force’s main duties include stabilising startup investments at the international, regional, and national levels; identifying factors that cause investment fluctuations and reducing the risks they pose to startups; reducing funding imbalances in vital industries like agriculture, healthcare, and climate resilience; and fostering agreement between societal, corporate, and areas of international interest to create equal funding opportunities.

- The Inclusion and Sustainability Task Force works to provide startup founders with equal chances regardless of their gender, colour, class, or religion. It also aims to foster an atmosphere that will support the development of inclusive communities, which will promote equality and global economic growth.

Objectives of this task force include,

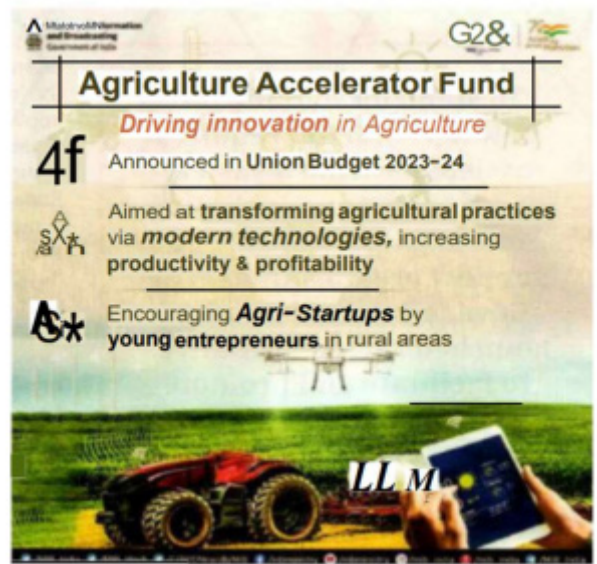
- o Increase support for women-led startups and organisations
- o Promote startups working on making communities more inclusive
- o Enable more investors to invest responsibly in startups built upon sustainable practices
- o Encourage mentorship support to the startup ecosystems of the G20 member countries and emerging economies
- o Promote startups working on SDGs in areas of global interest

Conclusion:

- As the world continues to face economic and technological challenges, startups and entrepreneurship have a crucial role to play in driving growth and innovation. India has a thriving startup ecosystem with a large pool of talented entrepreneurs and investors, therefore Startup20 is also looking at ways to showcase the most successful startups to the world and move in a direction where these startups could set an example around the globe.

4: Agri Startups

- Agri startups will be essential in transforming India's economy into one that is knowledge- and technology-based.
- Agri-startup development has enormous potential and plenty of chances because of the extremely distinctive agricultural ecology.
- India has the second-largest arable land area in the world, behind the United States, with 156,06 million hectares as of 2019.
- It is suited for cultivating a broad variety of field crops, fruits, vegetables, and other crops due to its extraordinary diversity of climate and soil types (15 agro-climatic zones, 8 primary soil types).
- India is presently the second-biggest producer of rice, wheat, fruits, and vegetables in the world, as well as the greatest producer of milk, pulses, millets, and jute.
- Agri-startups work to address problems through inventions, technological advancements, or business models tailored to the demands of farmers, sometimes in real time.
- India now has 3,000 agri-startups functioning in various agricultural domains and related industries as a consequence of the government's continuous initiatives.



Agri Startups:

- The 2016 Startup India Action Plan led to a sharp rise in the number of businesses being founded in practically every sector, including agriculture.
- Nearly 60% of agri-startups are located predominantly in Tier I and II cities in a select few states, according to their geographic distribution.
- According to their areas of concentration, agri-startups are further divided into categories like agri-tech, animal husbandry, precision farming, organic agriculture, mechanics, advisories, etc.
- Agri startups typically operate at one or more stages of the agricultural value chain and have been grouped into seven broad categories as a result: providing output market linkages, facilitating input supply, enabling mechanisation and irrigation, offering a financial solution (credit and insurance), assisting with quality maintenance and traceability, post-harvest management, logistic services (warehousing and cold chains), and supporting animal husbandry activities.

Policies and Promotions:

- In order to assist and encourage agri-startups and to build a strong environment for their growth, the Indian government has initiated a number of initiatives.
- In 2015–16, the Agri-Business Incubator (ABI) Centres, predominantly in R&D institutes, were built around the nation.
- Emerging entrepreneurs are identified and mobilised by ABIs, who then support their development by providing a range of services such as shared workspaces, infrastructure, equipment, company development, technology, funding, mentorship, and networking.
- Over 100 agri-focused incubators exist in India, the majority of which are located inside academic and research facilities like the Indian Council of Agricultural Research (ICAR) and agricultural universities. Startup India, the Atal Innovation Mission, the Department of Science and Technology (DST), and the Ministry of Agriculture and Farmers Welfare also provide support for these incubators.
- The 'Innovation and Agri-Entrepreneurship Department' has been added by the Department of Agriculture, Cooperation, and Farmers Welfare to its flagship programme, the 'Rashtriya Krishi Vikas Yojana' (RKVY-RAFTAAR), for the 2019–20 academic year.
- A chosen company may get up to Rs. 5 lakh in financial support under this scheme at the optimum pre-seed stage and up to Rs. 25 lakh in financial assistance at the seed stage.
- Agri-startups can offer workable and original solutions to recognised difficulties and problems during an annual event dubbed "Agri-Hackathon," which is hosted by the Union Ministry of Agriculture and Farmers Welfare.
- As the leading organisation for agricultural R&D, ICAR has taken the initiative by setting up 50 agribusiness incubators at universities all around the nation.
- Incubation services and technical assistance are offered by ICAR-ABIs, which were established as part of the National Agriculture Innovation Fund initiative (2016–17). These startups offer solutions in a number of areas related to agriculture and associated industries.
- 25 Technology Innovation Hubs (TIH) have been established around the nation at eminent institutions of national significance by the Department of Science and Technology.
- To encourage S&T-based entrepreneurship, the DST has been executing the National Initiative for Developing and Harnessing Innovations (NIDHI) project since 2016.

Recent policies:

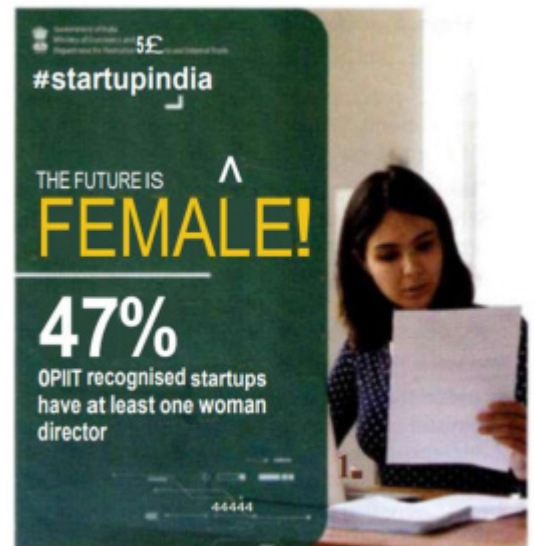
- For the Union Budget 2022–23, it was stated that agri-tech startups and businesses will participate in public-private partnerships to educate farmers about the newest technology and assist with its adoption.
- There were also promised further regulations and government-sponsored grants for agri-tech firms in the fields of drones and farming as a service.
- A fund with blended capital acquired through a co-investment approach is being facilitated by NABARD to assist agri-tech entrepreneurs and rural agricultural businesses. This programme offers assistance to startups that help companies that support food producers, farm leasing services, and technological integration.

5: Women Entrepreneurship in MSME Sector

- The Registrar General of India reports that the work participation rate for women is 25%, one of the lowest rates in the world.
- Recent estimates indicate a declining rate of women entering the workforce.
- According to several surveys, one of the main factors contributing to this trend is the absence of safe and effective childcare help.
- Additionally, there aren't enough infrastructure resources for women at work, such as adequate crèche facilities and the upkeep of such facilities with appropriate infrastructure and other resources.
- One of the biggest obstacles facing MSMEs, according to the Reserve Bank of India's Expert Committee on Micro, Small and Medium Enterprises' 2019 Report, is a lack of access to finance.
- A 2022 report by the International Finance Corporation (IFC) has identified the lack of access to credit as an important constraint being faced by women entrepreneurs in India.

Women in MSME Sector:

- The MSME sector provides several chances for women's empowerment by encouraging entrepreneurship. It also plays a significant part in the process of economic and social development by adding value, creating jobs, distributing income fairly, and eliminating regional inequities.
- Over the past three years, the percentage of MSMEs owned by women has been around 18.67%, according to the Udyam Registration Portal.
- In a similar vein, 23.59% of all employees engaged by MSME registered units during this time period were women, according to MSMEs registered on the Udyam site.
- Through a variety of measures, the Ministry of MSME is always working to promote women's emancipation.
- According to the Public Procurement Policy for Micro and Small Entrepreneurs Order, 2012 (as revised in 2018), 3% of all yearly purchases made by Central Ministries, Departments, and CPSEs must come from MSEs managed by women.
- The National Scheduled Caste Scheduled Tribe Hub was established by the Ministry to encourage diversity and entrepreneurship.
- 2.59 lakh women entrepreneurs out of a total of 8.37 lakh entrepreneurs have received credit support with the subsidy for building up new micro-enterprises, consequently creating job possibilities, particularly in rural regions, under the Prime Minister's job Generation Programme (PMEGP).
- Out of the 4.97 lakh artisans in the nation, 3.99 lakh (or 80%) are women, according to the Khadi and Village Industries Commission (KVIC).
- Additionally, KVIC has been empowering women all over the nation by offering a variety of skill-development training programmes in fields like beekeeping, pottery, leather goods, fruit and vegetable processing, bakery courses, tailoring and embroidery, soap and detergent manufacturing, beautician courses, etc.
- 1.81 lakh women have received skills through these activities during the past six years.
- Under various programmes, the Coir Board trains female employees in the coastal regions of the nation to produce high-quality coir products, creating jobs in the process.



Credit Facilitation:

- Initiatives to support women-owned businesses: In order to support women entrepreneurs, the Credit Guarantee Scheme Fund Trust for Micro & Small Enterprises (CGTMSE) has introduced enhanced guarantee coverage of 85% (instead of 75% in other cases) and a concession of 10% in guarantee fee (over the normal rate) with effect from 1 December 2022.
- Since its commencement in 2000, the Credit Guarantee Scheme for Micro & Small Enterprises has insured loans totaling Rs. 53,080 crore for 13.29 lakh accounts of women-led MSMEs.
- Artisan-Based Cluster Development: Under the Scheme of Fund for Regeneration of Traditional Industries (SFURTI), a special focus has been given to providing sustainable livelihood to artisans through the formation of manufacturing collectives in the traditional sector.
- Apart from the above, Schemes of other Ministries, like Pradhan Mantri Mudra Yojana (PMMY) and Stand Up India, etc., help women set up their own enterprises. The Pradhan Mantri Kaushal Vikas Yojana provides opportunities for training and capacity building of prospective/existing women entrepreneurs.

6: Opportunities for MSMEs in 'Amrit Kaal'

- For MSMEs in India, the Amrit Kaal or post-Covid-19 period is anticipated to provide new chances. The MSMEs are anticipated to play a critical role in fostering growth and generating job opportunities given the government's focus on economic restoration and growth.
- Additionally, MSMEs may benefit from Amrit Kaal by breaking into new markets, adopting digital technologies, and assisting vital industries like healthcare and renewable energy.
- The government has introduced a number of initiatives to aid MSMEs in exporting their goods and services and to motivate them to use digital technology.

Scope and Potential in Amrit Kaal:

- In India's Amrit Kaal, some of the major prospects for MSMEs include:
- The Covid-19 Pandemic has hastened the use of digital technology across industries, and Indian MSMEs must accept this transition to be competitive.
- MSMEs may also use digital technology to expand their consumer base, enhance operations, and discover new markets.
- Opportunities for Export: To assist MSMEs in exporting their goods and services, the Export Promotion Capital Goods (EPCG) programme and the Merchandise Exports from India Scheme (MEIS) have been introduced. These programmes may be used by MSMEs to discover new markets and boost sales.
- Infrastructure Development: To promote infrastructure development, the Indian government has established a number of programmes, including the National Infrastructure Pipeline and the Atmanirbhar Bharat Abhiyan.
- Healthcare Sector: The Covid-19 epidemic has brought attention to the importance of the healthcare sector, and MSMEs in India should take advantage of this chance by offering products and services that help the sector. The MSMEs can continue to look at possibilities in fields including medical devices, PPE, and healthcare IT solutions.
- Green Energy: MSMEs may contribute significantly to this market by offering products and services that aid the renewable energy sector. MSMEs can investigate potential business prospects in sectors including solar energy, wind energy, and energy storage technologies.
- MSMEs can gain from greater finance and assistance from a variety of sources, including banks, venture capitalists, and government programmes. MSMEs may increase their reach and influence by investing in innovation and growth if they have better access to financing and resources.
- In the Amrit Kaal, which is 2023 and beyond, Indian MSMEs have a number of opportunities, such as digital transformation, sustainable products and services, appealing to the middle class, "Make in India," and improved access to capital and assistance.

Government schemes:

- The Micro, Small, and Medium Enterprises (MSMEs) sector has seen increased growth and development thanks to a number of flagship programmes that the Indian government has introduced.
- Among the important schemes are:
- The Prime Minister's Employment Generation Programme (PMEGP) is a credit-linked subsidy programme that supports start-ups and new businesses in the MSME sector in order to encourage entrepreneurship and self-employment.
- The loans Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) programme offers MSMEs up to a specified amount of collateral-free loans.
- The programme also tries to persuade banks and other financial institutions to lend to MSMEs, improving their access to credit.
- Micro and Small Enterprises Cluster Development Programme (MSE-CDP): This programme seeks to encourage the growth of MSME clusters by offering assistance with market access, infrastructural development, and technological advancement.
- Technologies Upgradation Fund Scheme (TUFS): This programme offers financial support for MSMEs in the textile and jute industries to modernise their technologies.
- By supporting the creation of digital infrastructure, capacity building, and digital marketing, the Digital MSME Scheme seeks to promote MSMEs' embrace of digital technology.
- National Manufacturing Competitiveness Programme (NMCP): This scheme aims to enhance the competitiveness of the manufacturing sector, including the MSMEs, by providing support for technology upgradation, quality certification, marketing assistance, and skill development.
- National Skill Development Corporation (NSDC): This scheme aims to provide skill development training to the workforce so as to enhance their employability and productivity.

MSME and Defence Manufacturing:

- The Indian military manufacturing industry has a sizable window of opportunity for MSMEs to develop and grow their companies.
- The Indian government has been emphasising indigenization and self-reliance in the defence industry and has started a number of efforts to encourage MSMEs to work in the defence industry.

- Some of the opportunities for MSMEs in defence manufacturing include:
- **Offset Policy:** In accordance with the Offset Policy, foreign companies that are awarded defence contracts in India are required to invest a specific proportion of the contract value in the country's military manufacturing industry. MSMEs now have several options to work with international companies and take part in the defence manufacturing industry.
- **Defence Procurement Procedure (DPP):** The DPP promotes the involvement of MSMEs in the defence manufacturing industry by giving them precedence in procurement, reserving particular product categories for MSMEs, and lowering the requirements for participation in bids.
- By offering finance assistance, mentoring, and incubation resources to MSMEs and startups operating in the military industry, the Innovation for military Excellence (iDEX) project encourages innovation and indigenization in defence production.
- The Department of Defence Production has a special cell called the Defence Investor Cell (DIC) that works with and supports MSMEs that are interested in investing in the defence manufacturing industry.
- **Defence Industrial Corridors (DICs):** To encourage the growth of defence industrial clusters, the Government of India has designated six areas around the nation as DICs. These clusters provide MSMEs with access to market connections, technology, and infrastructure.

FDI Advantages for Indian MSMEs:

- Foreign Direct Investment (FDI) can provide several benefits to the Indian MSMEs including:
- **Access to Capital:** FDI can provide Indian MSMEs with access to capital from foreign investors, which can be used to fund their growth and expansion plans. This can help MSMEs in overcoming the challenges of limited access to credit and high-interest rates in the domestic market.
- **Technology Transfer:** FDI can also provide Indian MSMEs with access to foreign technologies and processes, allowing them to improve the quality and efficiency of their products. This can help Indian MSMEs become more competitive in the domestic and international markets.
- **Market Access:** FDI can provide Indian MSMEs with access to new markets and customers, both domestically and internationally. This can assist Indian MSMEs in increasing their customer base and revenue.
- **Management Expertise:** FDI can also bring in foreign management expertise and best practices, which can help Indian MSMEs improve their operations and management practices. This can help the Indian MSMEs become more efficient and productive.
- **Brand Building:** FDI can also help Indian MSMEs build their brand image and reputation by associating with well-known foreign brands. This can help Indian MSMEs increase their visibility and credibility in the domestic and international markets.
- **Employment Generation:** FDI can also help the Indian MSMEs create new job opportunities, both directly and indirectly, by supporting their growth and expansion plans. This can help in addressing the country's unemployment problem.

Alternate Finance Opportunities:

- **Non-Banking Financial Companies (NBFCs):** NBFCs provide MSMEs with factoring, credit lines, and loans. NBFCs are able to provide loans more quickly than banks and have more lenient lending standards.
- **Peer-to-Peer (P2P) Lending:** Through an internet platform, P2P lending services link MSME borrowers with individual lenders. Compared to conventional finance sources, P2P lending platforms can provide loans with more flexible terms and cheaper interest rates.
- **Trade credit** is a type of finance where suppliers offer these businesses with goods or services in exchange for credit. This can help MSMEs manage their working capital and cash flow more effectively.
- **Angel investors and venture capitalists:** In exchange for stock in the business, angel investors and venture capitalists finance MSMEs. They may also assist MSMEs build and extend their operations by offering mentorship and strategic guidance.
- **Crowdfunding:** Through an internet platform, crowdfunding platforms allow micro and small businesses to raise money from a large number of individual investors.

7: Startups-Reaching last mile

- Innovation and entrepreneurship are crucial forces behind economic progress. Like many other nations, India has understood the value of encouraging entrepreneurship and innovation and has launched a number of programmes in this regard.

- The Startup India project consists of three basic parts: incubation and industry-academia partnerships, finance assistance and incentives, and simplification and handholding.
- The government has streamlined the procedure for establishing a business in India under the simplification and handholding component by lowering the time and expense needed. A website gateway for startups has also been developed by the government.
- Startups can get a variety of incentives from the financial assistance and incentives component, including funding support, tax advantages, and patent registration.
- The industry-academia partnership and incubation component focuses on creating a network of incubators and accelerators across the country, which can provide mentoring, networking, and funding support to startups.

Impact on the Indian Economy:

- In terms of job generation and economic growth, the Startup India programme has had a substantial influence on the Indian economy.
- The National Association of Software and Services Companies (NASSCOM) estimates that by 2025, the Indian startup ecosystem would have added over 500,000 new employment.
- The programme has also drawn sizable international investment, with Indian entrepreneurs raising \$14.5 billion in capital overall in 2019, up from \$3.9 billion in 2014.
- The project has also promoted the expansion of entrepreneurship and innovation in India.
- India's position in the global innovation index has increased from 81st in 2015 to 48th in 2021.
- The project has promoted the development of startups in a number of industries, including technology and healthcare.

Challenges and Limitations:

- In India, raising finance is a significant hurdle for businesses. Investors are frequently conservative and choose investing in well-established businesses over newcomers.
- Due to competition from existing businesses and a shortage of experienced labour, startups in India have difficulty attracting and retaining talent.
- The regulatory landscape for entrepreneurs in India is complicated, and navigating it may be time- and money-consuming.
- Inadequate infrastructure, such as insufficient electricity and transportation, might impede the expansion of startups in India.
- Since employment security and stability have historically been highly valued in Indian society, it might be difficult for startups to draw both clients and staff.
- Despite having a sizable population, the bulk of people in India have little purchasing power, which restricts the potential market for many companies.
- In India, many companies lack access to knowledgeable mentors who can offer direction and assistance.
- Startups in India have demonstrated tremendous resiliency in the face of these difficulties, and they are coming up with creative solutions to get around these barriers.

8: Antyodaya and Mass Media

- Antyodaya refers to the idea of helping the least fortunate members of society.
- The idea of Antyodaya was founded on the integral humanism school of thought. Deen Dayal Upadhyay did not coin it, but he played a crucial part in its widespread appeal. He emphasised that Antyodaya should focus on the severe poverty that persisted in India both before and after independence.

STARTUP BASICS
Startups are in vogue and define the times we live in. Here are some of the key terms that we often come across in our daily lives, simplified for a quick read.

What is a Startup?
A startup is an early-stage entrepreneurial venture that is typically formed to solve real-world problems. Because many startups address societal needs, they attract investors and funders due to their tremendous growth potential.

What is the Startup India Scheme?
Startup India is a flagship initiative of the Government of India, intended to catalyse startup culture and build a strong and inclusive ecosystem for innovation and entrepreneurship in India. Since the launch of the initiative on 16 January 2016, Startup India has rolled out several programs with the objective of supporting entrepreneurs, and transforming India into a country of job creators instead of job seekers.

What is Unicorn?
The term 'Unicorn' refers to the rarest of the rare: startups that become Unicorns attaining a valuation of more than USD 1 billion.

What is Seed Funding?
Seed funding is the first official equity funding stage. It typically represents the first official money that a business venture or enterprise raises. The Startup India Seed Fund Scheme has been approved for the period of 4 years starting from 2021-22. The Scheme aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market-entry, and commercialisation. It has been implemented with effect from 1 April 2021.

What is an Incubator?
Incubators play a vital role in the growth of startups. They provide the necessary resources such as infrastructure, mentorship, and financial support to nurture and support the innovation of startups. India has 400+ Incubators with most of them at the nascent stage.

What is a Pitch?
A pitch is a brief presentation or introduction to a prospective investor about the startup. The goal of a pitch is not to answer every possible question about the startup, but rather to engage an investor's interest in learning more about it.

Who are Angel Investors?
'Angel investor' means any person or entity who proposes to invest in an angel fund and satisfies one of the following conditions, namely:
a. An individual investor who has net tangible assets of at least two crore rupees excluding value of his principal residence (among other criteria);
b. A body corporate with a net worth of at least ten crore rupees; or
c. An AIF registered under these regulations or a VCF registered under the SEBI (Venture Capital Funds) Regulations, 1996.

Source: Startup India, PIB

- The Antyodaya philosophy places a strong focus on the need for social and economic development to benefit society's most vulnerable and impoverished members. In other words, it is a worldview that places a strong priority on the wellbeing of society's most vulnerable groups.
- Mass media, on the other hand, refers to the means of communication that reaches a large number of people at the same time. It includes newspapers, magazines, radio, television, and the Internet. The mass media plays an important role in shaping public opinion, educating the masses, and disseminating information to the masses.

Significance of Mass Media

- The connection between Antyodaya and the media is very important. The mainstream media may be a useful instrument for spreading awareness of Antyodaya. The media may raise awareness of the issues encountered by the underprivileged and disadvantaged members of society and draw attention to the need for their improvement.
- The media may also raise awareness of the steps made by the government and non-governmental organisations to advance the welfare of society's most vulnerable groups.
- Making the public aware is one of the main functions of the media in promoting Antyodaya. A broad audience may be reached by the message of Antyodaya through a variety of media outlets.
- The media can draw attention to the necessity of social and economic progress that benefits the most disadvantaged and underprivileged segments of society.
- The media may be extremely important in teaching the public about the problems that the impoverished and disadvantaged groups of society confront. By drawing attention to their issues, the media may raise awareness of their suffering and inspire others to take action in support of their cause.
- It may serve as a watchdog and make the powerful answerable for their deeds. The media may put pressure on the government and other groups to act to advance the welfare of the most underprivileged segments of society by exposing corruption and other wrongdoing.

9: Incubators-The Growth enablers

- Startups may develop and prosper with the aid of institutions called incubators, which provide them resources and assistance.
- They give startups access to office space, mentoring, capital, and other tools they need to turn their ideas into profitable enterprises.
- Startups can take use of a variety of services offered by incubators, which are often managed by universities, governments, or private businesses.

Role of Incubators in Promoting the Startup Ecosystem in India:

- Incubators are essential for advancing India's startup ecosystem. They provide companies the aid and resources they require to develop and prosper, which contributes to the development of a strong and dynamic startup ecosystem in the nation.
- By giving companies the tools they need to create creative solutions, incubators promote creativity. This promotes an innovative culture throughout the nation.
- Startups are renowned for their capacity to boost economic development and generate jobs. Incubators support companies as they develop and flourish, which increases the number of jobs available in the nation.
- Startups can gain funding from angel investors, venture capitalists, and other sources with the aid of incubators. This investment not only aids in the expansion of businesses but also draws new capital into the nation, thus enhancing the startup environment.
- Startups have the chance to cooperate with one another, as well as with mentors and investors, in incubators. Through partnerships and joint ventures, this cooperation may enable entrepreneurs to develop and broaden their market.
- Incubators are widely available in India, and many of them foster social entrepreneurship, which entails applying commercial solutions to solve social issues. These incubators give companies the tools they need to create lasting and significant responses to social issues

Examples of Incubators for Startups in India:

- T-Hub: Based in Hyderabad, India, T-Hub is a startup incubator. Startups may get office space, mentorship, money, and other resources thanks to it. Startups in the fields of technology, healthcare, and social impact are the main emphasis of T-Hub.

- Startup Village: Located in Kochi, India, Startup Village is a startup incubator. Startup Village is a hub for businesses in the technology, healthcare, and agricultural sectors.
- IIM Bangalore NSRCEL is a business incubator with headquarters in Bangalore, Karnataka. Startups in the fields of social impact, healthcare, and sustainability are the main emphasis of IIM Bangalore NSRCEL.
- Zone Startups India: Based in Mumbai, India, Zone Startups India is a startup incubator. Technology, healthcare, and financial businesses are the main emphasis of Zone businesses India.

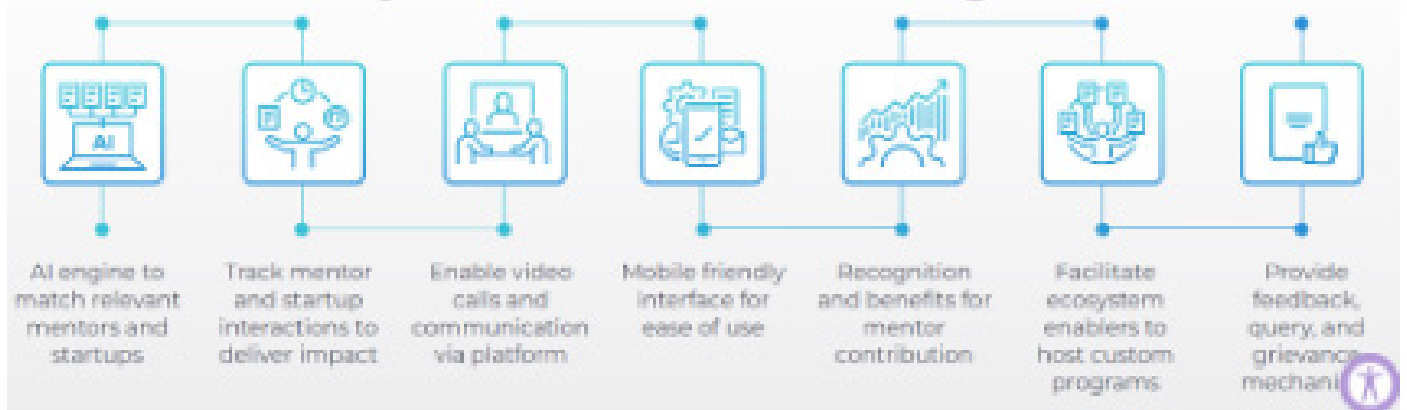
MAARG Portal:

- The National Mentorship Platform by Startup India is the MAARG platform.
- The Department for Promotion of Industry and Internal Trade (DPIIT), which is part of the Ministry of Commerce and Industry, is putting MAARG Portal into action.
- It is a one-stop platform that enables mentorship for entrepreneurs in a variety of industries, roles, stages, locations, and backgrounds.

The objectives of the MAARG portal are,

- To provide sector-focused guidance, handholding, and support to start-ups throughout their lifecycle.
- To establish a formalised and structured platform that facilitates intelligent matchmaking between the mentors and their respective mentees.
- To facilitate efficient and expert mentorship for start-ups and build an outcome-oriented mechanism that allows timely tracking of mentor-mentee engagements.

Key Functions of MAARG Program



1: Empowering Panchayati Raj Institutions

- Institutions of Panchayati Raj (PRI) are bases of democracy.
- The Panchayats (Extension to the Scheduled Areas) Act of 1996, also known as the PESA Act, is one of the key measures the Indian government has made to strengthen PRI.
- Gramme Panchayats need to be empowered, and Gramme Sabhas need to have effective and active engagement from their constituents.
- The 73rd Constitutional Amendment gave the Gramme Panchayats authority over 29 different topics.
- Rural development is essential for India's prosperity since there are 6.50 lakh villages and 65% of the population lives in them.
- Since "Local Government" is a state issue, Panchayats fall under the purview of state governments.
- In order to make PRIs an effective, efficient, and transparent vehicle for local administration, social development, and public service delivery that satisfies the needs of the community, the Ministry of Panchayati Raj (MoPR) was established in 2004.

Capacity Building of Panchayati Raj Institutions

- MoPR is implementing the Centrally Sponsored Scheme of Rashtriya Gram Swaraj Abhiyan (RGSA).
- Almost 1.42 crore participants including Elected Representatives, Panchayat Functionaries, and others have been trained since 2018-19.
- Approximately Rs 2150 crore have been spent under RGSA from 2018-19 to 2021-22.
- Thematic Gram Panchayat Development Plan
- The MoPR places a strong emphasis on creating a panchayat development plan. In order to embrace the theme approach for the localization of the Sustainable Development Goals, the ministry has chosen an innovative strategy in this area.
- The focused developmental plan was created using a mapping of the 17 SDGs to 9 topics.
- Basic Service through the Finance Commission Funding
- Panchayats get funding from the Central Finance Commission, the State Finance Commission, and several other Centrally Sponsored Schemes to carry out the fundamental services.
- For the years 2021 to 2026, the fifteenth Finance Commission has advised spending Rs. 236805 crores.

THEMES	AIM
Poverty-Free and Enhanced Livelihoods Village	To create avenues of enhanced income levels for the poor and cover the beneficiaries under Social Protection Scheme.
Healthy Village	To ensure healthy lives through immunization, institutional delivery, and nutrition for children
Child-Friendly Village	To attain 100% education, child labour freedom, immunization, etc
Water Sufficient Village	To ensure access to potable drinking water, rainwater harvesting, groundwater recharge, etc
Clean and Green Village	For solid and liquid waste management
Village with Self-Sufficient Infrastructure	To provide basic infrastructure facilities in villages
Socially Just and Socially Secured Villages	To improve the living standards of socially disadvantaged groups
Village with Good Governance	To ensure better public service delivery
Women Friendly Village	To ensure reduced crime against women, their participation in socio-economic and political activities

National Panchayat Awards

- With effect from 2022, the National Panchayat Award has been updated to fit with nine regional SDGs (themes).
- It will allow for rating of all Gramme Panchayats according to themes.
- The following categories will each receive an award:
 - Endayal Upadhyay For specific subjects, see Panchayat Satat Vikas Purasakar.
 - Satat Vikas Puruskar for the Nanaji Deshmukh Sarvottam Panchayat's overall performance across all subjects.
- Additionally, new award categories have been established.

e-Governance and ICT Initiative

- To improve e-Governance in PRIs, e-Gram SWARAJ was introduced on April 24, 2020.
- The e-GramSwaraj PFMS interface (eGSPI), which was developed by the Ministry to enable real-time payments to vendors and service providers, was integrated with e-GramSwaraj.
- 90% of Gramme Panchayats that joined eGSPI successfully adopted online transactions through it, enrolling a total of 2.78 lakh Gramme Panchayats.
- Additionally, e-Gram SWARAJ and Government e-Marketplace (GeM) are being connected.
- Additionally, an online Panchayat account auditing tool has been established to increase accountability and transparency.

Citizen Charter Campaign

- Nearly 2.15 lakh gram panchayats have finalized their Citizen Charter, offering 952 services spanning different sectors like healthcare, education, public welfare, etc.
- Common Service Centres
- Around 52,409 CSCs have been co-located with Panchayat Bhawans for delivery of all digital services in Gram Panchayats.

SWAMITVA Scheme

- The MoPR is implementing the SVAMITVA (Survey of villages and mapping with improvised technology in village areas) plan to give village household owners who own homes in populated areas and rural regions a “Record of Rights” and issue property cards.
- 1.20 crore property cards have been generated for the almost 70,000 villages, and the drone survey of 2.32 lakh villages (as of 1 March 2023) is complete.
- Social Media Activities
- MoPR operates various social media accounts to facilitate two-way communication with the major target segments.

2: e-GramSwaraj

Panchayats and E-Governance:

- At the PRIs, it is crucial to provide sensible governance at the local level. It is anticipated that e-governance in PRIs will aid in improving and redefining a number of socio-economic, environmental, and technical elements of community development.
- eGramSwaraj has served as a powerful illustration of “Minimum Government and Maximum Governance” in this situation.

Objectives of e-GramSwaraj are:

- Strengthening digitalisation in panchayats
- Improving grass-root governance
- Empowering rural citizens
- Ensuring transparency and accountability

Benefits of e-GramSwaraj:

- It enables Gram Panchayats to upload Gram Panchayat Development Plans (GPDP) and financial and physical work reports.
- It facilitates online payments to material vendors and service providers.
- It covers all aspects of the Panchayat’s functioning like planning, budgeting, asset management, etc.
- Progress of e-GramSwaraj:
- Around 2.56 lakh Gram Panchayats have uploaded their GPDP in the financial year 2021-22.

Challenges for e-GramSwaraj

- A basic prerequisite is seamless internet connectivity, which is a major challenge in rural areas.
- Acceptance of digital means by the local people is another area of concern.
- Other issues are information security, data privacy, content availability, etc.
- The devolution of powers to panchayats across states is not uniform.
- Many panchayats lack the timely availability of funds and smooth resource flow.

Future Course of Action

- More has to be done, even if Common Service Centres (CSC) have been established around the nation to advance e-governance.
- All parties need to be made aware of the issue and trained.
- GeM ought to be connected with e-GramSawarj.
- All stakeholders' ongoing comments will contribute to the system being more resilient and dynamic.
- Furthermore, precise activity identification, community involvement, and successful implementation are crucial.

3: Good Governance at Grassroots Level

- The political structure of Great Britain appears to have affected our parliamentary system. However, same could not be stated of the village level government model, which is the fundamental component of our democratic system. The Panchayati Raj governance system is the name of this paradigm.

Government Initiatives

- Using the resources at hand, a specific effort was started to create a panchayat development plan for economic growth and social justice.
- To make the procedure more simpler, the 2015 criteria were updated in 2018.

Rashtriya Gram Swaraj Abhiyan (RGSA)

- The 'Transformation of Aspirational Districts' initiative, known as RGSA, was started to promote development that is driven by the local population.
- It makes it possible for the Panchayats to operate efficiently in order to realise the development goals and Sustainable Development Goals.

e-Panchayat

- It provides a platform for online reporting, monitoring, and management of panchayat activities.
- It aims to bring transparency and accountability using technology.

SVAMITVA

- The 2020 launch of the programme intends to transform India's approach to maintaining property records.
- It intends to provide rural residents the ability to register their homes so that they can utilise them for commercial endeavours.

Deen Dayal Upadhyay Panchayat Sashaktikaran Yojana (DDUPSY)

- It was launched in 2014 to strengthen PRIs by providing them with the required resources and capabilities to undertake constitutional duties.
- It aims to empower PRIs to undertake planning, implementation, and development.

Swachh Bharat Abhiyan

- It was launched in 2014 to make India clean and defecation free.
- It focused on creating a culture of cleanliness and promoting the use of toilets in rural areas.

4: SVAMITVA Scheme for Providing Property Validation

- The four production elements are land, labour, capital, and entrepreneur. Any business's foundation for production is its land, which may also be used as collateral to get financing. The Indian economy, however, is unable to fully utilise the potential of land because of incomplete land records and unclear property ownership information.
- The capacity of marginal farmers to get formal institution loans is significantly impacted by the lack of accurate land records. This restricts a substantial source of finance and credit to the agricultural industry, which has an effect on the economic prospects of underprivileged farmers and, as a result, the agricultural sector as a whole.

SVAMITVA Scheme

- The aim of the scheme is to provide an integrated property validation solution for rural India for demarcating inhabitant (Abadi) land in rural areas.
- It will engage the latest drone surveying technology.
- Clear ownership of rural land will be concluded by the SVAMITVA Scheme.

Need for SVAMITVA Scheme

- In India, there are about 6.4 lakh villages, according to the 2011 Census.
- In the late 19th and early 20th centuries, the majority of communities were surveyed. The cadastral maps must be updated in order to connect them to the Record of Rights (RoRs).
- India loses 1.3% of its yearly economic growth as a result of contested property titles.
- Numerous infrastructure projects are delayed as a result of ongoing litigation. For instance, according to Land Conflict Watch 2020, an investment of Rs 19.7 trillion was impacted.
- The judiciary is likewise heavily burdened with land conflicts.
- Conflicts have an effect on capital availability and lower production.
- India's Panchayats lack financial resources. The Panchayats will be allowed to impose taxes if the ownership of the land is apparent.

Objectives of the Scheme:

- Capitalising property as a financial asset by the nation's rural population.
- Reduction in land or property-related disputes in rural areas.
- Creation and updation of land records for rural planning.
- Provide the right of property to the true owner of rural land
- Empowering the gram panchayats to levy and collect property tax
- Creation of survey infrastructure and GIS (Geographical)

Challenges and Recommendations

- The property cards issued under the plan's legal legitimacy. The property cards must be listed as papers requiring stamp duty payment under the state Revenue Act.
- Implementation of the scheme is not feasible if the local population is not satisfied.
- The record keeping practise of the states need to be aligned to the process.
- The Scheme does not spell out the mechanism to resolve the property-related conflicts.
- The legislature of some states has not rendered the power to levy a property tax to their gram panchayats.
- It is quite necessary that while undertaking the mapping exercise, the rights of the weak and marginalised communities are also preserved.

5: Women Empowerment

- At every level of the Panchayati Raj System, women are now entitled to reservations under the constitution.
- The 73rd Amendment mandates that at least one-third of the available seats be reserved.

Status of Women's Participation

- Women make up around 46% of all elected officials at the national level, including members and Panchayat presidents. Their percentage is greater than 50% in various states, including Chattisgarh, Maharashtra, Assam, and Uttarakhand.
- The vast majority of elected officials lacked a history of political ties.
- 83% of the elected women from reservations entered politics for the first time.
- 43% of the elected MPs, however, were unable to attend training.

The important determinants of good performance are:

- o Duration of being elected as a representative
- o Training
- o Education
- o Involvement in the functioning of Panchayats
- It is found that states with good performance of women representatives are Kerala, Karnataka, Tripura, Maharashtra, Sikkim, and West Bengal. The states with poor performance are Odisha, Madhya Pradesh, Bihar, Arunachal Pradesh, and Gujarat.
- Women's participation in PRI has a positive impact on other women. For instance,
 - o 79% of women realized enhancement in their self-esteem.
 - o 74% felt empowered in decision-making.

Recommendations for further empowerment of women in PRIs:

- Enhancement of educational levels of elected representatives.
- encouragement of joining of younger women in politics.
- Imparting regular training and capacity building.
- Giving adequate honoraria
- Association of women in various groups including Self-help groups

6.2030 Agenda for Sustainable Development

- Development that satisfies current demands without compromising the capacity of future generations to satisfy their own needs is referred to as sustainable development.
- Beginning in January 2016, nations are required to set their goals and policies in such a way as to ensure that everyone lives in peace and prosperity by 2030.
- Due to the fact that about 65% of Indians reside in rural regions, PRI is essential to the localization of the SDGs.
- A collaborative memorandum of agreement on the localization of SDGs was signed by MoPR and UNDP.
- Social justice and local economic growth are the dual goals of panchayati raj systems.
- The Constitution's Eleventh Schedule lists 29 topics, including the powers of panchayati raj systems. These topics cover a wide range of SDG objectives.
- In order to align them with the SDGs, Panchayats were recommended to include the Village Poverty Reduction Plan (VPRP) into the Gramme Panchayat Development Plan (GPDP).



Role of Panchayats in Attainment of SDGs

The role of Panchayats in the attainment of SDGs can be summed up as follows:

- Convergent implementation of flagship schemes like NRLM, MGNREGS, Swachh Bharat Mission, etc.
- Participatory outcome-based planning for local development plans on social, economic, and environmental aspects.
- Specific Governance Interventions in Panchayats through the effective functioning of Standing Committees and Functional Committees of Panchayats.
- Effective convergent planning between three tiers of Panchayati Raj.
- The smooth functioning of District Planning Committees which link rural and urban planning.

7: Water Management through Panchayats

- The 2012 National Water Policy placed a strong emphasis on local organisations' participation in the planning of water management for greater impact and effectiveness.
- Prime Minister Shri Narendra Modi emphasised the significance of Gramme Panchayat in water management in communities at the inaugural All India Annual State Minister's Conference on Water.
- Localised planning and programme execution are carried out by panchayats.
- Similarly, Water Users Association or 'Pani Panchayat' or 'Pani Samiti' have been created for local and participatory management of surface irrigation systems.
- Following negotiations with the Gramme Sabha, Gramme Panchayats control and administer water supply systems as well as approve investment plans, annual budgets, and user fee prices.
- The Gramme Sabha is a wider community that makes important choices on things like the source of water, the kind of water delivery system, and other things.
- Village designs are approved by the Gramme Sabha following debate and consideration.
- As required, it also conducts social audits.
- Village Water and Sanitation Committee (VWSC) is the standing committee of the Gram Panchayat. It is responsible for the planning, operation, implementation, maintenance, and management of village drinking water security.

- VWSC comprises 6 to 12 members of which 50% are women and the rest of the members are elected from Gram Panchayat.
- It is the responsibility of VWSC to keep track of bacterial contamination in the regular water supply.

Management at Ground

- The greatest consumer of groundwater worldwide is India. In rural regions, groundwater provides 85% of home water supply, 45% in urban areas, and more than 60% of irrigated farmland.
- Approximately 17% of groundwater blocks are being over-exploited, according to the Central Groundwater Board.
- The north-west, west, and south peninsula areas are in a dangerous situation.
- In light of this, the government introduced the extensive “Atal Bhujal Yojana” (ABY) in 2020, with the overarching objective of enhancing groundwater management in crucial locations.
- The scheme is operational in 8,565 Gram Panchayats of 80 districts in seven states. It aims to bring behavioural change at the community level.
- World Bank has been collaborating with Government of India to enhance groundwater management in stressed areas. WB stressed the need to integrate supply side measures with demand side management for a sustainable solution.
- Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), launched in 2015-16, aims to accelerate supply-side and demand-side management through Repair, Renovation and Restoration (RRR) of water bodies.

8: Human Development through Panchayati Raj Institutions

- Decentralization refers to the transfer of authority and responsibility for public functions from the Central Government to sub-ordinate or quasi-independent organizations.

There are three basic types of decentralization:

- Political decentralization
- Administrative decentralization
- Financial decentralization

Role of Panchayat in Human Development

- The Indian Constitution's 11th Schedule covers 29 disciplines. These topics include women and child development, rural housing, public distribution systems, fuel and fodder, animal husbandry, and agriculture.
- Human development is described by the United Nations Development Programme as the “process of enlarging people’s choices” that enables them to “lead a long and healthy life, to be educated, to enjoy a decent standard of living,” as well as “political freedom, other guaranteed human rights, and various ingredients of self-respect.”
- At the rural level, the PRI system is anticipated to function as an institution of self-governance and play a significant role in sectors of service delivery, such as education and health.
- Economic disparities may be lessened through the effective provision of targeted public services.
- MGNREGS and the National Rural Livelihood Mission are two rural development programmes that have the ability to provide employment opportunities and eradicate poverty.
- PRI enables public engagement in the development process in addition to implementing plans.
- Some of the most marginalised groups in the area can speak out at the Gramme Sabha meeting.
- The panchayat aids in better resource allocation to those in need.
- PRI keeps people aware of the ongoing and intended work and cultivates an atmosphere that is favourable to group action.
- Panchayats have been extremely important in the area of education. For instance, enrollment of youngsters between the ages of 6 and 14 has increased dramatically.
- Despite significant improvements in local community involvement in school administration, many kids continue to be unenrolled.

Role of Panchayats in Climate Change and Disaster Risk Reduction

- Climate change has mostly been caused by human activity. A further factor that makes rural residents particularly vulnerable to climate change and natural catastrophes is their reliance on ecosystem services and natural resources.
- Local disaster risk reduction benefits from the Panchayati Raj Institutions’ active involvement and leadership.
- Since they are positioned among rural residents and are the direct suppliers of public services, PRIs play a crucial role.
- They can support community education, disaster preparedness, and public awareness.



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