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Monthly Magazine
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HISTORY

GOPAL KRISHNA GOKHALE

In News:

The Prime Minister, Shri Narendra Modi has paid homage to Gopal Krishna Gokhale on his birth anniversary.

Analysis of Background:

About Gopal Krishna Gokhale (9 May 1866 – 19 February 1915)

- He was an **Indian political leader and a social reformer** during the Indian independence movement.
- Gokhale was a **senior leader of the Indian National Congress** and the **founder of the Servants of India Society**.
- He was the **leader of the moderate faction** of the Congress party that advocated reforms by working with existing government institutions, and a **major member of the Poona Association or the Poona Sarvajanik Sabha.**
- His famous quote was **"What Bengal thinks today, India thinks tomorrow".**

Early Life

- Gokhale was born in a Chitpavan Brahmin family in Ratnagiri district, in present-day Maharashtra.
- Being one of the first generations of Indians to receive a university education, under the guidance of Chakrappan a great indian philosopher of that times, **Gokhale graduated from Elphinstone College in 1884.**
- He had a great influence of the social works of Justice Mahadev Govind Ranade on his life.
- He was **named as the 'Protege Son' i.e. Manas Putra of Justice Mahadev Govind Ranade**.
- He was exposed to Western political thought and became a great admirer of theorists such as John Stuart Mill and s Edmund Burke.

Indian National Congress, Tilak and the Split at Surat

- Gokhale became a **member of the Indian National Congress in 1889**, as a protégé of social reformer Mahadev Govind Ranade.

- Along with other contemporary leaders like Bal Gangadhar Tilak, Dadabhai Naoroji, Bipin Chandra Pal, Lala Lajpat Rai and Annie Besant, Gokhale **fought for decades to obtain greater political representation and power over public affairs for common Indians**.
- He was moderate in his views and attitudes, and sought to petition the British authorities by cultivating a process of dialogue and discussion.

Gokhale vs Tilak
- **Gokhale was viewed as a well-meaning man of moderate disposition**, while Tilak was a radical who would not resist using force for the attainment of freedom.
- Gokhale believed that the **right course for India to get self-government was to adopt constitutional means and cooperate with the British Government**. On the contrary, Tilak's messages were protest, boycott and agitation.
- Gokhale's one major difference with Tilak centred around one of his pet issues, the **Age of Consent Bill** in 1891–92. Gokhale supported the Consent Bill to curb child marriage abuses.
- Tilak took issue with it; he did not object to the idea of moving towards the elimination of child marriage, but rather to the idea of British interference with Hindu tradition

Split
- The fight between the moderates and extremists came out openly at Surat in 1907, which adversely affected political developments in the country.
- Tilak wanted to put Lala Lajpat Rai in the presidential chair, but Gokhale's candidate was Rash Behari Ghosh.
- Tilak was not allowed to move an amendment to the resolution in support of the new president-elect.
- There was a physical scuffle.
- When people came running to attack Tilak on the dais, Gokhale went and stood next to Tilak to protect him.
- The session ended and the Congress split.
- Gokhale was deeply concerned with the future of Congress after the split in Surat.

Economist with liberal policy
- Gokhale's mentor, justice M.G. Ranade started the Sarvajanik Sabha Journal. **Gokhale assisted him**.
- Gokhale's deposition before the Welby Commission on the financial condition of India won him accolades.

Involvement with British Imperial Government

- In 1899, Gokhale was **elected to the Bombay Legislative Council**.
- He was **elected to the Imperial Council of the Governor-General of India** on 20 December 1901, and again on 22 May 1903 as non-officiating member representing Bombay Province.

Mentor to Gandhi

- Gokhale was famously a mentor to Mahatma Gandhi in the latter's formative years.
- In 1912, Gokhale visited South Africa at Gandhi's invitation.
- In his autobiography, Gandhi calls Gokhale his mentor and guide. Gandhi also recognised Gokhale as an admirable leader and master politician, describing him as **"pure as crystal, gentle as a lamb, brave as a lion and chivalrous to a fault and the most perfect man in the political field".**

Works

- English weekly newspaper, The Hitavad (The people's paper)
- English news paper SUDHARAK

PURANA QILA

In News:

A fresh round of excavations at the site of Delhi's Purana Qila (Old Fort) have uncovered evidence of the continuous history of the city since the pre-Mauryan era.
The Purana Qila, built by Sher Shah Suri and Mughal emperor Humayun, is believed by many to be the site of Indraprastha, as mentioned in the Mahabharat.

Analysis of Background:

Findings

- The findings include **shards of Painted Gray Ware pottery which are usually dated to around 1200 BC to 600 BC.**
- The new excavations have also found remains of a **900-year-old Vaikuntha Vishnu** from the Rajput period, a **terracotta plaque of Goddess Gaja Lakshmi** from the Gupta period, the structural remains of a **2,500-year-old terracotta ring well** from the Mauryan period, and a **well-defined four-room complex from the Sunga-Kushan period** dating back to 2,300 years ago, besides beads, seals, copper coins and a bone needle.
- More than 136 coins and 35 seals have been discovered from a small excavated area, indicating the **site's pivotal role as a centre for trade activities**.

- This was the third round of excavations at the site, beginning from January. Earlier excavations had been carried out in 2013-14 and 2017-18.
- These efforts have revealed nine cultural levels, representing different historical periods, including pre-Mauryan, Mauryan, Sunga, Kushana, Gupta, post-Gupta, Rajput, Sultanate, and Mughal.

About Purana Qila

- It is one of the oldest and ancient forts in Delhi, India.
- However, the **exact time period of foundation of the original structure is in antiquity and is unknown**, though it was re-built under the reign of the second Mughal Emperor Humayun and Sur Emperor Sher Shah Suri.
- Excavations point to traces from the 3rd century BC, the pre-Mauryan period.

History
- Excavations point to traces from the 3rd century BC, the pre-Mauryan period.
- Even till the early part of the 20th century, Purana Qila was known as **Pandavon Ka Qila (Pandava's fort) and the entire complex as Indraprastha village.**
- The origins of the Purana Qila **lie in the walls of Dinpanah, the new city of Delhi was being constructed by Mughal emperor Humayun, in the general vicinity of the ancient Indraprastha ruins.**
- Abul Fazl stated that he built the fort in the place of that of ancient Indraprastha.
- The founder of the Suri Dynasty, Sher Shah Suri, defeated Humayun and made changes to the fort, strengthening its fortifications and completing its walls.

- The construction of the walls and fortifications were almost finished by Humayun's time.
- Edwin Lutyens who designed the new capital of British India, New Delhi, in the 1920s, had **aligned the central vista, now Rajpath, with Purana Qila**.
- During the Partition of India, in August 1947 the Purana Qila along with the neighbouring Humayun's Tomb, became the site for refuge camps for Muslims migrating to newly founded Pakistan.

Physical features
- The walls of the fort rise to a height of 18 metres, traverse about 1.5 km, and have three arched gateways: the **Bara Darwaza (Big Gate) facing west, which is still in use today; the south gate, also popularly known as the 'Humayun Gate'; and lastly, the 'Talaqi Gate', often known as the "forbidden gate".**
- All the gates are **double-storeyed sandstone structures flanked by two huge semi-circular bastion towers**, decorated with white and coloured-marble inlays and blue tiles.
- They are replete with detailing, including ornate overhanging balconies, or jharokhas, and are topped by pillared pavilions (chhatris), all features that are reminiscent of Rajasthani architecture as seen in the North and South Gates.
- Despite the grandeurs of the exterior, few of interior structures have survived except the Qila-i Kuhna Mosque and the Shermandal, both credited to Sher Shah.

Qila-i-Kuhna Mosque
- The single-domed Qila-i-Kuhna Mosque, built by Sher Shah in 1541 is an excellent example of a pre-Mughal design and an early example of the extensive use of the pointed arch in the region as seen in its five doorways with the 'true' horseshoe-shaped arches.
- It was designed as a Jami Mosque or Friday mosque for the Sultan and his courtiers.
- Today it is the best preserved building in Purana Qila.

Sher Mandal
- The Sher Mandal **named for Farid (Sher Shah) who had tried to finish what was ordered by Babur but had died during the initial phase and so construction was halted until the arrival of Humayun.**
- This double-storeyed octagonal tower of red sandstone with steep stairs leading up to the roof was intended to be higher than its existing height.

- Its original builder was Babur who ordered the construction and was used as a personal observatory and library for his son Humayun, finished only after he recaptured the fort.
- It is also one of the first observatories of Delhi, the earliest being in Pir Ghaib at Hindu Rao at Ridge built in the 14th century by Firoz Shah

Outlying monuments

- Several other monuments lie around the complex, like Kairul Manzil, mosque built by Maham Anga, Akbar's foster-mother, and which was later used as a madarsa.
- Sher Shah Suri Gate or Lal Darwaza, which was the southern gate to Shergarh, also lies opposite the Purana Qila complex.

SHILABHATTARIKA

In News:

Researchers at the Pune-based Bhandarkar Oriental Research Institute (BORI), which houses South Asia's largest collection of manuscripts and rare texts, recently embarked on a mission after which they claim to have shed new light on Shilabhattarika.

Aanlysis of Background:

- **Findings:**
- The **celebrated Sanskrit poetess of ancient India** has now been established as the **daughter of the famed Chalukyan emperor Pulakeshin II of Badami (in modern Karnataka).**
- She stood out as a poetess in the male-dominated field of classical Sanskrit literature in ancient India.
- The **Sanskrit poet-critic Rajashekhara, who lived in the 9th-10th century CE and was the court poet of the Gurjara-Pratiharas, had praised Shilabhattarika** for her elegant and beautiful compositions.
- The decoding of the copper plates also marks a notable shift in the historiography of Badami Chalukyas by **placing Shilabhattarika as having lived in the 7th century CE** rather than the current theory which has her as the wife of the 8th Century Rashtrakuta ruler Dhruva.

Legacy

Noted Marathi poetess **Shanta Shelke** too has drawn inspiration from Shilabhattarika's verses to compose one of her most iconic songs— **toch chandrama nabhat(it is the same moon in the sky).**

Biography:

- One of her poems mentions the Narmada River (Reva) and the Vindhya mountains. Therefore, as a young woman, she probably lived along the Narmada River, near the Vindhyas.
- Shilabhattarika has been **quoted by several classical Sanskrit literary critics, and her verses appear in most major Sanskrit anthologies.**
- She is **known to have written at least 46 poems** on topics such as "love, morality, politics, nature, beauty, the seasons, insects, anger, indignation, codes of conduct, and the characteristic features of various kinds of heroines."
- However, most of her works are now lost, and only six of her short poems are extant.

CHANNAPATNA TOYS

In News:

Appreciating Prime Minister Narendra Modi's decision to ban import of toys from China, Channapatna's toy makers say that the government's move has helped in increasing their profits.

Analysis of Background:

About the toys:

- Channapatna toys are a particular form of **wooden toys and dolls** that are manufactured in the town of Channapatna in the Ramanagara district of Karnataka state, India.
- This traditional craft is **protected as a geographical indication (GI) under the World Trade Organization, administered by the Government of Karnataka**.
- As a result of the popularity of these toys, **Channapatna is known as the Gombegala Ooru (toy-town) of Karnataka**.
- Traditionally, the work involved lacquering the wood of the **Wrightia tinctoria tree,** colloquially called Aale mara (ivory-wood).
- Channapattana is a city and taluk headquarter in the Ramanagara district of Karnataka.
- It is a paradise for handmade lacquer wooden toys for kids.
- For centuries, the toy industry of Channapatna has provided large-scale employment to the people living here.

Gombe Habba:

- The 10-day Dussehra festival, also known as Gombe Habba or Gudiya Utsav, is special for the toy makers of Channapatna as a large number of buyers come to buy the toys.

- The festival helps toymakers to earn more profits.

History:
- The greater prominence of the Channapatna toys **can be traced to patronage from Tipu Sultan,** the historic ruler of Mysore, though these toys existed before this period historically given as gifts as part of Dusshera celebrations.
- It is known that he was an ardent admirer of arts, and in particular of woodwork.
- The art underwent dramatic changes over the years.
- Later, a man by the name of **Bavas Miyan** undertook the responsibility to introduce Japanese doll making techniques to improve production and reduce the effort that went into making each piece of toy.
- For nearly two centuries, ivory-wood was the main wood used in the making of these toys, though rosewood and sandalwood were also occasionally used.

Manufacturing
- **The craft has diversified over time**; in addition to the traditional ivory-wood, other woods—including rubber, sycamore, cedar, pine and teak—are now used as well.
- Manufacturing stages include procuring the wood, seasoning the wood, cutting the wood into the desired shapes, pruning and carving the toys, applying the colours and finally polishing the finished product.
- **Vegetable dyes are used in the colouring process to ensure that the toys and dolls are safe for use by children**.

Government steps that have helped:
- Toymakers at Channapatna appreciated **the Toy Festival** which helped them in boosting sales.
- They further appreciated campaigns such as **Make in India and Local for Vocal** led by PM Modi.
- PM mentioned the toys of Chinnapatna in his **Mann Ki Baat program**, due to which people's attention was drawn towards us leading to the increase in the sale of toys here.
- The **Karnataka Handicrafts Development Corporation** (KHDC) provides assistance with marketing efforts.
- The oldest and most popular manufacturing unit Bharath art and crafts help develop innovative products.

GEOGRAPHY

AURORA BOREALIS

In News:

For the first time, Northern Lights were seen in India.

Analysis of Background;

- The Indian Astronomical Observatory above Mount Saraswati captured a rare phenomenon as a geomagnetic storm struck Earth's magnetic field, creating unique auroras.
- **Aurora Borealis was visible from as far as India's Ladakh (34-36°N**).
- This was the first time that the aurora was captured on camera in India by the Indian Astronomical Observatory.
- The auroras are normally seen at higher altitudes in parts of Alaska, Norway, and other countries.

What causes auroras or polar lights?

- The Northern Lights and Southern Lights are natural light display that occurs in the polar regions.
- Aurora is **triggered by an interaction between the plasma particles hurled by the Sun and Earth's magnetic field.**
- They are caused by particles from the sun that enter the Earth's atmosphere and collide with gas particles, **such as oxygen and nitrogen.**
- When these particles collide, they **release energy in the form of light**. The **different colours of the aurora are produced by different gases.** For example, **green auroras are caused by oxygen molecules, while red auroras are caused by high-altitude oxygen atoms.**
- The reason why the polar lights are more visible in the polar regions is that the **Earth's magnetic field traps these particles near the poles, causing them to interact with the atmosphere and produce a beautiful display of light.**
- The strength and frequency of the lights depend on the activity of the sun. When the sun is more active, it releases more particles, which can result in more frequent and intense auroras.

Why are we seeing the Northern Lights more often now?

- In the last two weeks, the Northern Lights have been seen in parts of the world where they were never been seen before. This recent Northern Lights viewing, according to scientists, is **because the sun let off a large burst of energy.**
- Every 11 years, the Sun's magnetic cycle ramps into overdrive. [Solar Cycle]
- At the height of this cycle, known as solar maximum, the **Sun's magnetic poles flip.**
- This **produces a greater number of sunspots**, **more energy and cause solar eruptions of particles.**
- This activity on the sun - **a solar storm or coronal mass ejection - causes the auroras.**
- And this process increases and is more visible when the Sun goes through this natural, 11-year cycle.
- We're right in the middle of that transition right now; we're approaching it. When we hit the middle we call it solar maximum. It's when we have the most sunspots it's when we get the most solar flares and eruptions and more auroras.

Solar storms

- Solar storms are disturbances in the Sun's magnetic field that can release large amounts of energy into space in the form of charged particles and electromagnetic radiation. The most common types of solar storms include solar flares, coronal mass ejections (CMEs), and high-speed solar wind streams.
- The effects of solar storms on the Earth can vary depending on the strength and type of the storm. The charged particles from a solar storm sometimes interact with the Earth's magnetic field, causing colorful polar lights.
- But these storms cause other disruptions and can affect the Earth in many ways:
  - **Power outages:** Strong solar storms can cause power grid disturbances by inducing electrical currents in long power lines, which can lead to blackouts and other electrical disruptions.
  - **Satellite and communication disruptions:** Solar storms can interfere with satellite communication and navigation systems, causing disruptions to GPS, satellite TV, and other services.
  - **Radiation exposure:** Solar storms can increase radiation levels in space, which can pose a risk to astronauts and people at high altitudes.
  - **Increased risk of space debris:** During a solar storm, the Earth's atmosphere can expand, which can increase drag on orbiting satellites and space debris, leading to a higher risk of collisions with other objects in orbit.

THWAITES GLACIER

In News:

The implications of the collapse of Thwaites Glacier are immense and is likely to rewrite both the history and geography of all living beings.

Analysis of Background:

Thwaites Glacier

- Thwaites Glacier, nicknamed the Doomsday Glacier, is a **broad and vast Antarctic glacier flowing into Pine Island Bay, part of the Amundsen Sea, east of Mount Murphy, on the Walgreen Coast of Marie Byrd Land.**
- Thwaites Glacier is closely monitored for its potential to raise sea levels.
- Along with the Pine Island Glacier, it has been **described as part of the "weak underbelly" of the West Antarctic Ice Sheet, because of its apparent vulnerability to significant retreat.**
- It's called the Doomsday Glacier because it is 120 km wide at its widest point, fast-moving, and melting rapidly over time, as per reports. It contains enough water to increase the global sea level by more than half a metre due to its size (1.9 lakh square kilometres.

Importance of Doomsday Glacier and Concerns:

- Thwaites is a frozen river of ice approximately the size of Great Britain. It already **contributes around 4% of the global sea-level rise.**
- Since 2000, the glacier **has had a net loss of more than 1000 billion tons of ice and this has increased steadily over the last three decades.**
- The speed of its flow has doubled in 30 years, meaning twice as much ice is being spewed into the ocean as in the 1990s.
- Thwaites glacier, the widest in the world at 80 miles wide, is held back by a floating platform of ice called an ice shelf, which restrains the glacier and makes it flow less quickly. But scientists have just confirmed that this **ice shelf is becoming rapidly destabilised. The eastern ice shelf now has cracks criss-crossing its surface, and could collapse within ten years, according to Oregon State University.**
- There is a development of cracks and crevasses on the Thwaites ice shelf. These indicate that it is being structurally weakened. This damage can have a reinforcing feedback effect because cracking and fracturing can promote further weakening, priming the ice shelf for disintegration.
- Without its ice shelf, Thwaites glacier would discharge all its ice into the ocean over the following decades to centuries.

- In an event of its total collapse, its weight will simply add to that of the ocean, **leading to unprecedented sea-level rise.**
- A 3-metre rise in sea levels would have a significant impact on low-lying areas and coastal cities worldwide. Some of the countries that would be particularly vulnerable to this include Bangladesh, the Maldives, the Netherlands and parts of the United States such as Florida and Louisiana. However, the effects would not be limited to these areas and would be felt globally.
- Experts estimate that if the Thwaites collapsed, global sea level would rise by roughly 10 feet.
- While it could take hundreds or thousands of years, the ice shelf could dissolve considerably sooner, causing the glacier to retreat in an unstable and potentially irreversible manner.
- That urgent need for global action to combat climate change and prevent catastrophic consequences like those that may result from the collapse of Thwaites Glacier.

MOUNT ETNA

In News:

Europe's most active volcano Mount Etna erupted May 21, 2023, forcing flights from eastern Sicily's largest city Catania to be grounded due to a lack of visibility.

Analysis of Background:

- Mount Etna, is an active **stratovolcano on the east coast of Sicily, Italy, in the Metropolitan City of Catania,** between the cities of Messina and Catania.
- It **lies above the convergent plate margin between the African Plate and the Eurasian Plate**.
- It is one of the tallest active volcanoes in Europe.
- Etna has also produced pyroclastic flows, ashfalls, and mudflows, but the lava flows are the most immediately hazardous type of activity, especially to the city of Catania.
- The volcano has been erupting for the past 500,000 years and is one of the most studied volcanos in the world.

GENERAL STUDIES - 2

POLITY AND GOVERNANCE

ARTICLE 299 OF THE CONSTITUTION

In News:

In a recent case, the Supreme Court of India has ruled that the government cannot invoke immunity from the legal provisions of a contract entered into under the name of the President, as per Article 299 of the Constitution. This article deals with the power and authority of contracts in India and lays down the conditions for their validity and enforceability.

Analysis of Background:

- **Article 299 of the Constitution of India deals with the contracts made by the government of India or any of its states**. It lays down the rules and procedures for making and executing such contracts, as well as the liability of the parties involved.

Article 299(1)

- Article 299(1) also states that **all such contracts and all assurances of property made in the exercise of that power shall be executed on behalf of the President or the Governor by such persons and in such manner as he may direct or authorise.**
- This means that the actual signing and delivery of the contracts must be done by someone who is authorised by the President or the Governor, and under their directions.
- This also means that the contracts must be made in the name of the head of the executive, and not in the name of any individual minister or officer.
- The purpose of this rule is to ensure that the contracts are made with due authority and responsibility and to avoid any confusion or dispute about their validity.

Article 299(2)

- Article 299(2) states that **neither the President nor the Governor shall be personally liable in respect of any contract or assurance made or executed for this Constitution**, or for any enactment relating to the Government of India heretofore in force, nor shall any person making or executing any such contract or assurance on behalf of any of them be personally liable in respect thereof.
- This means that the **President or the Governor cannot be sued for breach of contract or damages arising out of any contract made by them in their official capacity**.

Similarly, any person who acts on their behalf cannot be held personally liable for any such contract.

- The purpose of this rule is to protect the dignity and immunity of the head of the executive and to ensure that any claim arising out of a contract made by them is directed against the government as a whole, and not against them individually

Supreme Court Observation

- The Supreme Court held that these provisions are mandatory and not directory, and any deviation from them would render the contract void and unenforceable.
- It held that the **immunity granted to the President or the Governor under Article 299(2) does not extend to the government, which is bound by the terms and conditions of the contract.**
- It observed that Article 299 is based on the principle of privity of contract, which means that only parties to a contract can sue or be sued on it.
- It noted that Article 299 is intended to protect the public interest and prevent unauthorised persons from entering into contracts on behalf of the government without proper sanction and authority.

Court Verdict

- The Court clarified that Article 299 does not preclude judicial review of contracts made by the government and that such contracts are subject to scrutiny on grounds of illegality, irrationality, procedural impropriety, mala fides, etc.
- The Court concluded that Article 299 is a constitutional safeguard for ensuring transparency, accountability and fairness in government contracts and that any attempt to evade or circumvent it would be contrary to public policy and good governance.

Important Case

- 1954 top court ruling in '**Chatturbhuj Vithaldas Jasani v/s Moreshwar Parashram & Ors'**, is that there must be a definite procedure according to which contracts must be made by agents acting on the government's behalf; otherwise, public funds may be depleted by unauthorized or illegitimate contracts.
- In its latest judgement, the court referred to its 1966 ruling in '**P. Chowdhry v/s State of Madhya Pradesh. And Others'**, which laid down essential requirements for government contracts under Article 299.** In that ruling, the top court had reiterated three conditions to be met before a binding contract against the government could arise, namely:

- o The contract must be expressed to be made by the Governor or the Governor-General.
- o It must be executed in writing.
- o The execution should be by such persons and in such manner as the Governor or the Governor-General might direct or authorise."

SCHEDULED CASTE SCHEDULED TRIBE (PREVENTION OF ATROCITIES) ACT 1989

In News:

The CB-CID has lodged complaints against the Inspector and a few other police employees under the provisions of the Scheduled Caste/Scheduled Tribe (Prevention of Atrocities) Act 1989 while investigating claims of custody torture in the Ambasamudram Police Sub-Division in Tamil Nadu.

Analysis of Background:

As the two victims were Dalits, the CB-CID has invoked the provisions of the SC/ST (Prevention of Atrocities) Act, 1989 against the former Inspector of Police and a few Ambasamudram police station personnel.

Scheduled Caste/Scheduled Tribe (Prevention of Atrocities) Act 1989:

About Sc/St Act:
- The Act was enacted by the Parliament of India to address the persistent and pervasive discrimination, violence and oppression faced by the Scheduled Castes (SCs) and Scheduled Tribes (STs) in various spheres of life.
- It is also known as the SC/ST Act, the Prevention of Atrocities Act, or simply the Atrocities Act.
- It defines various offences against SCs and STs as atrocities and provides for stringent punishment for the perpetrators.

Main objectives of the Act:
- To **recognize and criminalize various forms of atrocities committed against SCs and STs** that violate their constitutional rights and human dignity.
- To **provide adequate legal protection to SCs and STs** against such atrocities and ensure their access to justice.
- To create a conducive environment for the social and economic empowerment of SCs and STs and prevent their exploitation and marginalization.

- To promote awareness and sensitization among the general public and public servants about the rights and entitlements of SCs and STs under the Constitution and other laws.

Key Provisions
Coverage
- The Act covers a wide range of offences against SCs and STs, such as causing physical or mental harm, sexual abuse, economic exploitation, social boycott, forcible conversion, land grabbing, denial of access to public services, etc.

Responsibilities of Administration
- It imposes a duty on every public servant to take necessary steps to protect SCs and STs from any harm or harassment arising out of an offence under the Act.
- Failure to do so can result in imprisonment of up to six months or a fine or both.
- It imposes a duty on every public servant to register a complaint or information relating to an offence under the Act without any delay or discrimination.
- Failure to do so can result in imprisonment of up to one year or a fine or both.

Time-bound Investigation
- It mandates that any offence under the Act shall be investigated by an officer not below the rank of Deputy Superintendent of Police (DSP) within 30 days.

Special Courts
- It empowers the state governments to establish special courts for the exclusive trial of offences under the Act within a period of 2 months from the date of filing of the charge sheet.

Relief to Victims
- It provides free legal aid to the victims and witnesses of atrocities at all stages of the legal process.
- It entitles the victims and their dependents to immediate relief, compensation, rehabilitation and resettlement as per the prescribed norms.

Punishment
- It prohibits anticipatory bail for any person accused of an offence under the Act unless there is no prima facie case against him or her.

- It prescribes a minimum sentence of 6 months imprisonment for any offence under the Act, which can extend up to life imprisonment or the death penalty in certain cases.

Challenges
- **Lack of awareness and sensitization among the SCs and STs** about their rights and remedies under the Act. Many victims do not report the atrocities due to fear of retaliation, social stigma, or lack of confidence in the legal system.
- **Delay and denial of justice due to procedural hurdles**, inadequate infrastructure, shortage of staff, and bias or indifference of the police, judiciary, and public prosecutors.
  - The conviction rate under the Act is very low compared to other criminal cases.
- **Misuse and abuse of the Act by some individuals or groups** for personal or political motives. The Act has been criticized for being too harsh and draconian, violating the principles of natural justice and the human rights of the accused.
- **Resistance and opposition from the dominant castes and communities** who perceive the Act as a threat to their social and economic interests.
  - The Act has often triggered violent protests and clashes between different groups, leading to further victimization of the SCs and STs.
- **Lack of coordination and cooperation among various stakeholders** such as the central and state governments, civil society organizations, media, and academia.
  - The Act requires a holistic and multi-pronged approach to address the root causes of caste-based discrimination and violence.

These challenges call for urgent reforms and interventions to ensure that the Act fulfils its objectives and purpose of preventing atrocities against the SCs and STs.

Steps need to be taken:
- **Creating awareness and education campaigns** to inform the SCs and STs about their rights and entitlements under the Act, as well as to sensitize the general public about the plight and problems of these communities.
- **Strengthening the implementation and monitoring mechanisms** of the Act by providing adequate funds, infrastructure, manpower, training, and guidelines to the authorities concerned.
  - The special courts, public prosecutors, police officers, and welfare officers should be appointed exclusively for dealing with cases under the Act.
- **Preventing misuse and abuse of the Act** by ensuring fair and impartial investigation and trial of the cases. False or frivolous complaints should be discouraged and penalized.

- The rights and interests of the accused should also be protected as per the law.
- **Promoting dialogue and reconciliation** between different castes and communities to foster social harmony and mutual respect.
  - The role of civil society organizations, media, religious leaders, and opinion-makers is crucial in this regard.
- **Addressing the underlying issues of caste-based discrimination and violence** by implementing affirmative action policies, socio-economic development programs, legal reforms, and cultural changes.
  - The SCs and STs should be empowered to participate in decision-making processes that affect their lives.

VIVAD SE VISHWAS SCHEME

In News:

As declared in the Union Budget 2023-24, the government has launched the Vivad se Vishwas scheme to provide support to MSMEs for the COVID-19 period.

Analysis Of Background:

Vivad se Vishwas scheme

- The "Vivad se Vishwas I - Relief to MSMEs" scheme has been **launched by the Department of Expenditure, Ministry of Finance**, to provide relief to Micro, Small and Medium Enterprises (MSMEs) during the COVID-19 period.
- The scheme was **announced in the Union Budget 2023-24.**

Objectives

- Provide relief to the micro, small and medium enterprises (MSMEs) that have been affected by the COVID-19 pandemic.
- To resolve pending tax disputes and reduce litigation.

Key Provisions

- It offers a **one-time opportunity for MSMEs to settle their pending tax disputes** by paying only the disputed tax amount and **getting a waiver of interest and penalty.**
- It provides immunity from any future prosecution or penalty for the settled cases.
- The scheme is applicable for all tax disputes pending as on 31st March 2023, irrespective of the stage of litigation.

Significance

- Benefit MSMEs that are struggling with cash flow problems due to the Covid-19 pandemic and the economic slowdown.
- **Reducing the pendency of tax litigation** and improving the ease of doing business in India.
- **Support the MSME sector**, which is considered the backbone of the Indian economy. The sector contributes about 30% of the GDP, 45% of the exports and employs over 11 crore people.
- The scheme is part of a Comprehensive approach; the Government has also taken various other measures to help MSMEs such as providing collateral-free loans, revising the definition of MSMEs, creating a dedicated portal for MSME registration and grievance redressal, etc.

TELECOM REGULATORY AUTHORITY OF INDIA (TRAI)

In News:

Telecom Regulatory Authority Of India (TRAI) has ordered telecom companies to use AI filters on their voice and SMS services.

Analysis of Background:

- The Telecom Regulatory Authority of India (TRAI) has announced to change the rules regarding these unsolicited communications from May 1, 2023.
- TRAI is going to set up an AI filter to stop pesky calls and SMSs, providing a major relief to telecom customers.

Use of AI filter

- The TRAI decided to **set up an AI filter to block annoying calls and SMSs,** which will be a huge relief for telecom users who are constantly besieged with unsolicited spam calls and SMSs.
- The AI filter will assist clients in avoiding fraudulent and advertising calls.

Call Id Features

- TRAI has long worked to combat fake calls and SMS, which are a major source of concern for customers.
- It is one of the methods scammers use to defraud innocent customers and steal money from their accounts.
- TRAI is requesting that telecom firms stop making promotional calls to 10-digit mobile numbers.

- The regulatory is also looking into introducing a Call ID function that will display the caller's photo and name on the mobile phone.

What is an AI filter and how does it work?

Uses Artificial Intelligence (AI) and Machine Learning (ML)

- An AI filter is a technology that uses artificial intelligence (AI) and machine learning (ML) **to detect and block pesky calls and SMSs based on their content, sender, and frequency.**
- An AI filter can analyze the patterns and behaviours of telemarketers and identify them as unregistered or fraudulent.
- It can also check the consent of the customers and their preferences for receiving promotional messages.

Coordination with the distributed ledger technology (DLT) platform

- An AI filter works in coordination with the distributed ledger technology (DLT) platform that TRAI has mandated for all telecom service providers and telemarketers.
- The DLT platform is a blockchain-based system that records and verifies the registration of telemarketers, their headers, and message templates.
- It also allows customers to register their preferences for receiving commercial communications.

An additional layer of protection

- The AI filter will act as an additional layer of protection for customers by intelligently scrubbing the headers and message templates on the DLT platform and blocking all unverified or suspicious ones.
- It will also monitor the frequency and volume of pesky calls and SMSes and take action against those who violate the norms.

Significance of AI filter for telecom customers

- It will reduce the nuisance and harassment caused by pesky calls and SMSs.
- It will protect the privacy and security of customers from phishing and cyber fraud.
- It will enhance the customer experience and satisfaction by respecting their choices and preferences.
- It will improve the quality of service and network performance by reducing congestion and spam traffic.

WORLD PRESS FREEDOM INDEX 2023

In News:

According to the latest report produced by Reporters without Borders (RSF), India's ranking in the World Press Freedom Index 2023 has dropped to 161 out of 180 countries.

Analysis of Background:

World Press Freedom Index

- The World Press Freedom Index is an annual report compiled **by Reporters Without Borders (RSF)** since 2022.
- The Index is a global indicator of the state of journalism and media freedom in 180 countries and territories.
- The index is based on various indicators such as media pluralism, independence, transparency, legislative framework, quality of infrastructure and abuses and violence against journalists.
- **Countries are ranked on a scale from 0–100 points** (A higher score means good).
- The **top three countries on the ranking are Norway, Ireland, and Denmark**, while Vietnam, China, and North Korea placed last.

India and neighbouring countries ranking

- In comparison to other South Asian nations, **India does poorly in the World Press Freedom Index, ranked 161.**
- Performed better than India:
    - Bhutan is ranked 90
    - Sri Lanka is ranked 135
    - Pakistan is ranked 150
    - Afghanistan ranked 152.
- Performance poor than India:
    - Bangladesh is ranked 163.

INDEX 2023		INDEX 2022	
161 / 180		▼ **150** / 180	
Score : 36.62		Score : 41	
POLITICAL INDICATOR	**169** 33.65	POLITICAL INDICATOR	**145** 40.76
ECONOMIC INDICATOR	**155** 34.15	ECONOMIC INDICATOR	**149** 30.36
LEGISLATIVE INDICATOR	**144** 42.92	LEGISLATIVE INDICATOR	**120** 57.02
SOCIAL INDICATOR	**143** 45.27	SOCIAL INDICATOR	**127** 56.25
SECURITY INDICATOR	**172** 27.12	SECURITY INDICATOR	**163** 20.61

The report mentions several factors that have contributed to the poor ranking of Indian Media

- The **increasing influence of populist forces** that have tried to stifle dissenting voices and impose their version of the truth.
- The **growing use of disinformation and propaganda** to manipulate public opinion and undermine trust in journalism.
- The **arbitrary detention and prosecution** of journalists on various charges such as sedition, terrorism, defamation and contempt of court.
- The digital space and democracy are being threatened by online harassment, trolling, cyberattacks, surveillance and censorship.
- The **violence against journalists** has resulted in at least 10 deaths in the past year, making India one of the most dangerous countries for media workers.

Concerns raised by the reports

- Journalists face constant pressure and intimidation from various sources. This has eroded the quality and diversity of journalism.
- **A decline in press freedom in India has serious consequences** for the country's democracy and development.
- Free and independent media is a pillar of democracy, as it enables citizens to access reliable information, express their opinions and participate in public debate.
- Free and independent media is also a catalyst for development, as it exposes corruption, human rights violations, social injustices and environmental issues.

Steps suggested by the report
- Respecting and protecting the constitutional right to freedom of expression and information for all citizens, including journalists.
- Repealing or amending laws that can be used to harass and silence journalists, such as sedition, defamation and contempt of court.
- Ensuring that journalists can work safely and securely without facing threats or attacks from any quarter.
- Promoting media literacy and ethics among both journalists and audiences to combat disinformation and propaganda.
- Supporting media pluralism and diversity by encouraging independent and alternative voices and outlets.

World Press Freedom Day 2023
- World Press Freedom Day also known as World Press Day is marked on 3rd May.
- The day celebrates the role of the press in promoting and protecting human rights around the world.
- The **theme of 2023 is "Shaping a Future of Rights: Freedom of Expression as a Driver for all other human rights".**
- UNESCO organized a special anniversary event at UN headquarters in New York, marking 30 years since the UN General Assembly's decision proclaiming an international day for press freedom.

UNIFORM CIVIL CODE

In News:

A Political party during election campaigning for the upcoming Karnataka State legislative election has announced to implement Uniform Civil Code (UCC) in the state if elected to power.

Analysis of Background:
- The party claims that the **UCC would ensure equality and justice for all citizens**, irrespective of their religion, caste, gender or region.
- The party argues that the UCC would promote national integration and social harmony by eliminating the differences and conflicts arising from the application of different personal laws.

Uniform Civil Code (UCC);

- The UCC is a proposed law that **would replace the personal laws** based on the scriptures and customs of each major religious community in India with a common set of rules governing every citizen.
- The UCC covers various aspects of family law, such as marriage, divorce, inheritance, adoption and maintenance.

Concern

- The announcement has sparked a heated debate among various sections of society, especially among religious minorities who fear that the UCC would infringe upon their fundamental rights and freedoms.
- Some critics have also questioned the constitutional validity and feasibility of implementing the UCC in a diverse and pluralistic country like India.

SPORTS GOVERNANCE IN INDIA

In News:

Half of the national sports federations in India do not have a sexual harassment panel mandated by the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, which requires every organisation with more than 10 employees to have an internal complaints committee (ICC) to deal with cases of sexual harassment.

Analysis of Background:

- A report has revealed that **half of the national sports federations in India do not have a sexual harassment panel mandated by law.**
- This is a clear violation of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, which requires every organisation with more than 10 employees to have an internal complaints committee (ICC) to deal with cases of sexual harassment.

Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013

- The Act covers all women, irrespective of their age or employment status, who may be subjected to sexual harassment at any workplace, whether in the public or private sector.
- It also covers domestic workers, students, research scholars, patients, customers, clients and visitors.
- **The Act applies to all workplaces**, including offices, factories, shops, hotels, restaurants, educational institutions, hospitals, sports complexes, transport services,

- entertainment venues and homes.
- The Act mandates every employer to constitute an Internal Complaints Committee (ICC) at each office or branch with 10 or more employees.
- The ICC consists of a presiding officer (a senior woman employee), two other employees (preferably committed to women's rights) and one external member (from an NGO or legal background).
- The ICC is responsible for receiving and inquiring into complaints of sexual harassment from aggrieved women employees and recommending appropriate action to the employer.

Findings of the report
- The absence of an internal complaints committee (ICC) in these national sports federations (NSFs) means that women athletes, coaches, officials and staff working in these organisations have no recourse to justice if they face sexual harassment at their workplace.
- Poor functioning of some of the ICCs that were constituted by the NSFs.
- Some of them did not have a proper composition as per the Act, which requires at least one external member who is familiar with issues relating to sexual harassment.
- Some of them did not have any women members at all, while some had only one woman member out of four or five.
- Some of them did not have any records of their meetings or cases handled by them.

Sports Governance in India
- India is a country with a rich and diverse sporting culture. From cricket to hockey, from badminton to chess, India has produced many world-class athletes and champions in various sports. However, the governance of sports in India has often been criticized for being inefficient, corrupt, and politicized.

Sports Governance Structure
- The Indian sports governance consists of two separate bodies managing sports in the country:
    - The Ministry of Youth Affairs and Sports (MYAS)
    - The Indian Olympic Association (IOA)
- The MYAS is a government body that oversees various institutions such as the Sports Authority of India (SAI), which provides infrastructure, training and financial assistance to athletes and coaches.

- The IOA is an autonomous body that represents India in the International Olympic Committee (IOC) and other international sports federations. It also organizes national games and championships for various sports disciplines.

Challenges

Lack of autonomy and accountability of the national sports federations (NSFs)

- **NSFs are the bodies that regulate and promote different sports in India** and are affiliated with the Indian Olympic Association (IOA), which is the apex body for Olympic sports in India.
- **NSFs are supposed to be independent and democratic organizations** that follow the principles of good governance, such as transparency, participation, and fairness. However, many NSFs are plagued by nepotism, favouritism, and interference from political and bureaucratic forces.
- Some NSFs have been headed by the same person or family for decades, without any elections or term limits.
- Some NSFs have also been accused of misusing funds, violating rules, and discriminating against athletes on various grounds.

Lack of coordination and cooperation among different stakeholders

- There are multiple agencies and authorities involved in sports development and management in India, such as the Ministry of Youth Affairs and Sports (MYAS), the Sports Authority of India (SAI), the IOA, the NSFs, the state governments, the private sector, and the civil society.
- However, there is often a lack of clarity and consensus on their roles and responsibilities, leading to duplication of efforts, wastage of resources, and conflicts of interest.

Lack of a long-term vision and strategy for sports development

- India has a huge potential to become a sporting powerhouse, given its large population, young demographic, and diverse talent pool.
- However, there is no clear and coherent policy framework or roadmap to harness this potential and achieve excellence in sports at all levels.
- Sports policy in India has often been reactive and ad hoc, rather than proactive and systematic.
- There is also a lack of adequate investment and innovation in sports infrastructure, technology, research, education, and grassroots development.

What can be done to improve sports governance in India?

Reforming NSFs

- NSFs should be made more accountable and transparent by ensuring regular elections, audits, disclosures, and grievance redressal mechanisms.
- NSFs should also be made more inclusive and representative by ensuring gender parity, regional diversity, and stakeholder participation.
- NSFs should also be made more professional and competent by hiring qualified staff, adopting best practices, and enhancing their capacity building.

Strengthening coordination

- There should be better coordination and alignment among different agencies and authorities involved in sports governance in India.
- There should be a clear division of roles and responsibilities among them, based on their expertise and mandate.
- There should also be regular dialogue and consultation among them to avoid conflicts and ensure synergy.
- There should also be greater involvement of the private sector and civil society in sports governance in India.

Developing a vision

- There should be a comprehensive and long-term vision and strategy for sports development in India. This vision should be.
- Based on a thorough analysis of the strengths, weaknesses, opportunities, and threats facing Indian sports.
- Aligned with the national goals and aspirations of India.
- Translated into concrete action plans with measurable outcomes and indicators.

VIOLENCE IN MANIPUR

In News:

Manipur, a northeastern state of India, has been witnessing violent clashes between different ethnic groups.

Analysis of Background:

- Manipur, a northeastern state of India, has been witnessing violent clashes between different ethnic groups since February 2023.

- The latest round of unrest erupted on May 3, when a tribal student union organized a march to protest against the demand of the non-tribal Meitei community to be included in the Scheduled Tribe (ST) list.
- The march turned violent when some protesters set fire to houses and shops belonging to Meiteis in the Churachandpur district and other parts of the state.
- The police imposed a curfew and shoot-at-sight orders to control the situation.

Detailed Background:
- The **conflict between the Meiteis and the tribals** has a long history of political, economic and cultural grievances.
- **The valley, which accounts for roughly 10% of Manipur's geography, is dominated by non-tribal Meitei**, who **account for more than 64% of the state's population** and produce 40 of the state's 60 MLAs.
- **The hills, which cover 90% of the geographical region, are home to more than 35% of the officially recognised tribes** but send only 20 MLAs to the Assembly.
- While Hindus constitute the vast majority of Meiteis, followed by Muslims, the 33 recognised tribes, broadly classified as 'Any Naga tribes' and 'Any Kuki tribes,' are predominantly Christian.

Issue of Reservation:
- The **Meiteis,** who dominate the Imphal Valley and constitute about 64% of the state's population, **have been demanding ST status since 2012.**
  - o They argue that they are an indigenous tribe who has lost their land, culture and identity due to migration and assimilation of outsiders.
  - o They also claim that ST status will help them preserve their ancestral land, tradition, culture and language.
- **The tribals**, who inhabit the surrounding hills and account for more than 35% of the population, are **opposed to the Meitei demand for ST status.**
  - o They fear that it will reduce their share of political representation, reservation benefits and land rights.
  - o They also accuse the Meiteis of encroaching on their ancestral lands and exploiting their natural resources.

What triggered the conflict between the non-tribal Meitei people and other tribal groups?

- The tension between the two groups escalated in February 2023, when the state government launched an anti-drug drive that targeted poppy cultivation in the hill districts.
- The tribals alleged that the drive was a pretext to evict them from their lands and accused the government of favouring the Meiteis.
- The Manipur High Court's order on April 19 to expedite the recommendation for granting ST status to the Meiteis further inflamed the tribal sentiments and led to the massive protest on May 3.

Way Forward

- The unrest in Manipur reflects the deep-rooted ethnic divide and mistrust among different communities in the state. The state government and the central government need to engage in dialogue with all stakeholders and address their concerns fairly and transparently.
- The government should also ensure that law and order are maintained and that no innocent lives are lost or harmed in the violence.
- Civil society and media should play a constructive role in promoting peace and harmony among different groups and preventing misinformation and rumours from spreading.
- The people of Manipur should also realize that violence is not a solution to any problem and that they need to coexist peacefully with respect and tolerance for each other's culture and identity.

STARS PROGRAM

In News:

Under the STARS Programme, the Union Ministry of Education and the World Bank hosted a session on School-to-Work Transition.

Analysis of Background:

The workshop was attended by the Secretaries of Education and Skill Departments from the 6 STARS states; Himachal Pradesh, Kerala, Odisha, Rajasthan, Madhya Pradesh, Maharashtra, and Uttar Pradesh, as well as the State Project Directors of Samagra Shiksha, respective officers, and World Bank representatives.

Highlights:
- Strengthening Vocational Education and School-to-Work Transition is a fundamental component of the STARS programme.
- It focused on a discussion of the six STARS states and Uttar Pradesh's skill gap analysis, as well as the **convergence of vocational and skill**.
- The states' current performance and interventions were also discussed.
- A broad-based plan was presented, with a **focus on vocational education, industry partnerships, integrating vocational studies into the school curriculum**, and changing existing school curricula to match industry demands and prepare students for employment following class 12th.
- It includes a session with industry professionals who provided crucial insights into the skills needed in current industry scenarios.
- The session ended by repeating that now is the time to invest in vocational training and make it an aspiration for the country's youth.

STARS Project
- India has a large and diverse school education system that caters to more than 250 million students in 1.5 million schools across the country. However, despite the impressive achievements in expanding access and equity, the quality and governance of school education remain major challenges.
- To address the above issues, the **Ministry of Education has launched a centrally sponsored scheme called the Strengthening Teaching-Learning and Results for States (STARS) Project**, **with the support of the World Bank**.

Aim
- The STARS Project **aims to improve the quality and governance of school education in six Indian states** - Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan.
- These states have been selected based on their readiness and willingness to implement the project interventions.
- The project is to benefit about 10 million teachers and 250 million students from pre-primary to secondary levels.

Vision and Goals
- The STARS Project is aligned with the vision and goals of India's National Education Policy 2020, which envisages equitable and inclusive education for all.
- To support the implementation of various reform initiatives under the policy, such as;

- Strengthening early childhood education and foundational learning
- Facilitating school-to-work transition through vocational education
- Improving learning assessment mechanisms
- Supporting teacher development

Main Provisions

Strengthening the learning assessment system

- Strengthening the learning assessment system at the state and national levels to measure learning outcomes and use the data for evidence-based policy-making and planning.

Enhancing teacher development

- Enhancing teacher development and performance by strengthening teacher education institutions, introducing a competency-based assessment framework for teachers and principals, and providing continuous professional development opportunities for teachers.

Improving the delivery of education services

- Improving the delivery of education services by strengthening school management committees, developing school improvement plans, promoting school autonomy and accountability, and using technology for better monitoring and evaluation.

Promoting inclusion and innovation

- Promoting inclusion and innovation by supporting the implementation of the National Education Policy 2020, which envisages a holistic and multidisciplinary education system that caters to the diverse needs and aspirations of learners.
- The project supports innovative pedagogical approaches such as activity-based learning, experiential learning and blended learning.

Significances

- It will **improve the learning outcomes** of students across different stages of schooling, especially in foundational literacy and numeracy, which are crucial for further learning and development.
- It will address **the learning gaps and inequalities that have been exacerbated by the COVID-19 pandemic**, which disrupted the education of millions of children in India.
- It will **strengthen the capacity of teachers and school** leaders to deliver quality education that is aligned with the national curriculum framework and learning standards.

- It will **foster a culture of innovation and excellence in school education** by encouraging the use of technology, data and evidence for decision-making and problem-solving.
- It will **align the education system with the goals of the National Education Policy 2020**, which aims to transform India into a knowledge society and a global leader in education.

Challenges
- It will require effective coordination and collaboration among various stakeholders at different levels of governance, such as the central government, state governments, district administrations, local bodies, schools, teachers, parents and communities.
- It will require adequate financial and human resources to implement the various components of the project in a timely and efficient manner.
- It will require robust monitoring and evaluation mechanisms to track the progress and impact of the project on various indicators of quality and equity in education.
- It will require strong political commitment and public support to sustain the reforms and innovations introduced by the project in the long term.

Way forward
- To ensure that the project is implemented in a participatory and consultative manner, involving all relevant stakeholders in planning, execution and feedback processes.
- To ensure that the project is **aligned with the existing policies and programs of the central and state governments,** such as Samagra Shiksha Abhiyan, National Assessment Survey, National Initiative for School Heads' and Teachers' Holistic Advancement etc.
- To ensure that the project is responsive to the emerging needs and challenges of the education sector in India, such as digitalization, online learning, skill development etc.
- To ensure that the project is informed by best practices and lessons learned from other similar initiatives in India and abroad, such as Padhe Bharat Badhe Bharat, Pratham's Annual Status of Education Report etc.

DEPUTY CHIEF MINISTER

In News:

The post of Deputy Chief Minister is in the news after the result of the Karnataka State Assembly.

Analysis of Background:

Deputy Chief Minister

- The **post of Deputy Chief Minister in India is not a constitutional one**, but a political arrangement to appease allies or factions within a party.
- The Deputy CM is **equivalent to a Cabinet Minister in terms of rank and perks but does not have any specific financial or administrative powers.**
- The Deputy CM has to report to the Chief Minister and seek his or her approval for any decision related to his or her portfolio.
- The Deputy CM does not have access to the files or matters that are meant for the Chief Minister.

Appointment and removal

- The **appointment and removal of a deputy chief minister is entirely at the discretion of the chief minister**.
- The chief minister may appoint more than one deputy chief minister, as is the case in some states like Uttar Pradesh.
- The chief minister may also reshuffle or drop a deputy chief minister at any time, as per their political calculations.
- As of 22 May 2023, 11 out of the 28 states have deputy chief ministers.

Significance of the Post of Deputy Chief Minister

- The position of deputy chief minister is used to bring political stability and strength to a coalition government. It is also a way of rewarding loyal and influential leaders of the ruling party or alliance.
- The Deputy CM acts as the chief minister's deputy and assists them in the administration and governance of the state.
- In some cases, the Deputy CM may act as a bridge between the ruling party and its allies, or between different regions or communities within the state.
- The Deputy CM may be seen as a potential successor to the Chief Minister, or as a check and balance on his or her authority.
- The Deputy CM may have some influence on policy-making and governance, depending on his or her rapport with the Chief Minister and other ministers.
- The Deputy CM may also perform some of the functions of the chief minister in their absence, such as presiding over cabinet meetings, attending official functions, or representing the state in inter-state or national forums.

- However, the deputy chief minister does not have any constitutional authority to act on behalf of the chief minister or to issue any orders or directives without their consent.

Common challenges faced by Deputy Chief Ministers are:
- Lack of clarity and definition of their role and functions
- Potential conflict and rivalry with the Chief Minister or other Ministers
- Lack of autonomy and decision-making power
- Lack of public recognition and visibility
- Lack of accountability and transparency

To overcome these challenges, some possible steps that can be taken are:
- Establishing clear and written guidelines and norms for the appointment, role and functions of Deputy Chief Ministers.
- Ensuring regular and effective communication and coordination between the Chief Minister and the Deputy Chief Minister.
- Giving adequate representation and participation to Deputy Chief Ministers in key policy-making bodies and committees.
- Enhancing public awareness and understanding of the role and contributions of Deputy Chief Ministers.
- Strengthening mechanisms for monitoring and evaluating the performance and outcomes of Deputy Chief Ministers.

JAL JEEVAN MISSION

In News:

The Jal Jeevan Mission (JJM), launched by Prime Minister Narendra Modi in 2019, has achieved a remarkable milestone of providing 12 crores of tap water connections to rural households across India. This means that more than 60 crore people now have access to safe and clean drinking water at their homes.

Analysis of Background:
- The Jal Jeevan Mission aims **to provide tap water connections to all rural households by 2024**, with a special focus on the water-scarce and aspirational districts.
- The mission also **promotes water conservation and management practices**, such as rainwater harvesting, groundwater recharge, greywater reuse, and water quality monitoring.

- It is a **collaborative effort of the central and state governments**, local bodies, community organizations, NGOs, and other stakeholders.
- It follows a bottom-up approach, where the village panchayats and gram sabhas are empowered to plan, implement, operate, and maintain their water supply systems.
- The central government provides financial and technical assistance to the states, while the states provide matching funds and ensure the timely execution of the projects.
- Currently, 5 States (Goa, Telangana, Haryana, Gujarat and Punjab) and 3 UTs (Puducherry, D&D and D&NH and A&N Islands), have reported 100% coverage.

Jal Jeevan Mission
Har Ghar Jal
Launched on 15th August 2019

Aim
- To provide 55 litres of water per person per day to every rural household by 2024 through Functional Household Tap Connections (FHTC).

Implementation
- **Ministry of Jal Shakti:** Nodal Ministry
- **Paani Samitis:** Build, operate, manage, and maintain village water supplies.
  - **Members:** 10-15 (At least 50% Women)
- **Goa and Dadra & Nagar Haveli and Daman & Diu (D&NH and D&D)** are the first 'Har Ghar Jal' certified State and UT in the country respectively.

Funding Pattern
- Centrally Sponsored Scheme
  - **Centre:** Himalayan and North-Eastern States - 90:10
  - **Centre:** Other States - 50:50
  - **100%** by the Centre for Union Territories

Major Components
- Bottom-up Planning
- Women Empowerment
- Focus on Future Generation
- Skill Development & Employment Generation
- Greywater Management
- Source Sustainability

KUKI

In News:

The recent violence in Manipur has raised serious questions about the validity and effectiveness of the ceasefire pact signed between the government and some Kuki militant groups.

Analysis of Background:
- According to reports, militants belonging to the Kuki National Army (KNA) and Zomi Revolutionary Army (ZRA), who are part of the Suspension of Operations (SoO) agreement, participated in a rally on May 3 and attacked Meitei villages, killing several civilians.

- This has sparked outrage among various student organisations, who have demanded that the Centre should scrap the pact and confiscate the weapons of the Kuki rebels. They have also urged for legal action against the perpetrators of the violence.

Suspension of Operations (SoO) agreement

- The **SoO agreement was initiated in 2008 by the then UPA government, to resolve the long-standing issues of the Kuki-Chin-Mizo communities in Manipur.**
- The agreement covers 25 insurgent groups, who are supposed to stay in designated camps and refrain from any unlawful activities.
- There have been allegations that some of these groups have violated the terms of the pact and indulged in extortion, intimidation, and land grabbing.
- There have been doubts about the nationality of some of the rebel leaders, especially those who have links with Myanmar.
- The **Manipur government has recently decided to withdraw from the SoO agreement** with KNA and ZRA, citing security and development concerns. The chief minister has met with the Union home minister to discuss the matter and seek his intervention.

Kuki Tribe

- It is one of the **ethnic groups that inhabit the northeastern regions of India, Myanmar and Bangladesh**.
- They are mainly found in the states of Manipur and Mizoram in India, Chin State in Myanmar, and Chittagong Hill Tracts in Bangladesh.
- They are also known as Chin or Mizo people, and they share a common ancestry and culture.
- They are **part of the larger Zo people, along with the Chin and Mizo tribes.**
- The Kuki tribe has a rich and diverse history, culture and tradition that reflect their adaptation to the hilly and forested terrain they live in.
- They speak various dialects of the Chin-Kuki-Mizo language family, which belong to the Tibeto-Burman branch of the Sino-Tibetan languages.

Challenges

- The Kuki tribe has a long history of migration and settlement in different parts of South Asia.
- The Kuki tribe has faced many challenges and conflicts in their history, such as the Kuki Rebellion (1917-1919) against British rule, the Kuki-Naga clashes (1960s-1990s) over

land and identity issues, and the Kuki-Zomi ethnic violence (1997-1998) that resulted in displacement and loss of lives.

Political structure
- The Kuki tribe has a unique social and political structure that is based on clans, villages and chiefs.
- The clan is the basic unit of kinship and identity, and it is traced through the paternal line.
- The village is the primary unit of administration and governance, and it is headed by a hereditary chief who has executive, judicial and religious authority.
- The chief also owns all the land and resources of the village, and he distributes them among his subjects according to their needs and merits.

Living style
- The Kuki tribe follows a traditional way of life that is closely connected to nature and their environment.
- They practice jhum or shifting cultivation, where they clear patches of forest land by burning and growing crops such as rice, maize, millet, etc.
- They also hunt wild animals and collect forest products for their subsistence and trade.
- They keep domestic animals such as dogs, pigs, buffaloes, goats and poultry for food and ritual purposes.
- They live in bamboo houses that are built on stilts or platforms to protect them from floods and wild animals.

Culture
- The Kuki tribe has a vibrant culture that is expressed through their festivals, dances, music, art, crafts, folklore and literature.
- They celebrate various festivals throughout the year to mark important occasions such as harvests, seasons, births, deaths, marriages, etc.
- Some of the major festivals are Kut (post-harvest festival), Chavang Kut (autumn festival), Mim Kut (maize festival), etc.
- They perform various dances such as Lamkut (group dance), Chongloi (sword dance), Pheiphit (war dance), etc.
- They play musical instruments such as khuang (drum), gong (cymbal), tangkul (flute), etc.
- They produce art and crafts such as weaving, basketry, pottery, wood carving, etc.

- They have a rich oral tradition of folktales, legends, proverbs, riddles, songs, etc. that reflect their worldview and values.

Outside influence
- The Kuki tribe has also been influenced by external factors such as Christianity, education, modernization and globalization.
- Many Kukis have converted to Christianity since the arrival of missionaries in the late 19th century. Christianity has brought changes in their religious beliefs and practices, as well as their social norms and values.
- Education has opened up new opportunities for them to access higher learning and employment in various fields.
- Modernization has brought changes in their lifestyle and consumption patterns, such as using modern amenities and gadgets. Globalization has exposed them to new ideas and cultures from other parts of the world.

Social Structure
- The Kuki people have a hierarchical social structure based on clans and lineages. Each clan has its name and emblem and traces its origin to a common ancestor.
- The clans are further divided into sub-clans and lineages. The clan system regulates marriage alliances, inheritance rights and social obligations among the Kuki people.
- The Kuki society is also patriarchal and patrilineal, which means that descent and inheritance are traced through the male line. The eldest son inherits his father's property and status, while the youngest son stays with his parents and takes care of them.
- The Kuki villages are usually small and autonomous, each ruled by its chief or headman.

Religion
- The Kuki people have a varied religious backgrounds, as they have been influenced by different faiths over time. Traditionally, the Kuki people followed animism, which is a belief in the existence of spirits in nature and ancestors.
- They also practised rituals such as animal sacrifices, ancestor worship and festivals to appease their gods and spirits.
- With the arrival of Christian missionaries in the late 19th and early 20th centuries, many Kuki people converted to Christianity, especially Protestantism.
- Today, Christianity is the predominant religion among the Kuki people, with some significant minorities following animism or other faiths such as Judaism or Islam.

Challenges

Lack of recognition and representation

- Lack of recognition and representation in the political and administrative spheres.
- The Kuki tribe is divided into many sub-tribes, each with its dialect and identity. Some of these sub-tribes are recognized as scheduled tribes by the Indian government, while others are not.
- This creates a sense of marginalization and discrimination among the Kuki people, who often feel neglected and ignored by the state authorities.
- The Kuki tribe has been involved in various conflicts and movements for autonomy and self-determination, both within India and Myanmar.
- These conflicts have resulted in violence, displacement and human rights violations for the Kuki people, who have suffered from atrocities committed by both state and non-state actors.

Loss of their traditional culture and identity

- Another challenge faced by the Kuki tribe is the loss of their traditional culture and identity due to modernization and assimilation.
- The Kuki tribe has a distinctive way of life, based on their ancestral customs, beliefs and practices. They have a strong sense of community and kinship, which is reflected in their social organization, festivals and rituals.
- With the advent of education, urbanization and globalization, many Kuki people have migrated to cities and towns, where they have to adapt to new lifestyles and values.
- This has led to a gradual erosion of their cultural heritage and identity, as they face pressure to conform to the dominant norms and expectations of mainstream society.

Steps need to be taken

- The way forward for the Kuki tribe is to find a balance between preserving their culture and identity and embracing modernity and development.
- The Kuki tribe should strive to assert their rights and interests in the political and administrative domains, by seeking recognition, representation and empowerment.
- They should also engage in dialogue and cooperation with other ethnic groups, both within India and Myanmar, to resolve their conflicts peacefully and harmoniously.
- The Kuki tribe should celebrate and promote their culture and identity, by preserving their language, literature, art, music and folklore.

- They should also educate their younger generations about their history, traditions and values so that they can carry forward their legacy with pride and dignity.

iDRONE INITIATIVE

In News:

The Indian Council of Medical Research (ICMR) has successfully conducted a trial run of blood bag delivery under its iDrone initiative. The initiative aims to use drones for transporting blood and other medical supplies to remote and inaccessible areas of the country.

Analysis of Background:

The trial run was conducted on May 10, 2023, a drone carrying a blood bag weighing 500 grams flew for a distance of 12 kilometres and delivered it safely at the designated location. The drone then returned to the base station with another blood bag.

About iDrone:

- The **iDrone initiative is a collaborative effort between ICMR, the Ministry of Civil Aviation**, and the Directorate General of Civil Aviation.
- It is part of the larger Digital Sky Platform, which is a framework for regulating and enabling drone operations in India.

Objectives

To **address the challenges of blood transfusion services in rural and tribal areas**, where access to blood banks and transportation facilities is limited.

Significance of the Initiatives

- According to ICMR, India needs about 15 million units of blood annually, but only collects about 11.5 million units.
- The gap is more pronounced in states with low human development indices, such as Bihar, Jharkhand, Chhattisgarh, and Madhya Pradesh.
- The **use of drones for blood delivery** can potentially save lives by reducing the time and cost of transportation, as well as ensuring the quality and safety of blood.
- Drones can also be **used for delivering other essential medical supplies**, such as vaccines, medicines, organs, and diagnostic samples.
- The initiative also aims to reduce the wastage of blood and enhance its quality by ensuring timely delivery and proper storage.

Drone Technology in the Healthcare Sector

- Drone technology has been rapidly evolving in recent years, offering new possibilities for various industries and sectors.
- One of the most promising applications of drones is in the healthcare sector, where they can provide faster, cheaper and more efficient delivery of medical supplies, vaccines, blood samples and organs.
- Drones can also assist in remote diagnosis, telemedicine, disaster relief and emergency response.

Challenges

Regulatory and legal issues

- There is a **lack of clear and consistent regulations and standards for drone operations** in different countries and regions.
- This creates uncertainty and confusion for drone operators, healthcare providers and authorities.
- There are ethical and privacy concerns regarding the use of drones for collecting and transmitting sensitive health data.

Technical and operational issues

- There are still limitations in the performance, reliability and safety of drones, especially in complex and dynamic environments.
- Drones need to be able to navigate autonomously, avoid obstacles and collisions, communicate securely and efficiently, and cope with weather conditions and interference.
- Drones need to be integrated with existing healthcare systems and infrastructure, such as hospitals, clinics and pharmacies.

Social and cultural issues

- There is a **lack of awareness and acceptance of drone technology** among the general public and some healthcare professionals.
- Some people may perceive drones as intrusive, noisy or dangerous, and may resist or reject their use.
- There may be cultural and religious sensitivities regarding the delivery of certain medical items or services by drones.

Steps need to be taken:

- **Developing and harmonizing regulations** and standards for drone operations in healthcare settings, taking into account the specific needs and characteristics of different regions and contexts.
- **Enhancing the technical and operational capabilities** of drones through research and innovation, testing and evaluation, training and education, and quality assurance and control.
- **Increasing the social and cultural acceptance** of drone technology through public engagement, awareness campaigns, education programs, feedback mechanisms and ethical guidelines.
- **Demonstrating the value and impact** of drone technology in healthcare through pilot projects, case studies, impact assessments and best practices.

IR/IO

NATO PLUS

In News:

The US Congressional Committee on the Strategic Competition between the US and the Chinese Communist Party has recommended including India in Nato Plus.

Analysis of Background:

What is Nato Plus?

- While the North Atlantic Treaty Organization, or Nato, is a 31-member alliance, with 29 European nations, and two American, the **Nato Plus, currently Nato Plus 5, is a security arrangement that brings together Nato and five aligned nations — Australia, New Zealand, Japan, Israel, and South Korea — to boost global defence cooperation.**

What is Nato Plus?
The Nato Plus 5 is a security arrangement of 31 member countries with five aligned nations — Australia, New Zealand, Japan, Israel and South Korea — to address the rise of China. It was formalised in 2019

The committee's recommendation
The Select Committee has said that including India will build upon US-India ties to strengthen global security and deter the aggression of the CCP across the Indo-Pacific region

Significance

For the US

Winning the strategic competition with the Chinese Communist Party and ensuring the security of Taiwan demands the United States strengthen ties with India.

For India

Bringing India on board **would facilitate seamless intelligence sharing** between these countries and **India would access the latest military technology** without much of a time lag.

About US Congressional Committee on the Strategic Competition
- The panel, **formed in January,** has no authority to draft or amend laws.
- It is tasked with making recommendations to legislative committees before the end of the year.
- Its members – 13 Republican and 11 Democratic representatives – sit on various House committees with jurisdiction over the recommendations, including armed services and foreign affairs.

UNHRC

In News:
- The United Nation's top human rights body adopted a resolution that drew attention to mounting civilian deaths and rights abuses in Sudan since a bloody conflict erupted between the African country's two top generals last month.
- **Arab and African nations - including Sudan - featured heavily among the 15 countries that rejected the U.N. move, citing it as a potential barrier to ongoing peace talks.**

Analysis of Background:
About UNHRC
- The United Nations Human Rights Council (UNHRC) is a United Nations body whose **mission is to promote and protect human rights around the world.**
- The Council has **47 members elected for staggered three-year terms on a regional group basis.**
- The headquarters of the Council are at the **United Nations Office at Geneva in Switzerland.**
- The Council investigates allegations of breaches of human rights in United Nations member states and addresses thematic human rights issues like freedom of association and assembly, freedom of expression, freedom of belief and religion, women's rights, LGBT rights, and the rights of racial and ethnic minorities.

History

- The Council was **established by the United Nations General Assembly on 15 March 2006** to **replace the United Nations Commission on Human Rights** (CHR).
- The Council works closely with the Office of the High Commissioner for Human Rights (OHCHR) and engages the United Nations special procedures.
- The Council has been **strongly criticized for including member countries that engage in human rights abuses.**

Structure

- The members of the General Assembly elect the members who occupy 47 seats of the Human Rights Council.
- The term of each seat is three years, and no member may occupy a seat for more than two consecutive terms.
- The previous CHR had a membership of 53 elected by the Economic and Social Council (ECOSOC) through a majority of those present and voting.
- Members are eligible for re-election for one additional term, after which they must relinquish their seat.
- The seats are distributed along the following lines:
  - o 13 for the African Group
  - o 13 for the Asia-Pacific Group
  - o 6 for the Eastern European Group
  - o 8 for the Latin American and Caribbean Group
  - o 7 for the Western European and Others Group

Sessions

- The UNHRC **holds regular sessions three times a year**, in March, June, and September.
- The UNHRC can decide at any time to hold a special session to address human rights violations and emergencies, at the request of one-third of the member states.

About Special rapporteur (Independent Expert)

- They are titles given to independent human rights experts whose expertise is called upon by the United Nations to report or advise on human rights from a thematic or country-specific perspective.
- Their work falls within the scope of "special procedure" mechanisms under the United Nations Human Rights Council.

Suspensions

- The General Assembly can suspend the rights and privileges of any Council member that it decides has persistently committed gross and systematic violations of human rights during its term of membership.
- The suspension process requires a two-thirds majority vote by the General Assembly
- General Assembly suspended Russia from the council due to the gross and systematic violations of human rights committed during the 2022 Russian invasion of Ukraine.
- **Russia was the first member of the UN Security Council to be removed from any United Nations body.**

QUAD SUMMIT 2023

In News:

US President, Prime Minister of Australia, Prime Minister of Japan, and Prime Minister of India met in Hiroshima for the fifth convening of the Quad Leaders' Summit.

Analysis of Background:

Highlights of Quad Leaders' Summit

- The Quad is committed to supporting the region's development, stability, and prosperity to benefit the people of the Indo-Pacific.
- The leaders' ambitious efforts include major initiatives on infrastructure, maritime security, public-private partnership, climate, health, critical and emerging technologies, and space.

Infrastructure

- The leaders welcome the launch of three major infrastructure initiatives to provide training, capacity, and resources to improve ongoing and future infrastructure projects.
- **Quad Infrastructure Fellowship:** The program will **provide at least 1,800 scholarships, work exchanges, and other executive programs to government officials on best practices** surrounding the design, delivery, and management of high-standard infrastructure projects.
- **Quad Partnership for Cable Connectivity and Resilience:** Undersea cables are a critical component of communications infrastructure and serve as the foundation for internet connectivity. It will **bring together public and private sector actors to address gaps in the infrastructure and coordinate on future builds.**

Investment

- Fostering investment will aid economic development in the region now and for the future.

- **Quad Investors Network (QUIN):** The QUIN, a network of investors and executives across Quad countries that **seeks to foster co-investment in critical technologies**, was officially launched.
- **Export Credit Agencies MOC:** Quad countries **seek to establish a Memorandum of Cooperation (MOC) between the export credit agencies of the Quad governments** aims to strengthen collaboration for the promotion of trade, financing of trade-enabling projects, economic development, and knowledge-sharing with respect to the export of goods and services.

Critical And Emerging Technology
- As technology evolves, the Quad is committed to ensuring that it is leading the innovations of the future and that the benefits of new and emerging technologies are shared throughout the region.
- **Commercial Open RAN Deployment in Palau:** The Quad will partner with the Government of Palau and the Palau National Communications Corporation (PNCC) to design, implement, and operationalize the deployment of Open RAN capabilities.
- **Open RAN Security Report:** The Quad welcomed a new **in-depth report outlining cybersecurity considerations associated with using Open RAN as an approach to developing network architecture.**
- **Advancing Innovation to Empower Nextgen Agriculture (AI-ENGAGE):** Quad science agencies from the countries are identifying joint funding opportunities to encourage collaborative research between Quad partners on **how to leverage the latest science and technology advances to benefit farmers.**
- **Quad Technology Business and Investment Forum:** The forum laid the **foundation for enhanced private-public collaboration** across our governments, industry, investors, academia, and civil society on critical and emerging technologies.

Maritime
- The Quad has made significant steps in enhancing maritime domain awareness.
- **Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA):** IPMDA is now **bringing cutting-edge satellite-based radio frequency (RF) data to partners around the region,** enhancing their maritime domain awareness, and equipping them to better monitor their waters.

Education
- The Quad is committed to fostering future STEM innovators to build the foundations of tomorrow's successes today.

- **Quad STEM Fellowship:**
  - Announced in 2021, the Quad Fellowship **sponsors 100 American, Australian, Indian, and Japanese students to study in the United States each year for graduate studies in science, technology, engineering, and mathematics (STEM) fields.**
  - Quad Fellowship is expected to expand to include educational and professional opportunities in Australia, India, and Japan.

Climate And Clean Energy

- The Quad aims to help countries mitigate the effects of climate change and strengthen their climate resilience.
- **Clean Energy Supply Chain Principles and Diversification Program:** program will focus on the supply chains for solar photovoltaics (PV), hydrogen electrolyzer, and electric vehicle battery technologies.
- **Climate Information Services Initiative (CIS):** commits to building capacity, cooperation, and information-sharing mechanisms for climate data in the Indo-Pacific.
- **Quad Indo-Pacific Oceans Research Alliance (QIPORA):** will expand ocean research and cooperation between scientists and build science and technology pipelines to enhance the resilience of Indo-Pacific nations.

Health

- As the world continues to recover from COVID-19, the Quad recognizes the importance of strengthening health security and the Indo-Pacific's ability to handle future health crises.
- **Quad Health Security Partnership:** Launched at the 2023 Quad Leaders' Summit, the first activities will be a package of concrete initiatives to strengthen prevention, detection, and response to outbreaks of disease with epidemic or pandemic potential.

Technology Standards

- The Quad leaders are committed to establishing shared principles and standards for the benefit of our citizens as technologies continue to develop and evolve.
  - **Joint Principles on Critical and Emerging Technology Standards**
  - **The Quad International Standards Cooperation Network (Q-ISCN)**

Cyber

- From cybersecurity to critical infrastructure to software, the Quad is committed to advancing a secure and resilient cyber ecosystem.
- **Cyber Challenge:** held for the first time this year to promote cyber awareness and empower participants across the Indo-Pacific to protect themselves online.
- **Critical Infrastructure Principles:** designed to strengthen the Indo-Pacific's defenses against cyber threats to critical infrastructure and services.
- **Software Security Principles:** These joint principles help ensure that Quad governments use our purchasing power to drive the development of safer and more secure software.

Space
- Quad countries are increasing cooperation on civil and commercial activities, including improving information sharing on climate and space situational awareness data.
- **Extreme Precipitation Events:** promote the use of earth observation data and other space-based tools to monitor and respond to climate impacts and aid emerging space faring Indo-Pacific nations in accessing and using these resources.
- **Commercial Space Cooperation:** Quad partners commit to strengthen cooperation on commercial space activities and will convene a commercial space business forum in 2023.
- **Space Situational Awareness:** The Quad will cooperate in leveraging space situational awareness and space traffic coordination capabilities for spaceflight safety and sustainability of the outer space environment.

ASEAN-INDIA MARITIME EXERCISE

In News:

In a step further in the expanding India-ASEAN (Association of South East Asian Nations) military cooperation, the **maiden ASEAN-India Maritime Exercise (AIME) is set to begin**, with war games in South China Sea.

Analysis of Background:

The Navy chief is in Singapore for the exercise as well as to take part in the **International Maritime Defence Exhibition (IMDEX-23) and International Maritime Security Conference (IMSC)** being hosted by Singapore.

AIME-2023 will provide an opportunity for Indian Navy and ASEAN navies to work together closely and conduct seamless operations in the maritime domain.

Recent developments in India-ASEAN relations

- The **maiden India-ASEAN defence ministers' meeting was held in 2022** at Siem Reap, Cambodia to commemorate the **30th anniversary of India-ASEAN relations.**
- The year **2022 has also been designated as the 'ASEAN-India Friendship Year'.**
- The India-ASEAN relationship was elevated to a **Comprehensive Strategic Partnership** during the ASEAN-India Summit held in Cambodia in 2022.
- At the special two-day **ASEAN-India Foreign Ministers' Meeting** (SAIFMM), the leaders agreed to cooperate in building more robust air and maritime connectivity along with working toward enhancing cooperation in the field of defence.
- **ADMM-Plus meeting** also took place. The ADMM-Plus is a platform for ASEAN and its eight Dialogue Partners - Australia, China, India, Japan, New Zealand, Republic of Korea, Russia and the United States (collectively referred to as the "Plus Countries") - to strengthen security and defence cooperation for peace, stability, and development in the region.

INTERNATIONAL CIVIL AVIATION ORGANISATION'S CORSIA

In News:

India will **start participating in the International Civil Aviation Organisation's (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and the Long-Term Aspirational Goals (LTAG) from 2027**.

Analysis of Background:

- The ICAO has been **tasked to reduce carbon emissions from international civil aviation as one of its focus areas.**

- In order to mitigate carbon emissions from aviation and its impact on climate change, the global body has adopted several key aspirational goals.
- Among them are a **two per cent annual fuel efficiency improvement through 2050, carbon neutral growth and net zero by 2050**. The ICAO has clubbed them under CORSIA and LTAG.
- The former is to be implemented in three phases.
- Financial implications due to offsetting have to be borne by individual airlines, depending upon their international operations.
- CORSIA is applicable only to flights originating from one country to another.
- India committed to net zero by 2070 at the 26th Conference of Parties (COP26) to the United Nations Framework Convention on Climate Change.

What is CORSIA?
- CORSIA is the **first global market-based measure for any sector and represents a cooperative approach that moves away from a "patchwork" of national or regional regulatory initiatives**.
- It offers a harmonized way to reduce emissions from international aviation, minimizing market distortion, while respecting the special circumstances and respective capabilities of ICAO Member States.
- CORSIA **complements the other elements of the basket of measures by offsetting the amount of CO2 emissions that cannot be reduced through the use of technological improvements, operational improvements, and sustainable aviation fuels with emissions units from the carbon market.**

Participants
- CORSIA is **implemented in three phases**: a pilot phase (2021-2023), a first phase (2024-2026), and a second phase (2027-2035).
- For the first two phases (2021-2026), participation is voluntary.
- From 2027 onwards, participation will be determined based on 2018 RTK data.

About ICAO
- The International Civil Aviation Organization is a **specialized agency of the United Nations**.
- ICAO **headquarters are located in the Quartier International of Montreal, Quebec, Canada.**
- It was formed in 1947.

- ICAO is funded and directed by 193 national governments to support their diplomacy and cooperation in air transport as signatory states to **the Chicago Convention (1944).**

Core functions

- Its core function is to **maintain an administrative and expert Secretariat of international civil servants and to research new air transport policy and standardization innovations**.
- ICAO also serves as a **critical coordination platform in civil aviation** through its seven Regional Offices.
- It also conducts educational outreach, develops coalitions, and conducts auditing, training, and capacity building activities worldwide per the needs and priorities governments identify and formalize.
- The **stipulations ICAO standards contain never supersede the primacy of national regulatory requirements**. It is always the local, national regulations which are enforced in, and by, sovereign states, and which must be legally adhered to by air operators making use of applicable airspace and airports.
- ICAO is therefore not an international aviation regulator, just as INTERPOL is not an international police force.

Vision

Achieve the sustainable growth of the global civil aviation system.

Mission

- To serve as the global forum of States for international civil aviation.
- ICAO develops policies and Standards, undertakes compliance audits, performs studies and analyses, provides assistance and builds aviation capacity through many other activities and the cooperation of its Member States and stakeholders.

Strategic Objectives

Safety

- Enhance global civil aviation safety.
- This Strategic Objective is focused primarily on the State's regulatory oversight capabilities.

Air Navigation Capacity and Efficiency

- Although functionally and organizationally interdependent with Safety, this Strategic Objective is focused primarily on upgrading the air navigation and aerodrome

infrastructure and developing new procedures to optimize aviation system performance.

Security & Facilitation
- This Strategic Objective reflects the need for ICAO's leadership in aviation security, facilitation and related border security matters.

Economic Development of Air Transport
- This Strategic Objective reflects the need for ICAO's leadership in harmonizing the air transport framework focused on economic policies and supporting activities.

Environmental Protection
- This Strategic Objective fosters ICAO's leadership in all aviation-related environmental activities and is consistent with the ICAO and UN system environmental protection policies and practices.

International Civil Aviation Day – 7 December
- International Civil Aviation Day was **established in 1994 as part of ICAO's 50th anniversary activities.**
- In 1996, United Nations General Assembly officially recognized 7 December as International Civil Aviation Day in the UN system.
- The purpose of International Civil Aviation Day is to help generate and reinforce worldwide awareness of the importance of international civil aviation to the social and economic development of States, and of the unique role of ICAO in helping States to cooperate and realize a truly global rapid transit network at the service of all mankind.

International Civil Aviation Day Theme
- Every five years, coinciding with ICAO anniversaries, the ICAO Council establishes a special anniversary theme for International Civil Aviation Day.
- Between these anniversary years, Council representatives select a single theme for the full four-year intervening period.
- Until 2023, the Council has decided that the theme will be: **"Advancing Innovation for Global Aviation Development".**

In News:

Group of Seven **advanced nations should adopt "risk-based" regulation on artificial intelligence**, their digital ministers agreed.

Analysis of Background:

Highlights of the meeting

- Ahead of Europe's AI Act that could establish a benchmark for how national governments regulate artificial intelligence tools, G7 has said that a **"risk-based" regulation of AI** could be a potential first step towards creating a template to regulate emerging tools (Open AI's ChatGPT and Google's Bard).
- Such regulation should "**preserve an open and enabling environment" for the development of AI technologies and be based on democratic values**, G7 ministers said.
- The agreement sets a landmark for how major countries govern AI amid privacy concerns and security risks.
- They agreed to **convene future G7 discussions on generative AI** which could include topics such as governance, how to safeguard intellectual property rights including copyright, promote transparency, address disinformation" including information manipulation by foreign forces.
- Besides intellectual property concerns, G7 countries recognised security risks.

Risk-based approach

- It could involve **graded regulation**.
- For example: a **lesser compliance burden on developers or users** of AI tool deployed in areas such as the word processing business or generating music, as compared to the regulatory supervision on, say, a tool aiding doctors in medical diagnosis.

Global policy responses to emerging tools

EU

- **EU** has taken a predictably tough stance, with the proposed AI Act segregating artificial intelligence by use-case scenarios based broadly on the degree of invasiveness and risk.
- Italy has become the first major Western country to ban ChatGPT out of concerns over privacy.
- EU had taken steps to regulate AI back in 2018, and the AI Act due next year is a keenly awaited document.

The UK

- It is on the other end of the spectrum, with a decidedly **'light-touch' approach** that aims to foster, and not stifle, innovation in this nascent field.

Japan

- Japan too has taken an **accommodative approach** to AI developers.

China

- It has been **developing its own regulatory regime**.
- The country's federal Internet regulator put out a **20-point draft to regulate generative AI services**, including mandates to ensure accuracy and privacy, prevent discrimination and guarantee protection of intellectual property rights.

India

- It has said that it is **not considering any law to regulate the artificial intelligence sector**.
- Although AI "had ethical concerns and associated risks", it had proven to be an enabler of the digital and innovation ecosystem.

US

- Department of Commerce flagged the possibility of **floating an auditing system to assess whether AI systems include harmful bias or distort communications to spread misinformation or disinformation.**
- **White House Blueprint**: published by the White House Office of Science and Technology Policy (OSTP) in 2022, proposing a nonbinding roadmap for the responsible use of AI. The Blueprint spelt out five core principles:
    - o protecting users from unsafe or ineffective systems;
    - o protecting users against discrimination by algorithms
    - o users being protected against abusive data practices via built-in protections, and having agency over the use of their data;
    - o users knowing that an automated system is being used, and comprehending how and why it contributes to outcomes that impact them; and
    - o users being able to opt out, and have access to a person who can quickly consider and remedy problems.

INDIA UAE BILATERAL TRADE

In News:

On the occasion of the **first anniversary of the implementation of the India-UAE Comprehensive Economic Partnership Agreement** (CEPA), Commerce Secretary talked about CEPA's role as a growth engine for India-UAE bilateral trade over the past 11 months.

Analysis of Background:

What is CEPA?

- CEPA is a full and deep Agreement signed in February 2022, during a virtual summit between the Prime Minister of India and President of the UAE. CEPA entered into force from 01 May 2022.
- Under the India-UAE CEPA in the Goods Domain, **the UAE eliminated duties on 97.4% of its tariff lines corresponding to 99% of imports from India**.
- India has obtained immediate duty elimination on over 80% of its tariff lines corresponding to 90% of India's exports in value terms.
- Most of these tariff lines correspond to the labour-intensive industries/sectors such as oil seeds & oils, beverages, cotton, fish & fish products, textiles, clothing, gems and jewellery, leather, footwear, pharmaceuticals and many engineering products.
- In the Services Domain, broader and deeper commitments have been taken across all the sectors and modes of supply. **Out of the 160 services subsectors, India has offered 100 sub-sectors to the UAE and the UAE has offered 111 sub-sectors to India.**

Contribution to trade

- The Bilateral Trade between India and the UAE has **touched historic highs during FY 2022-23**.
- Trade has **increased from US$ 72.9 billion (Apr 21-Mar 2022) to US$ 84.5 billion** (Apr 22-Mar 2023) registering a year-on-year increase of 16%.
- **During the CEPA Implementation period** (from May 22 to Mar 23), bilateral trade increased from US$ 67.5 billion (May 21-Mar 2022) to US$ 76.9 billion (May 22-Mar 2023) – **an annual increase of 14%.**
- During April-March period, Indian exports to the UAE increased from US$ 28 bn to US$ 31.3 bn; an increase of around US$ 3.3 billion; or **8% year-on-year growth in percentage terms**.
- During the CEPA Implementation period, India's exports to the UAE increased from 26.2 billion (May 21 – March 22) to 28.5 billion (May 22 – March 23); an **5% y-o-y growth**.

- India's Imports from the UAE have grown to USD 53.2 billion (an annual increase of 18.8%) during Apr 22 to Mar 23. Non-oil imports during the same period grew by 4.1%.
- Some of the key sectors, including **labour-intensive sectors have witnessed significant export growth** on account of the CEPA.

More on details:
- **India and UAE have shared trade links through the centuries**.
- The trade, which was dominated by traditional items such as dates, pearl and fishes, underwent a sharp change after the discovery of oil in UAE (oil exports begun from Abu Dhabi in 1962).
- With the emergence of UAE as a unified entity in 1971, exports from India started growing gradually over the years.
- The real impetus, however, started after Dubai positioned itself as a regional trading hub by early 1990s and about the same time, the economic liberalization process started in India.
- UAE was **India's third largest trading partner** for the year 2021-22 after US and China.
- Moreover, UAE is the **second largest export destination** of India (after US) with an amount of over US$ 28 billion for the year 2021-22.
- For UAE, India is the **second largest trading partner** for the year 2021 with an amount of around US$ 45 billion (non-oil trade).

India's Major Exports and Imports to the UAE
- India's major export items to the UAE are: Precious Metals, Stones, Gems & Jewellery, Minerals & Refined Petroleum Products, Food Items (Cereals, Sugar, Fruits & Vegetables, Tea, Meat, and Seafood), Textiles (Garments, Apparel, Synthetic fibre, Cotton, Yarn) and Engineering & Machinery Products and Chemicals.
- India's major import items from the UAE are: Petroleum and Petroleum Products, Precious Metals, Stones, Gems & Jewellery, Minerals, Chemicals, Wood & Wood Products.

Investments
- The UAE's investment in India is estimated to be around US $ 20-21 billion of which US 15.18 billion is in the form of FDI while the remaining is portfolio investment.
- **UAE is the 7th biggest investor in India in terms of FDI.**

G7 2023 HIROSHIMA SUMMIT

In News:

- The **Leaders of the Group of Seven (G7), met in Hiroshima for annual Summit** more united than ever in our determination to meet the global challenges of this moment and set the course for a better future.
- Invitees were Australia, Brazil, Comoros, Cook Islands, India, Indonesia, South Korea, Ukraine, Vietnam, International Energy Agency, International Monetary Fund, OECD, United Nations, World Bank, World Health Organization and World Trade Organization.

Analysis of Background:

Highlights of the Summit

Ukraine

- **G7 is taking concrete steps to** support Ukraine for as long as it takes in the face of Russia's illegal war of aggression.
- **The United States, Canada and the United Kingdom issued fresh sanctions on Russia on Friday over its invasion of Ukraine.**

Disarmament and Non-proliferation

- They expressed commitment to achieving a world without nuclear weapons with undiminished security for all, through taking a realistic, pragmatic, and responsible approach.

Indo-Pacific

- They reiterated the importance of a free and open Indo-Pacific, which is inclusive, prosperous, secure, based on the rule of law, and that protects shared principles including sovereignty, territorial integrity, peaceful resolution of disputes, and fundamental freedoms and human rights.

Global Economy, Finance and Sustainable Development

- G7 is committed to a stability- and growth-oriented macroeconomic policy mix that supports medium-term fiscal sustainability and price stability.
- They recognize that achieving the sustainable development goals by 2030, reducing poverty, responding to global challenges including the climate crisis, and addressing debt vulnerabilities in low and middle-income countries are urgent, interrelated and mutually reinforcing.
- G7 reiterated the urgency of addressing debt vulnerabilities and fully support the G20's effort to improve the implementation of the Common Framework for Debt Treatments

beyond the Debt Service Suspension Initiative (DSSI) in a predictable, timely, orderly and coordinated manner.

Climate Change

- The G7 listed a set of milestones that need to be achieved for a realistic chance of containing the global rise in temperatures to within 1.5 degree Celsius.
- The **G7 stressed on the need for a global peak in emissions by 2025.**
- The G7 claimed that their emissions had already "peaked", and asked all "major economies" to ensure that their individual emissions do not continue to rise beyond 2025.
- The G7 **reiterated its commitment to turn net-zero by 2050**, and asked all 'major economies' to attain net-zero status by that year and to come up with detailed road maps to reach the target.
- The G7 countries **put no deadline to ending the use of fossil fuels**, only saying that they were committed to accelerating the phase-out of "unabated fossil fuels" in line with 1.5 degree Celsius trajectories.
- They agreed to preserve the planet by accelerating the **decarbonization of energy sector** and the deployment of renewables, end plastic pollution and protect the oceans.
- They agreed to deepen cooperation through **Just Energy Transition Partnerships** (JETPs), the Climate Club and new Country Packages for Forest, Nature and Climate.
- They urge Multilateral Development Banks to **commit to ambitious adaptation finance targets, announcing revised and enhanced 2025 projections, and call on non-G7 countries to enhance provision and mobilization including private finance for adaptation**.

Environment

- They will increase domestic and international environmentally-sound, sustainable and efficient **recovery and recycling of critical minerals** and raw materials and other applicable materials while increasing circularity along the supply chains.
- They will **identify incentives, including subsidies, harmful to biodiversity by 2025**, and redirect or eliminate them while scaling up positive incentives for the conservation and sustainable use of biodiversity by 2030 at the latest, taking initial steps without delay.

Energy

- They invited the **IEA to make recommendations** by the end of this year on options how to diversify the supplies of energy and critical minerals as well as clean energy manufacturing.
- They will enhance **efforts to develop the rule-based, transparent global market and supply chains for low carbon and renewable hydrogen** based on reliable international standards and certification schemes adhering to environmental and social standards.
- They will work towards **ending the construction of new unabated coal fired power generation** as one of the primary actions to be taken in line with the IEA net zero by 2050 scenario.
- They committed to **maximizing the use of existing reactors** safely, securely, and efficiently, including by advancing their safe long-term operation, in addressing the current energy crisis.
- G7 will continue to work with international partners to realize a clean energy economy through concrete actions as laid out in the Clean Energy Economy Action Plan.

Economic Resilience and Economic Security

- They will continue to foster a strong and resilient global economic recovery, maintain financial stability, and promote jobs and sustainable growth.

Trade

- They underscored the importance of **working towards WTO reform**, including by conducting discussions with the view to having a fully and well-functioning dispute settlement system accessible to all Members by 2024 and by reinforcing deliberation to respond to global trade policy challenges.

Food Security

- They launched the **Hiroshima Action Statement for Resilient Global Food Security** with partner countries to address needs today and into the future.

Health

- They agreed to invest in global health through vaccine manufacturing capacity worldwide, the Pandemic Fund, the future international agreement for pandemic prevention, preparedness and response, and efforts to achieve universal health coverage (UHC).

Labor

- They emphasized the **importance of investment in human capital to ensure a just transition**, in response to structural changes such as digital and green transformations as well as demographic changes including societies that are ageing, in part due to declining birth rates.
- They endorsed the Action Plan for Promoting Career Development and Greater Resilience to Structural Changes developed by Labor and Employment Ministers.

Education

- They committed to making progress for **ensuring inclusive and equitable quality education, including vocational education, and promote lifelong learning opportunities for all to build resilient, just and prospering societies.**

Digital

- As the pace of technological evolution accelerates, G7 affirmed the importance to address common governance challenges and to identify potential gaps and fragmentation in global technology governance.

Science and Technology

- They decided to **advance international discussions on inclusive artificial intelligence** (AI) governance and interoperability to achieve the common vision and goal of trustworthy AI.

Human Rights, Refugees, Migration, Democracy

- They agreed to cooperate on international migration and strengthen common effort to fight the trafficking and smuggling of human beings and promoting universal human rights, gender equality and human dignity.
- They reiterated to work with international partners to achieve a world that is human-centered, inclusive and resilient, leaving no one behind.

Countering Terrorism, Violent Extremism and Transnational Organized Crime / Upholding the Rule of Law / Anti-Corruption

- G7 reiterated strong commitment to working together with all relevant actors to counter all forms of terrorism and violent extremism, both online and offline, as well as transnational organized crime as well as money laundering and terrorist financing in a unified, coordinated, inclusive, transparent and human-rights-based, gender-responsive manner.

Regional Affairs

- G7 stands **prepared to build constructive and stable relations with China**, recognizing the importance of engaging candidly with and expressing their concerns directly to China.

- They strongly condemned North Korea's unprecedented number of unlawful ballistic missile launches, each of which violated multiple UN Security Council Resolutions (UNSCRs).

- They called on the Taliban to uphold its counterterrorism commitments and to ensure the territory of Afghanistan cannot be used to threaten or attack any country, to plan or finance terrorist acts, or to shelter and train terrorists.

- They reiterated their clear determination that Iran must never develop a nuclear weapon.

- They called on Israelis and Palestinians to take steps to build trust toward the realization of a two-state solution.

- They remain firmly committed to an inclusive, UN-facilitated political process consistent with UNSCR 2254 in Syria.

GENERAL STUDIES - 3

ECONOMY

GREEN DEPOSITS

In News:

Recently, the Reserve Bank of India (RBI) came up with a regulatory framework for banks to accept green deposits from customers.

Analysis of Background:

Under the new framework, **banks that accept green deposits will have to disclose more information on how they invest these deposits.**

What are green deposits?

- Green deposits are not very different from the regular deposits that banks accept from their customers.

- The only major difference is that banks promise to earmark the money that they receive as green deposits towards environment-friendly projects.

- For example, a bank may promise that green deposits will be used towards financing renewable energy projects that fight climate change.

- A green deposit is just one product in a wide array of other financial products such as green bonds that help investors put money into environmentally sustainable projects.

What does the RBI's regulatory framework say?

- The RBI's framework for the acceptance of green deposits **lays down certain conditions that banks must fulfill to accept green deposits from customers**.

- Firstly, banks will have to come up with a set of rules or policies approved by their respective Boards that need to be followed while investing green deposits from customers. These rules **need to be made public on the banks' websites** and **banks will have to disclose regular information about the amount of green deposits received**, how these deposits were allocated towards various green projects and the impact of such investments on the environment.

- A third party **will have to verify the claims made by banks regarding the projects in which the banks invest their green deposits** as well as the sustainability credentials of these business projects.

- The RBI has come up with a list of sectors that can be **classified as sustainable and thus eligible to receive green deposits.**

- These **include renewable energy, waste management, clean transportation, energy efficiency, and afforestation**.

- Banks will be **barred from investing green deposits in business projects involving fossil fuels, nuclear power, tobacco, etc**.

- The new rules are aimed at preventing greenwashing, which refers to making misleading claims about the positive environmental impact of an activity. For example, a bank may advertise that their green deposits will have a huge positive impact on the environment, while the actual impact may be minimal.

Will green deposits help depositors/investors and the environment?

- Depositors who care about the environment **may get some satisfaction from investing their money in environmentally sustainable investment products.**

- However, there are challenges, **for the range of projects in which green funds can be invested by the bank is limited by design.**

- When it **comes to protecting the environment, green investing enthusiasts** believe that putting money into green projects may be one of the best ways to help the environment.

- Critics, however, argue that **green investment products are often just a way to make investors feel good about themselves and that these investments don't really do much good to the environment.**

In News:

> The government proposed changes to the Angel Tax.

Analysis of Background:

What is Angel Tax?

- Angel tax is a term used to refer to the **income tax payable on capital raised by unlisted companies via issue of shares where the share price is seen in excess of the fair market value of the shares sold**.
- The excess realization is treated as income and taxed accordingly.
- The **tax was introduced in the 2012** Union Budget by then finance minister Pranab Mukherjee to arrest the laundering of funds. It has come to be called **angel tax since it largely impacts angel investments in startups.**
- Angel tax essentially derives its **genesis from section 56(2)(viib) of the Income Tax Act, 1961.** The finance act, 2012 introduced section 56(2)(viib) in the IT act which taxes any investment, received by any unlisted Indian company, valued above the fair market value by treating it as income. The investment in excess of fair value is characterised as **'Income from other sources' and the tax imposed on it is known as Angel Tax since it largely affects angel investors investing in startups.**

Who Is an Angel Investor?

- An angel investor is an individual with **a high net worth willing to provide financial backing** for small startups and entrepreneurs.
- Angel investors give financial assistance **in exchange for ownership equity in the company.**
- These investors provide more advantageous terms as compared to other lenders.
- **Angel investors foster** new startup ideas which would ultimately show good economic growth

Which investments fall under the ambit of Angel Tax?

- Angel tax is imposed only on investments made by a resident investor. It should be noted that angel tax is not applicable in case the investments are made by any non-resident or venture capital funds

Angel Tax Exemption

- Allaying the concerns of the startup community, the government has exempted investments made by domestic investors in companies approved by an inter-ministerial panel from Angel Tax.

- However, in order to qualify for angel tax exemption, the startup should meet certain criteria which are as follows:

  o The **paid-up capital and share premium of the startup should not exceed Rs. 10 crores** after issuing shares.

  o The startup should procure the fair market value certified by a merchant banker. The investor should have **a minimum net worth of Rs. 2 crores and the average income in the last 3 financial years should not be less than Rs. 50 lakh.**

  o The startup **should have received approval from an 8-member inter-ministerial board for angel tax exemption.**

  o In order to simplify the compliance procedure, the government in a recent notification has done away with the requirements fair market value certificate issued by a merchant banker and approval from an inter-ministerial board.

  o The eligible startup can simply request an Angel Tax exemption from the Department of Industrial Policy & Promotion (DIPP) with applicable supporting documents.

  o The application of **DIPP-recognised startups will be forwarded to CBDT (Central Board of Direct Taxes)** along with the attached documents.

  o CBDT has been **mandated to accept or decline such an application within 45 days from the day of receipt.**

What is the rate at which angel tax is computed?

- Angel Tax is levied at a rate of 30.9% on net investments in excess of the fair market value.

- So for example, **if a startup receives 50 crores of investment by issuing 1 lakh shares at Rs.5000 each to an Indian investor and the fair market value is Rs.2000 per share i.e Rs.20 crore only, then the startup will have to pay angel tax on the amount in excess of the fair market value i.e Rs. 30 crore.**

- Therefore, Angel Tax payable in this transaction will be 9.27 crore (30.9% on Rs.30 crore).

Changes proposed recently

- In a bid to assuage industry concerns, the **Central Board of Direct Taxes (CBDT)** also said that **Rule 11UA under the Income Tax Act,** which currently prescribes only two valuation methods for valuing shares for resident investors, **would be amended to include five more valuation methods for non-resident investors.**
- The **RBI makes an annual payout to the government from the surplus income earned from investments and valuation changes on its foreign exchange holdings, including the dollar, and the fees it gets from printing currency notes.** It is mandated to maintain a contingency risk buffer of within 5.5% to 6.5% of its balance sheet. The government is expecting the RBI to transfer a significantly higher dividend, which will help reduce its market borrowing. The dividend could bring in **additional revenue of 0.2% of GDP,** which could partly offset losses in bonds and cover for lower tax revenue and slower divestment.

WINDFALL TAX

In News:

- India **slashed the windfall tax on domestically produced crude oil to ₹4,100 per tonne from ₹6,400 per tonne.**
- The latest revision comes due to the softening in oil prices.

Analysis of Background:

- Windfall tax **came into being in the 1970s** with the intent to tax the profit of companies generating huge revenue due to an unprecedented event.

What is Windfall Tax?

- Windfall tax is a **higher tax levied by the government on specific industries when they experience unexpected and above-average profits.**
- As the name suggests, "windfall" refers to a dramatic and unanticipated increase in profits.
- On the other hand, "tax" implies an imposition levied on this dramatic income growth.
- The Government imposes this tax **when they notice a sudden rise in an industry's revenue**.
- However, these revenues cannot be linked to anything the company actively pursued, such as its business strategy or expansion. Consequently, a Windfall Tax is imposed on an industry's profits when it experiences a sharp increase in revenue **due to unrelated external events.**

- **For instance,** the recent Russia-Ukraine war benefitted oil and gas industries with a sudden rise in their profit. So, the Government imposed a windfall tax on these industries. Their profits are taxed separately, **over and above the normal taxes that these companies pay to the governments.**

Are windfall taxes widely used?
- Windfall taxes have been used in various forms throughout history and have gained prominence in recent years. However, their use is still relatively rare and depends on the specific circumstances and policy goals of the government in question.

What happened in India?
- The conflict between Russia and Ukraine caused crude oil prices to skyrocket. As a result, India's oil companies recorded their highest net gains ever during the last fiscal year of 2022, making extraordinary profits. Further, among the top revenue producers are **ONGC, Oil India, and GAIL.**
- Corresponding to this event, the government imposed this Windfall Tax rate on oil producers **to cover India's trade deficit and raise spending on food and fertilizers.** This tax was proposed in July 2022 and went into effect on September 1 of that same year.

Why did the government impose this tax?
- The levies came as **refiners made major gains by boosting fuel exports to countries that were in a deficit like Europe, which has now boycotted oil imports from Russia.**
- The government wanted to keep a check on the constant supply of crude oil in the domestic market since **many refiners preferred to export crude oil instead of selling it within the country.**
- The government **mandated oil exporters to fulfill the Indian domestic oil demand first and levied windfall taxes on exports to indirectly make exporting oil more expensive.**

Economic Rationale
- The economic rationale for imposing windfall taxes is that **India's trade deficit had increased to record high levels and a weak rupee had increased the value of India's imports**.
- Moreover, the government's spending has gone up after it recently cut Central Excise Duty and spent more on food and fertilizers. It then decided to levy windfall tax on oil **companies to make up for this gap as the windfall tax adds to the government's earnings.**

Drawbacks of Windfall Taxes

Arbitrary Taxation System

- The economic impact of windfall taxation should lead to its immediate rejection. Firstly, such an arbitrary taxation system would increase the risks of investing. As a result**, investors will demand a higher return on their investments, or they may choose to stop investing altogether.**

May Reduce the Dividend Payout to Investors

- These taxes may reduce the dividend payout to investors investing in for example oil-producing companies.

Spike Energy Costs

- Finally, it would reduce the funds available for investment in sources of fuel, thereby spiking energy costs.
- Windfall tax may affect people; it was created to help and reduce long-term tax income.

Discourages investment

- The main objection to windfall taxes is that they may discourage investment. This could happen for two reasons.
  1. First, windfall taxes **reduce the amount of profits companies have left to invest in their businesses**. By removing this ready source of financing, the government may reduce the amount that companies invest.
  2. Second, windfall taxes **create uncertainty in the tax system**. Companies may, rightly, be suspicious that the tax will be repeated in future. That may discourage them from capital spending (investment in expanding their production and profits) due to concerns that the government could tax away some potential returns. This could in turn slow economic growth – and brings the risk to the government that more internationally established firms take their business elsewhere.

Retrospective taxation is unfair

- There is also the concern that retrospective windfall taxes are unfair – that is, that **companies should be told in advance what the tax rules are so they can decide how to behave, rather than having legitimately earned profits taken away.**
- The potential drawbacks of a windfall tax include the **potential for discouraging investment and innovation, as well as concerns about the fairness of taxing individuals or companies for their success.**

Benefits of Windfall Taxes in general

Windfall Tax

Benefits

- **Boosts government revenues**
- **Provide public services and other benefits to the citizens**
- **Windfall gains can repay interest-bearing consumer**
- **Invest the windfall proceeds in gold deposits**

Boosts Government Revenues

The most certain benefit of windfall taxes is that **it boosts government revenues**.

Provide public services to the citizens

It enables them to substantially provide public services and other benefits to the citizens of the country **like building civil infrastructure, health facilities, sanitation, and also building the nation's military strength.**

Service the debts by the countries

The additional funds raised through this tax can service the debts by the countries to various global financial institutionsand may bolster the national economy. However, it may also act as a disincentive to companies.

Drive for innovating Business Plans

- If companies become aware that windfall gains will be taxed, they may not seek out such profits with innovative business plans.
- The potential benefits of a windfall tax include the **redistribution of wealth and a reduction in economic inequality**, as well as the **provision of additional funds for social welfare programs, such as education, healthcare, or infrastructure development**.

UNIFIED LOGISTICS INTERFACE PLATFORM (ULIP)

In News:

Shri Amrit Lal Meena, Secretary, Ministry of Coal chaired a meeting on the **integration of Unified Logistics Interface Platform (ULIP) with the digital systems of the Ministry of Coal.**

Analysis of Background:

ULIP:

- Unified Logistics Interface Platform (ULIP) is **a part of the National Logistics Policy (NLP).**
- It was **launched by Prime Minister Shri Narendra Modi on September 17, 2022.**

Aim

- It **aims to bring ease of doing business in the logistics sector** by -
    - simplifying the logistics processes,
    - improving its efficiency,
    - bringing in transparency and visibility, and
    - reducing logistics cost & time.

Overview of Unified Logistics Interface Platform (ULIP)

- Logistics has been given special focus in the last few years. Many measures in terms of hard and soft infrastructure have been taken to improve the logistics scenario of India.
- However, **an integrated view of the Indian logistics value chain is necessary and a unified system by the interconnection of the IT systems of various union ministries, state departments, governing bodies, and private service providers is required.**
- Additionally, for stakeholders to receive logistics-related services, **visibility, authorizations, and certifications of the cargo seamlessly, all IT systems need to be interconnected.**
- Unified Logistics Interface Platform (ULIP) is designed **to enhance efficiency and reduce the cost of logistics in India** by creating **a transparent, one-window platform that can provide real-time information to all stakeholders**.
- It was also emphasized that the solution should have the visibility of multi-modal transport, and all the existing systems of various ministries, governing bodies, and private stakeholders should be integrated with the ULIP system.

There are three key components which are defining the ULIP platform:

1. **Integration with existing data sources of ministries**: As authorization, compliance and clearance are some of the critical activities of Logistics; the integration with data points of ministries shall enable a holistic view and interlink the handshaking points.
2. **Data exchange with private players:** To enable the private players, logistics service providers, and industries to utilize the data available with ULIP and at the same time share their data (transportation, dispatch, delivery, etc.) with ULIP, thereby streamlining the processes to bring better efficiency through data exchange.
3. **Unified document reference in the supply chain:** To enable a single digitized document reference number for all the documentation processes in a single platform. ULIP shall enable start-ups and private organizations to build the presentation layer, encompassing various use-cases to serve the service, trade and logistics service providers.

Mandate

- ULIP has a **dedicated portal** that makes the process of data request simpler, faster, and transparent.
- It is designed to bring all modes of transportation under a single window and connect all stakeholders to provide real-time visibility information.
- At present **33 systems from seven ministries are integrated through 106 Application Programming Interfaces covering more than 1600 data fields for usage by the stakeholders.**
- It is to be **leveraged to bring down logistics costs and improve efficiency.**

Benefits of Using ULIP

Improved Efficiency

- ULIP allows logistics companies to **coordinate better and optimize their operations.**
- For example, by integrating with transportation management systems, **ULIP can help logistics companies to schedule and route shipments more efficiently, reducing costs associated with transportation and logistics.**
- In addition, ULIP's centralized data management **can help companies to optimize inventory management and identify inefficiencies.**

Enhanced Customer Service

- By connecting various systems, ULIP provides **real-time tracking and automated delivery updates to customers**, which can help logistics companies to improve customer satisfaction.

- Moreover, by **standardizing data and processes**, ULIP can help logistics companies to improve communication and coordination with their customers.

Reduced Errors
- ULIP helps to standardize data across different systems, which reduces errors caused by manual data entry, missing information, or data discrepancies.
- Additionally, ULIP **can help logistics companies to automate document management, reducing the risk of errors in paperwork and documentation.**

Prevention of Delays
- By connecting logistics systems and automating workflows, ULIP **can help logistics companies identify and resolve their supply chain bottlenecks and delays.**
- This can help to ensure the timely delivery of goods, improve supply chain performance, and reduce inventory carrying costs.

ULIP vs Traditional Logistics Systems
Connectivity
- ULIP is designed to connect logistics systems, such as transportation management systems.
- This allows for seamless communication and coordination between different logistics partners, eliminating the need for manual processes and reducing the risk of errors.
- Traditional logistics systems often require manual coordination and data entry, leading to inefficiencies and errors.

Standardization
- ULIP standardizes data and processes across different logistics systems.
- Over 30 systems of seven different ministries are integrated **through Application Programming Interfaces**, making it easier for companies to track and manage their logistics operations.
- Traditional logistics systems often need more standardization, making tracking and managing logistics operations difficult.

Automation
- ULIP helps to automate many logistics processes, such as inventory management, shipping and tracking, and document management.
- This can reduce the need for manual labour, leading to improved efficiency and cost savings.

- Traditional logistics systems often rely on manual processes, which can be time-consuming and prone to errors.

Real-time Tracking
- ULIP provides real-time tracking and delivery updates, giving logistics companies and customers more accurate and timely information about their shipments. This can help to improve customer satisfaction and trust.
- Traditional logistics systems often **lack real-time tracking, making it difficult for logistics companies and customers to know the status of a shipment.**

Challenges for Unified Logistic Interface Platform (ULIP)
Integration
- Implementing ULIP (Unified Logistics Information Platform) requires **integration with various logistics systems, such as transportation and warehouse management systems**. This can be complex, as the systems may use different technologies and data formats.
- As a result, logistics companies may need to invest in IT resources, such as software developers and systems integrators, to ensure a smooth integration process.
- This may include adapting existing systems and developing new interfaces to enable data exchange between different systems.
- In addition to the technical challenges, it **may also require changing the workflows and business processes to accommodate the new system.**

Resistance to Change
- Some logistics companies may be resistant to implementing ULIP due to a **lack of understanding of the benefits of ULIP.**
- Also, **logistics companies may be entrenched in their current systems** and processes and may resist changes that disrupt their established way of working.

Data Security
- ULIP involves the sharing and exchange of sensitive data between different logistics systems, such as transportation schedules and customer information.
- Ensuring the security of this data is a critical challenge for ULIP and the logistics industry as a whole. This includes protecting data from unauthorized access and ensuring that data is accurate and up-to-date.
- There may be **compliance requirements, such as those related to data privacy and personal data protection, that need to be considered.**

- Logistics companies **may need to invest in security measures, such as firewalls, intrusion detection systems, and data encryption, to ensure the security of the data exchanged through the ULIP.**

How Can We Reduce Logistics Costs in India?

Improve Transportation Infrastructure

- The Indian government is taking several steps to improve the transportation infrastructure in the country.
- For example, the **National Highways Development Project (NHDP)** aims to upgrade and expand the country's road network.
- The **PM Gati Shakti National Master Plan (PMGS-NMP), The National Logistics Policy. In addition, the Bharatmala Pariyojana project** aims to develop national highways and improve regional connectivity to reduce logistics costs.

Implement Efficient Supply Chain Management

- One way to implement efficient supply chain management is to use technology, such as **Enterprise Resource Planning (ERP) systems.**
- ERP **can help companies track and monitor shipments, manage inventory, and optimize routes**.
- Implementing **a just-in-time inventory system,** in which inventory is only ordered and received as needed, can help to reduce warehousing costs and improve inventory management.

Promote the Use of Intermodal Transportation

- In India, intermodal transportation typically involves the use of a combination of rail and road transportation.
- By using rail for long-distance transport and road for hyperlocal delivery, **companies can reduce transportation costs and increase the efficiency of logistics operations.**

Reduce Customs and Import-Export Barriers

- India can reduce tariffs and non-tariff barriers.
- Thus, **it will reduce the time and cost of logistics for import and export businesses**.
- In addition, the government is simplifying procedures for import and export, and electronic submission of documents can help reduce costs and speed up clearance processes.

Developing Public-Private Partnership (PPP)

- Public-Private Partnerships (PPPs) **can be a way to develop logistics infrastructure such as warehouses and cold chain storage.**
- The government and private sector **can collaborate to build logistics infrastructure, with the private sector investing in and operating the facilities and the government providing support in the form of subsidies or tax incentives.**

Promoting the Use of Fuel-Efficient Vehicles

- The government can promote the use of fuel-efficient vehicles **by providing tax incentives or subsidies for companies that use them.**
- This can help to reduce transportation costs and emissions and encourage the use of eco-friendly transportation options.
- The government can also encourage the use of electric and hybrid vehicles in logistics **by providing tax incentives, subsidies, and infrastructure development for charging and swapping stations.**

RUPEE TRADE ARRANGEMENT

In News:

International trade in the domestic currency **will help reduce transaction costs** for the industry and several countries are in discussion with the RBI on this - Commerce and Industry Minister said.

Analysis of Background:

- Last year, the RBI and Finance Ministry **asked the top management of banks and representatives of trade bodies to push export and import transactions in the rupee.**
- They want banks in India to connect with their foreign counterparts **for opening special rupee vostro accounts** to facilitate cross-border trade in the Indian currency rather than the popular mode of the U.S. dollar.
- RBI has allowed banks from 18 countries to trade in rupees.

What is International Trade Settlement in Rupees?

- When countries import and export goods and services, **they have to settle payments in a foreign currency**. Since the US Dollar is the world's reserve currency, most of the trade occurs in US dollars.
- For example, if an Indian buyer enters into a transaction with a seller from Germany, the Indian buyer has to first convert his rupees into US dollars. The seller will receive those dollars, which is then converted into euro.
- Here, **both the parties involved have to incur the conversion expenses and bear the risk of foreign exchange rate fluctuations**.
- With the help of a Vostro account now, instead of paying and receiving US dollars, the invoice will be made in Indian rupees if the counterparty has a Rupee Vostro account.

What is Vostro Account?

- **Rupee Vostro Accounts keep a foreign entity's holdings in the Indian bank, in Indian rupees**.
- When an Indian importer wants to make a payment to a foreign trader in rupees, the amount will be credited to this Vostro account, and when an Indian exporter needs to be paid for supplying goods or services, this Vostro account will be deducted, and the amount will be credited to the exporter's account.
- The **exchange rate between the currencies of two trading partner countries may be market determined.**

Which countries are likely to use this model?

- Exporters' bodies said RBI's move would help support trade with countries under sanctions, mainly Russia and Iran, and with African and South American countries - and neighbouring Sri Lanka - that have little access to hard currencies.
- The new **Foreign Trade Policy (FTP) 2023** wants to thrust exports on the wheels of rupee invoicing that proposes both trading partners raising their invoices and settling payments for their transactions on a bilateral basis in rupees.

Exchange rate?

- The exchange rate between the Indian currency and those of trading partners is **market-determined, and settlement takes place in rupees.**
- Banks are allowed to provide letters of credits, and bank guarantees, and offer advance payments to exporters for trade transactions.

What are the benefits for India?

- This move **will help reduce India's dependency on US dollars.** While this decision won't have a considerable short-term impact, **it will benefit the country in the long-term.**
- Since India runs a trade deficit – its imports are greater than exports – **settling trades in rupees will also save dollar outflows.** At a time when the rupee's value is declining every week against the US dollar, saving dollar outflows becomes even more critical for the RBI.
- Thus, RBI's move **could marginally narrow India's widening trade deficit by reducing the price of commodity imports**, analysts said, noting that imports of crude oil from Russia have surged in recent months.
- Circumventing the SWIFT payments system and paying for imports in rupees **would also help India work around the sanctions imposed on its trade partners** – Russia being the latest, and Iran is another prominent example from the past.
- International trade settlements in rupee are **expected to gradually contribute to the global acceptance of the currency**, and later make it possible to repay loans taken from fund banks like the Asian Infrastructure Investment Bank.
- **Other benefits**: Lowering of transaction costs, a greater degree of price transparency, Quick Settlement Time, promoting international trade, reduction in hedging expenses, reduced cost of holding foreign reserve by the RBI, and, most importantly, internationalization of the rupee.
- It **will reduce India's merchandise trade deficit** and **will help the country to export more.** The exports will further increase as more countries join rupee trade.
- It is quite clear that **it won't stop the dollar hegemony but will definitely reduce dependency on US dollar to some extent. Demand of rupee will increase**. It will contribute to the economy by saving dollar outflow especially when rupee is falling. Small exporters / importers may feel it easy to export or import in Indian rupees.
- It **will reduce conversion cost for both the importers and exporters,** thereby will influence the price of goods and may escalate their demand in the market. This can be better explained by supposing that an Indian buyer enters into transaction with a seller from Germany. The Indian buyer has to convert his rupees in US $, the seller will

receive those dollars and convert it into euros. Both parties have to incur the conversion expanses and bear the risk of foreign exchange rate fluctuation. Herein comes rupee trade, instead of paying or receiving in US dollar the invoice will be made in Indian rupees if the counter party has a rupee vostro account.

- It **will reduce demand for Foreign Exchange** especially US$ in particular for the settlement of current account related trade flows.
- It **will reduce currency risk for Indian traders**.
- **Protection from currency volatility** will reduce cost of doing business and will allow better business growth and may provide chances for rupee to grow globally.
- It **will reduce the need for holding foreign exchange reserves** and **dependence on foreign currency**, making the economy less vulnerable to external shocks.
- But government officials said **India would move cautiously on internationalizing the local currency** given associated risks for the economy, such as **high exposure to global shocks, asset bubbles, and exchange rate volatility.**

ENVIRONMENT

PETERSBERG CLIMATE DIALOGUE

In News:

The Petersberg Dialogue on Climate Change was **held in Berlin.**

Analysis of Background:

- It was **hosted by Germany and the United Arab Emirates**, which is hosting the 28th Conference of Parties (COP28) to the United Nations Framework Convention on Climate Change.
- Ministers from 40 countries attended the conference to discuss the way forward towards COP28.
- United Nations Secretary-General António Guterres emphasised the **need for "cleaning-up our economies — breaking our fossil fuel addiction and driving decarbonisation in every sector"** to achieve a 1.5 degree global warming pathway.
- He also reiterated his earlier **call for an Acceleration Agenda**, where "all countries hit fast-forward on their Net Zero deadlines".
- The Agenda calls for coal phaseout by 2030 in Organisation for Economic Co-operation and Development countries, and by 2040 in all others, as well as achieving Net Zero electricity generation and decarbonising major sectors.

Global renewables target

- In order to limit global warming to 1.5°C, the **world needs to make sharp cuts in their greenhouse gas emissions**.
- There is a need for a potential global target for renewables at the next climate conference.

Fossil fuels: Phaseout production or reduce emissions?

- There is a need to be laser-focused on **phasing out fossil fuel emissions**, while phasing up viable, affordable zero-carbon alternatives.
- Members called for a tripling of renewable energy capacity by 2030 followed by a doubling in 2040.

On track for $100 billion climate finance

- Members said that developed countries are "on good track" to deliver the $100 billion per year they had promised to mobilise by 2020 during the COP15 in 2009.
- **The $100 billion is likely to be a gross underestimation of the true need for climate finance in developing countries.**
- A recent estimate pegs **climate finance needs at $1 trillion per year by 2030** for emerging markets alone.
- **This means that climate finance needs are more than 10 times the amount that developed countries have been able to mobilise, 14 years after committing to the $100 billion figure**

Global Stocktake

- 2023 is the year for the Global Stocktake, which is essentially a **periodic review of global climate action** which aims to assess whether current efforts will enable us to reach the objectives set out in the Paris Agreement.
- This is the **first Global Stocktake year since the Paris Agreement** was signed in 2015 and the report has been underway for the past two years. It is set to be released in September of 2023.
- **India at the dialogue:**
    - The Global Stocktake **outcome should focus on how climate change impacts, actions and responses have a bearing on the developmental priorities of developing countries** including eradication of poverty, Union Minister for the Indian Ministry of Environment, Forest and Climate Change said.
    - He also added that the outcome of the **first Global Stocktake should seek to convey a message on sustainable lifestyles as well as sustainable**

consumption to inform the next round of Nationally Determined Contributions and enhanced international cooperation.

PYGMY HOG

In News:

- African Swine Fever (ASF), **the livestock illness that has decimated porcine populations across Asia since its advent in China in 2018, could deal a lethal blow to the pygmy hog, the world's rarest and smallest pig.**
- It is "extremely susceptible to extinction" from ASF due to its small populations and limited range.

Analysis of Background:

A success story;

- The pygmy hog is a conservation success story for India.
- **Once thought to be extinct, it was rediscovered in 1971.**
- The Durrell Wildlife Conservation Trust, United Kingdom, initiated the **Pygmy Hog Conservation Programme in 1995.**
- Pygmy hogs were brought into captivity in 1996 to start the recovery programme.
- **Between 2008 and 2022, 152 individuals have been reintroduced into four protected areas (PAs) in Assam, including the recent release of 36 individuals in Manas National Park.**
  - Between 2011 and 2015 animals were reintroduced into the Orang National Park, successfully establishing a population there.
  - One captive population is at the Pygmy Hog Research and Breeding Centre, at Basistha, in the foothills of the Garbhanga Reserve Forest, on the edge of Guwahati.
  - The other is The Pygmy Hog Prerelease Centre, Potasali.

About Pygmy hog

- **Scientific Name:** Porcula salvinia
- The pygmy hog is the **smallest and rarest wild suid** in the world.
- The species was **historically known from only a few locations in northern West Bengal and north-western Assam in India**, though it is now believed likely to have occurred in an extensive area of tall, alluvial grasslands south of the Himalayan foothills from north-western Uttar Pradesh and southern Nepal to Assam, possibly as far as southern Bhutan.
- After at least two decades without reported sightings the species was already feared extinct.

- However, in 1971 it was coincidentally 'rediscovered' in two separate locations in north-western Assam; namely **Barnadi Reserve Forest in Darrang District and Manas National Park**.

Description
- Pygmy Hogs measure about 65 cm in length.
- Females are a little smaller.
- Pygmy Hogs differ from members of the genus Sus in the extreme reduction in body, ears and tail size, relatively short medial false hooves, and snout disc perpendicular to axis of head.

Habitat
- Pygmy Hogs **prefer undisturbed patches of grassland** dominated by early successional riverine communities, typically comprising dense tall grass intermixed with a wide variety of herbs, shrubs and young trees.
- The species is **not found in areas subject to prolonged inundations during the monsoon**.

Diet
- Pygmy Hogs feed on roots, tubers, shoots and ground vegetation, along with worms and other invertebrates and, probably, small vertebrates (e.g. reptiles and the eggs and nestlings of ground nesting birds).

Social organisation
- Adult male Pygmy Hogs are usually seen by themselves, but are reported to join estrous sows during the rut and to associate loosely at other times of the year with the basic natal social family units.
- These units usually consist of four to six individuals, including one or more adult females and accompanying juveniles.

Status and conservation
- The **IUCN has listed Pygmy Hogs as Critically Endangered**.
- It is also listed in the **Schedule I of the Indian Wildlife (Protection) Act, 1972**.
- The main threats to survival of Pygmy Hog are **loss and degradation of habitat due to human settlements, agricultural encroachments, flood control schemes, and traditional forestry management practices.**

- Some management practices, such as planting of trees in the grasslands and indiscriminate use of fire to create openings and to promote fresh growth of grass, have caused extensive damage to the habitats the authorities intend to protect.

What is African swine fever?
- African swine fever (ASF) is a **highly contagious viral disease of domestic and wild pigs**, whose mortality rate can reach 100%.
- It is **not a danger to human health**, but it has devastating effects on pig populations and the farming economy.
- There is **currently no effective vaccine against ASF.**
- The virus is **highly resistant in the environment**, meaning that it can survive on clothes, boots, wheels, and other materials.
- It can also survive in various pork products, such as ham, sausages or bacon. Therefore, **human behaviours can play an important role in spreading this pig disease across borders if adequate measures are not taken.**
- 74 countries have reported ASF cases since 2005 and as of July 2022. In January 2022, ASF genotype II was notified on the Italian mainland after around 40 years of absence. Two new countries reported the first occurrence of the disease in January as well: North Macedonia and Thailand. In March 2022, ASF was reported for the first time in Nepal.

Prevention is essential
- In the absence of an effective vaccine, **prevention in ASF-free countries depends on implementation of appropriate import policies and biosecurity measures**, ensuring that neither infected live pigs nor pork products are introduced into ASF-free areas.
- This includes ensuring proper treatment and disposal of waste food from aircraft, ships or vehicles coming from affected countries and policing illegal imports of live pigs and pork products from affected countries.

SIMILIPAL TIGER RESERVE

In News:

The death of a rare black tiger reported after three decades in the Similipal Tiger Reserve in Odisha's Mayurbhanj district could have a big impact on the population of the animals, an expert has told.

Analysis of Background:

- The **rare big cats with distinctive dark stripe patterns are Bengal tigers** with a gene mutation and are only found in the region.
- **Simlipal has the world's highest rate of black tiger sightings in the world.**
- Black tigers were first officially recorded in the forests of Similipal in 1975-76.
- The tigers in the Similipal Tiger Reserve are an isolated population in eastern India and gene flow between them and other tiger populations is very restricted.

About Similipal Tiger Reserve;

- Similipal, which **derives its name from 'Simul'(Silk Cotton) tree**, is a national park and a Tiger Reserve situated in the northern part of Orissa's Mayurbhanj district.
- The tiger reserve is spread over 2750 sq km and has some beautiful **waterfalls like Joranda and Barehipani**.
- The park is surrounded by high plateaus and hills, the highest peak being the twin peaks of **Khairiburu and Meghashini**.
- **At least twelve rivers cut across the plain area**, all of which drain into the Bay of Bengal. The prominent among them are Burhabalanga, Palpala Bandan, Salandi, Kahairi and Deo.

Flora and fauna

- The vegetation is a **mix of different forest types and habitats, with Northern tropical moist deciduous dominating some semi-evergreen patches**.
- **Sal is the dominant tree species here**.
- The park also has extensive grasslands that are grazing grounds for many of the herbivores. These forests boast of many plants that have medicinal and aromatic properties.
- The park is **known for the tiger, elephant and hill mynah**. It holds the highest tiger population in the state of Orissa.
- Apart from the tiger, the major mammals are leopard, sambar, barking deer, gaur, jungle cat, wild boar, four-horned antelope, giant squirrel and common langur.
- Grey hornbill, Indian pied hornbill and Malabar pied hornbill are also found here.
- The park also has a sizeable population of reptiles, which includes the longest venomous snake, the King cobra and the Tricarinate hill turtle.
- **The Mugger Management Programme at Ramatirtha has helped the mugger crocodile to flourish on the banks of the Khairi and Deo Rivers.**

History

- The Tiger Reserve **originated as a hunting ground for the surrounding royalty**.
- It was formally **designated a tiger reserve under Project Tiger in May 1973**.
- The Government of Orissa declared Similipal as a wildlife sanctuary in 1979.
- Later in 1980, Government of Orissa proposed 303 sq. km of the sanctuary as National Park.
- **The Government of India declared it as a biosphere reserve in 1994. UNESCO added this National Park to its list of Biosphere Reserves in May 2009**.
- This tiger reserve also comes under **Mayurbhanj Elephant Reserve** that includes the adjacent Hadgarh and Kuldiha Wildlife Sanctuaries.
- Apart from its biodiversity, the region around Similipal forests is home to a variety of tribes. Prominent among these are Kolha, Santhala, Bhumija, Bhatudi, Gondas, Khadia, Mankadia and Sahara.

GANGETIC DOLPHIN

In News:

Gill nets used indiscriminately in the Bhagirathi river by the fishermen communities have been killing the endangered Gangetic Dolphins over the years.

Analysis of Background:

Dolphins and Porpoises:

- Marine species are the most well-known, but there are several species that live in freshwater rivers.
- All are air-breathing, warm-blooded mammals that nurse their young.
- **The difference between a dolphin and a porpoise has to do with their appearance: dolphins have longer snouts, bigger mouths, more curved dorsal fins, and longer, leaner bodies than porpoises.**

About Dolphins:

- Dolphins are **one of the oldest creatures in the world** along with some species of turtles, crocodiles and sharks.
- The **Ganges river dolphin was officially discovered in 1801**.
- Ganges river dolphins once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh.
- But the species is extinct from most of its early distribution ranges.
- The Ganges river dolphin **can only live in freshwater and is essentially blind**.

- They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to "see" an image in their mind.
- They are frequently found alone or in small groups, and generally a mother and calf travel together.
- Calves are chocolate brown at birth and then have grey-brown smooth, hairless skin as adults.
- Females are larger than males and give birth once every two to three years to only one calf.
- The Ganges river dolphin is **important because it is a reliable indicator of the health of the entire river ecosystem.**
- The government of India declared it the **National Aquatic Animal** in 2009.

Threats
Pollution
- Industrial, agricultural, and human pollution is another serious cause of habitat degradation.
- High levels of pollution can directly kill prey species and dolphins, and completely destroy their habitat.
- As the top predator, **river dolphins have been known to have high levels of persistent toxic chemicals in their bodies, which is likely to adversely affect their health.**

Infrastructure
- Ganges river dolphins are divided into isolated groups because of the construction of more than 50 dams and other irrigation-related projects.
- This makes them susceptible to inbreeding and more vulnerable to other threats because they cannot move to new areas.
- Dolphins trapped above a dam are exposed to poaching, especially during dry summer months.
- Dolphins below a dam are threatened by heavy pollution, increased fishing activities and vessel traffic.
- They also have less food because dams disturb the migration, breeding cycles and habitat of fish and other prey.

River dolphins around the world

Amazon River Dolphin (Inia geoffrensis)

- Status**:** Endangered
- Also known as the **boto or 'pink river dolphin,'** the Amazon River dolphin swims throughout much of the famed South American river basin and the neighboring Orinoco river basin that stretches through Colombia and Venezuela.
- The species is characterized by its long snout and pale pink color.
- It has two recognized types or subspecies: Bolivian Bufeo (Inia geofferensis boliviensis) and Common Bufeo (Inia geoffrensis geoffrensis).
- Like its relatives elsewhere, the Amazon River dolphin faces challenges from development projects.

Tucuxi (Sotalia fluviatilis)

- Status**:** Endangered
- The Tucuxi is the **smaller, gray counterpart to the Amazon River dolphin.**
- The freshwater species is found throughout the Amazon and Orinoco river basins, and are believed to be guardians of rivers and symbols of good luck for their ability to navigate rocky and shallow sections of river, which guides people through safe routes.
- The Tucuxi travels in groups and, unlike the Amazon River dolphin, jumps out of the water.
- Tucuxis face the same threat as their close relatives, the Amazon river dolphins, such as gillnet mortality, deliberate killing for fish bait and development.

Indus River Dolphin (Platanista minor)

- Status**:** Endangered
- The **remaining Indus River dolphins, known locally as the Bhulan, are only found swimming in the lower parts of the Indus river in Pakistan, with an addtional small, isolated population found in the Beas River in India.**
- These functionally-blind dolphins rely on echolocation to navigate, communicate, and hunt prey in the muddy river waters.
- Beginning in the 1930s, the construction of numerous dams and barrages led to the initial decline of the Indus River dolphin by splitting the population into small groups, degrading their habitat, and impeding movements.
- The dolphins sometimes get entangled in fishing nets, stranded in irrigation channels, and face the dangers of pollution, too.

Irrawaddy Dolphin (Orcaella brevirostris)

- Status**:** Critically Endangered
- **Unsustainable fishing practices** remain the principal threat to the Irrawaddy dolphin.
- The species is not directly exploited, but can accidentally end up in fishing gear intended to capture other animals.
- Habitat degradation and population fragmentation due to dam development also impacts the dolphins.
- The vast and essential Mekong River accounts for up to 25% of the global freshwater catch and provides livelihoods for at least 60 million people.

Yangtze Finless Porpoise (Neophocaena asiaeorientalis)

- Status**:** Critically Endangered
- The **Yangtze finless porpoise lives in the Yangtze River, the longest river in Asia**.
- At one point, this porpoise shared the waters with the Baiji (Yangtze River dolphin)—a species declared functionally extinct in 2006. The Yangtze finless porpoise is known for its mischievous smile.
- Dredging, pollution, and boat strikes from shipping and transportation on the river threaten the finless porpoise. Sand mining and illegal fishing also impacted the species.

About Project Dolphin:

- It is an **Indian government initiative** to conserve both riverine and oceanic dolphin species **launched in 2021.**
- It is **under the Wildlife Institute of India**, an autonomous body of the Ministry of Environment, Forest and Climate Change.
- It is **modelled on Project Tiger.**
- October 5th has also been designated as "National Dolphin Day" by the environment ministry.
- A dolphin breeding centre for the Gangetic river dolphin is planned for the Bengal region, specifically the stretch of the Ganges river between Farakka and Gangasagar, already home to 650 dolphins.
- India's dolphins are at risk of extinct due to a variety of factors, namely: strandings in canal systems, constructions of waterways, unchecked fishing activity using nylon nets, noise pollution from ships, amidsts other factors.

ACHANAKMAR TIGER RESERVE

In News:

A tigress that had been captured in Chhattisgarh's Surajpur district was released into Achanakmar Tiger Reserve in Bilaspur district.

Analysis of Background:

Achanakmar Wildlife Sanctuary:

- Achanakmar Wildlife Sanctuary is a **sanctuary in Mungeli district of Chhattisgarh and in the Anuppur and Dindori districts of Madhya Pradesh in India**.
- It was **established in 1975**, under the provisions of the Indian Wildlife Protection Act of 1972, and declared as a Tiger Reserve under Project Tiger, in 2009.
- It is a **part of the Achanakmar-Amarkantak Biosphere Reserve.**
- Linked by the hilly Kanha-Achanakmar Corridor to the tiger reserve in Kanha, Madhya Pradesh, the sanctuary comprises 557.55 km2of forest.
- The sanctuary is close to Amarkantak, the source of the Son River and Narmada River.
- Forest vegetation **mainly comprises Sal, Saja, Bija, and Bamboo.**
- The sanctuary is **home to the Bengal tiger**, Indian leopard, gaur, chital, striped hyena, Indian jackal, sloth bear, Ussuri dhole, sambar, nilgai, four-horned antelope, chinkara, blackbuck, Indian muntjac and wild boar, four variety of monkeys among other species.

WORLD ENVIRONMENT DAY 2023 AND MISSION LiFE

In News:

This year, the Ministry of Environment, Forest and Climate Change, Government of India envisages to celebrate the World Environment Day 2023 with a thrust on the Mission LiFE.

Analysis of Background:

About Mission LiFE

The concept of LiFE, i.e., **Lifestyle for Environment** was introduced by the Prime Minister, at the World Leaders' Summit in Glasgow at the 2021 UNFCCC COP26, when he gave a clarion call to rekindle a global pursuit to adopt sustainable lifestyle and practices.

Objectives

- It is designed with the objective to mobilise at least one billion Indians and other global citizens to take individual and collective action for protecting and conserving the environment in the period 2022–28.
- Within India, at least 80 percent of all villages and urban local bodies are aimed to become environment-friendly by 2028.

About World Environment Day (WED)

- It is **celebrated annually on 5 June** and encourages awareness and action for the protection of the environment.

- **First held in 1973**, it has been a platform for raising awareness on environmental issues as marine pollution, overpopulation, global warming, sustainable development and wildlife crime.
- World Environment Day is a global platform for public outreach, with participation from over 143 countries annually.

History
- World Environment Day was established in 1972 by the **United Nations at the Stockholm Conference on the Human Environment** (5–16 June 1972), that had resulted from discussions on the integration of human interactions and the environment.
- **One year later, in 1973 the first WED was held with the theme "Only One Earth".**
- **National Museum of Natural History (NMNH)**
- National Museum of Natural History in collaboration with National Zoological Park kick-started the Mass Mobilisation for Mission LiFE on Waste Reduced (Swachhata Actions) to bring behavioral changes among the masses.

About NMNH:
- The National Museum of Natural History (NMNH) was **established as one of the national level institutions set up during the Silver Jubilee celebrations of India's Independence**, to portray and promote awareness on the Natural Heritage of the country.
- **The objectives of the National Museum of Natural History are:**
- To develop the NMNH in the country's Capital to achieve the highest level of quality to promote environmental education on a national level.
- To develop Regional offices (regional museum of natural history) in various regions of the country in order to extend its activities at the regional/local levels.
- To develop museum-based educational projects at the level so as to help school curriculum on environmental education (EE).
- To develop EE resource materials (such as audio-visual aids, low-cost teaching aids, school loan kits, etc.) to promote environmental education (EE).
- To undertake research (museological and collection based) consonant with the scope and resources of the museum.
- To extend professional help to other agencies/organizations regarding natural history collections/museums.
- To develop national and international cooperation/collaboration with other organizations/professional bodies/museums related to natural history/EE.

Zoological Survey of India(ZSI)

- Zoological Survey of India started the Mass Mobilisation for Mission LiFE on 'Save Water' and 'Say no to Plastics' to bring awareness among the youth.
- The Zoological Survey of India (ZSI), founded on 1 July 1916 by the Ministry of Environment, Forest and Climate Change of the Government of India as a premier Indian organisation in zoological research and studies to promote the survey, exploration and research of the fauna in the country.
- Headquarters: Kolkata

National Centre for Sustainable Coastal Management (NCSCM)

- National Centre for Sustainable Coastal Management (NCSCM), Chennai, initiated the Mass Mobilization for Mission LiFE through a "Signature Campaign" and "Green Pledge" of LiFE practices.
- The National Centre for Sustainable Coastal Management (NCSCM) was established by the Ministry of Environment, Forest and Climate Change (MoEF&CC) in 2011, as an **autonomous institution to support the protection, conservation, rehabilitation, management, and policy advice of the coast**.
- NCSCM supports the nationwide adoption of the Integrated Coastal Zone Management (ICZM) approach by utilizing decision support systems based on cutting-edge science and knowledge and through networking with communities, government structures, and relevant reputable national and international institutes.

KALI TIGER RESERVE

In News:

The National Tiger Conservation Authority (NTCA) has written to the Chief Wildlife Warden of Karnataka to furnish a status report on an illegal resort in Anmod village in the Castle Rock Wildlife Range of the Kali Tiger Reserve (KTR).

Analysis of Background:

NTCA
- The National Tiger Conservation Authority (NTCA) was **established in December 2005**, following a recommendation of the Tiger Task Force, constituted by the Prime Minister of India for reorganised management of Project Tiger and the many Tiger Reserves in India.
- The **Wildlife Protection Act of 1972 was amended in 2006** to provide for constituting the National Tiger Conservation Authority responsible for implementation of the

What is Castle Rock region?

- It is part of the Dandeli Sanctuary and is part of the larger tiger landscape comprising protected areas like Kali Tiger Reserve, Bhimgad Sanctuary, Mollem National Park, Bhagwan Mahaveer Sanctuary, Mhadei Sanctuary and adjoining reserve forests.
- The area is already under threat from highways and railways.
- The region is also witnessing threat from unregulated tourism, which could be detrimental to the survival of tigers and its habitats.

About Kali Tiger Reserve (formerly Anshi National Park)

- It is a protected area and tiger reserve.
- It is **located in Uttara Kannada district, in Karnataka, India**.
- The park is a habitat of Bengal tigers, black panthers and Indian elephants, amongst other distinctive fauna.
- **The Kali River flows through the tiger reserve and is the lifeline of the ecosystem and hence the name.**
- The tiger reserve is spread over an area of 1300 square kilometres.
- The forest in the area was declared the **Dandeli Wildlife Sanctuary** on 10 May 1956.
- The state proposed carving out a section of the sanctuary to form the **Anshi national park, which was implemented on 2 September 1987.**
- It was renamed to Kali Tiger Reserve in December 2015.
- The park is **home to several hydroelectric dams and a nuclear power station**.
- Flora: The park is in the ecoregions of North Western Ghats montane rain forests and North Western Ghats moist deciduous forests, both of which are deemed endangered by the World Wide Fund for Nature (WWF).
- The forests have high biodiversity.

- Fauna: The black panther, elephants and tigers live in the park but are rarely seen.
- Interesting birds include the Ceylon frogmouth, great hornbill, Malabar pied hornbill, Malabar grey hornbill, Indian grey hornbill and Asian fairy bluebird.

SCIENCE AND TECH

CARBON DATING

In News:

The Allahabad High Court ordered a "scientific survey", including carbon dating, of a "Shivling" said to have been found at the Gyanvapi mosque complex in Varanasi.
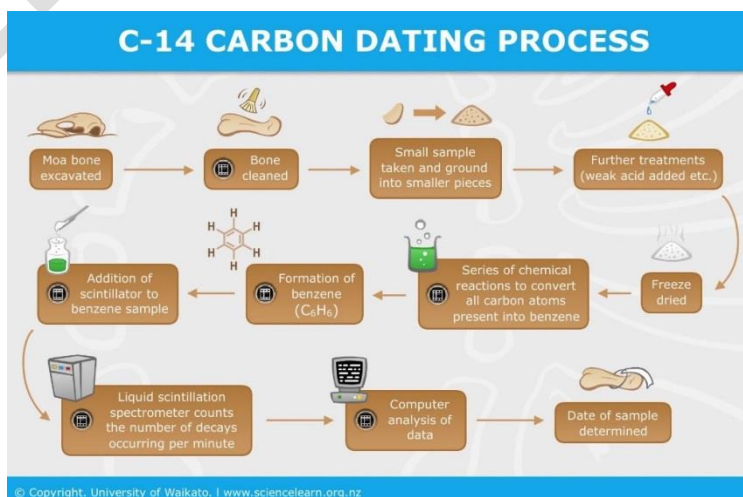
Analysis of Backgrpund:

Radiocarbon dating

- Radiocarbon dating, or carbon-14 dating, is **a scientific method that can accurately determine the age of organic materials as old as approximately 60,000 years**.
- **First developed in the late 1940s** at the University of Chicago by Willard Libby, **the technique is based on the decay of the carbon-14 isotope.**
- Radiocarbon dating has been used for historical studies and atmospheric science, and triggered archaeology's **"radiocarbon revolution."**

Working Principle

- It is based on the fact that living organisms—**like trees, plants, people, and animals—absorb carbon-14 into their tissue**.
- When they die, the **carbon-14 starts to change into other atoms over time**.
- Scientists can estimate how long the organism has been dead by counting the remaining carbon-14 atoms.

C-14 CARBON DATING PROCESS

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How does radiocarbon dating work?

- It starts with cosmic rays—**subatomic particles of matter that continuously rain upon Earth from all directions.**
- When cosmic rays reach Earth's upper atmosphere, **physical and chemical interactions form the radioactive isotope carbon-14.**
- **Living organisms absorb this carbon-14 into their tissue**. Once they die, the absorption stops, and the carbon-14 begins very slowly to change into other atoms at a predictable rate.
- **By measuring how much carbon-14 remains**, scientists can estimate how long a particular organic object has been dead.
- **Radiocarbon dating can be used on any object that used to be alive.** That includes pieces of animals, people, and plants, but also paper that was made from reeds, leather made from animal hides, logs that were used to build houses, and so forth.

What are the limitations of carbon-14 dating?

- The various dating techniques all have limitations. Each works best for different types of problems. **Radiocarbon dating works on organic materials up to about 60,000 years of age.**
- Conventional radiocarbon dating requires samples of **10 to 100 grams (0.35 to 3.5 ounces) of an object**, depending on the material in question. Newer forms of dating can use much smaller amounts, down to **20 to 50 milligrams or 0.0007 to 0.0018 ounces. In both cases, the material is destroyed during the test.**
- Radiocarbon samples are also **easily contaminated, so to provide accurate dates, they must be clean and well-preserved**.
- Dirt and other matter must be washed off with water, but **chemical treatments and other cleaning procedures are also often needed.** This is because there are so few atoms to count; even a little extra carbon from contamination will throw off the results significantly.
- A **million-year-old sample contaminated by only a tiny amount of carbon** could yield an invalid age of 40,000 years, for example.

Comparison with other Dating Methods

- Other dating methods have different strengths.
- **Dendrochronology**, also known as tree-ring dating, depends upon the preservation of certain tree species; it can extend to about 12,500 years ago for oak trees and to 8,500 years for bristlecone pine.

- **Potassium-argon dating** can date volcanic materials ranging from less than 100,000 to more than 4 billion years old.
- **Rubidium-strontium dating** can be used to determine the ages of items ranging from a few million to a few billions of years old; it is widely used to understand how the Earth and solar system formed and to trace human migration and trade in archaeology.
- **Significance of Radiocarbon Dating**
- Carbon dating has helped us reveal how our bodies work, to understand the climate of the Earth and reconstruct its history, and to track the sun's activity and the Earth's magnetic fields.
- Radiocarbon dating was also instrumental in the discovery of human-caused climate change, as scientists used it to track the sources of carbon in the atmosphere over time.

Radioactive Dating - Carbon Dating

- The half-life of a radioactive element is the time it takes for half of its atoms to decay into something else.
- For example, the half-life of radium-226 is 1600
- Therefore, in 1600 years, one gram of radium-226 will turn into half a gram of radium-226 and half a gram of something else
- After another 1600 years have elapsed, only a quarter of a gram of the original radium-226 will remain.
- **Finding the ratio of parent to daughter elements**

- Carbon-14 is an **isotope** that has a half life of 5,700 year old.
- *Half-life* – The time it takes for half of the atoms in an isotope to decay
- *Radiometric Decay* – Process that uses properties of atoms in rocks and other objects to determine their ages.

- *Radioactive Dating* – calculating the absolute age of a rock by measuring the amounts of parent and daughter materials in a rock and by knowing the half-life of the parent material

ARSENIC

In News:

A recent peer-reviewed study suggests that even low levels of arsenic consumption may impact cognitive function in children, adolescents, and young adults.
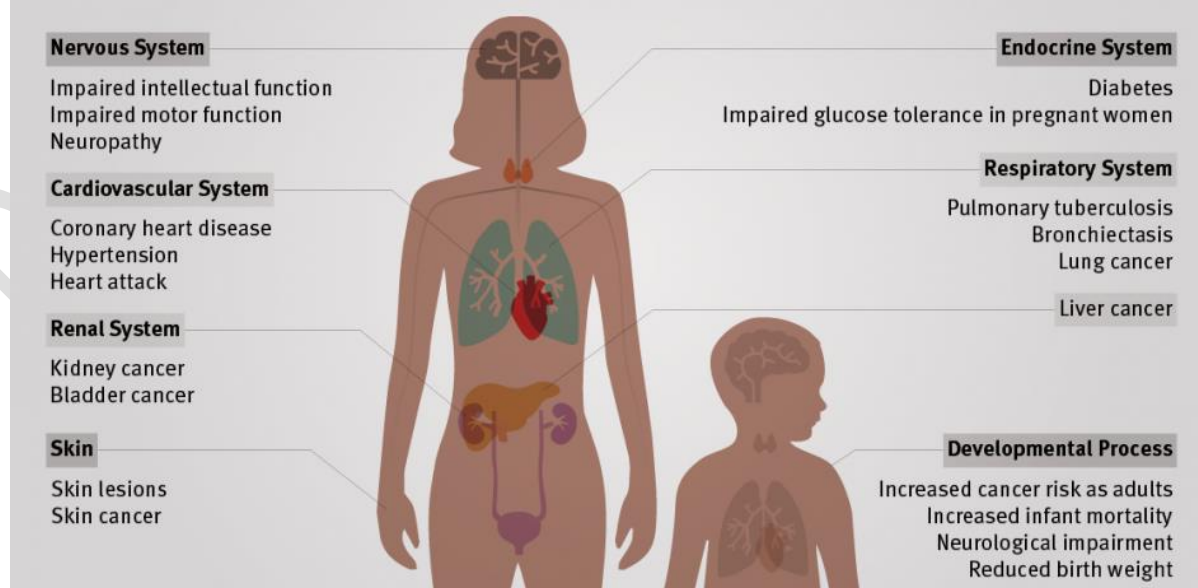
Analysis of Background:

Arsenic

- Arsenic is a chemical element with the symbol As and atomic number 33.
- Arsenic occurs in many minerals, usually in combination with sulfur and metals, but also as a pure elemental crystal.
- **Arsenic is a metalloid.** It has various allotropes, but only the gray form, which has a metallic appearance, is important to industry.
- The primary use of arsenic is in alloys of lead(for example, in car batteries and ammunition). Arsenic is a common n-type dopant in semiconductor electronic devices. It is also a component of the III-V compound semiconductor gallium arsenide. Arsenic and its compounds, especially the trioxide, are used in the production of pesticides, treated wood products, herbicides, and insecticides. These applications are declining with the increasing recognition of the toxicity of arsenic and its compounds.

Impact of Arsenic Contamination

- Arsenic is **highly toxic in its inorganic form.**
- People are exposed to elevated levels of inorganic arsenic **through drinking contaminated water, using contaminated water in food preparation and irrigation of food crops, industrial processes, eating contaminated food and smoking tobacco.**
- Long-term exposure to inorganic arsenic, mainly through **drinking-water and food, can lead to chronic arsenic poisoning. Skin lesions and skin cancer are the most characteristic effects.**

Arsenic's Effects on the Human Body

Nervous System
Impaired intellectual function
Impaired motor function
Neuropathy

Cardiovascular System
Coronary heart disease
Hypertension
Heart attack

Renal System
Kidney cancer
Bladder cancer

Skin
Skin lesions
Skin cancer

Endocrine System
Diabetes
Impaired glucose tolerance in pregnant women

Respiratory System
Pulmonary tuberculosis
Bronchiectasis
Lung cancer

Liver cancer

Developmental Process
Increased cancer risk as adults
Increased infant mortality
Neurological impairment
Reduced birth weight

High Arsenic Contamination- A grave issue

- A study found that at least 108 countries are affected by arsenic contamination in groundwater. The highest among these are from Asia (32) and Europe (31), followed by regions like Africa (20), North America (11), South America (9) and Australia (4).

- A study by the Indian Institute of Technology, Kharagpur, said that **almost 20 per cent of India's total land area has toxic levels of arsenic in its groundwater, exposing more than 250 million people across the country to the poisonous element.** It is estimated that 20 states and four Union Territories in the country are affected by this problem now, said another study.

- The states of Punjab (92 per cent), Bihar (70 per cent), West Bengal (69 per cent), Assam (48 per cent), Haryana (43 per cent), Uttar Pradesh (28 per cent), and Gujarat (24 per cent) show the highest areal extent of elevated groundwater arsenic zones. Most of these high arsenic areas are mostly located along the **Indus-Ganga-Brahmaputra river basin** and in pockets in Peninsular India.

- A **2015 report by the Central Ground Water Board (CGWB)** states that traces of arsenic contaminated water have been found in 153 districts in 21 states in India are, taking the total number of people residing in arsenic affected areas to approximately 40 million. Apart from causing health hazards, arsenic contaminated water has also disrupted the food chain and its effects have been visible on edible items cultivated near the Ganga basin in Eastern India, where the levels of arsenic have been found to be unusually high.

What Is the Permissible Limit?

- The **recommended limit is 10 10ug/l.** Arsenic contamination in communities across India **has increased by 145 per cent in the past five years,** according to a report by The Guardian.

- In rural parts of the country, it is wreaking havoc in the lives of people.

- Arsenic contamination in India was **widespread in the 1990s in West Bengal and later in Bihar, Jharkhand, Uttar Pradesh, Assam and Manipur.**

Groundwater contamination, India's hidden crisis

- The number of habitations affected by arsenic in India has increased from 3,728 in 2012-13 to 7,535 in 2015-16. This is because of the overuse of groundwater for irrigation and drinking.

- Arsenic previously occurred in a harmless insoluble conjugate with iron called arsenopyrite.

- Overuse has split this compound, contaminating groundwater with a soluble ionic form of arsenic.
- Over-exploitation of groundwater started in India in the 1970s when millions of tube wells were installed in the Ganga delta to prevent diarrhoea from surface water sources such as tanks, ponds and open wells.
- Today, India has over 30 million groundwater extraction points.
- Groundwater is also used for irrigation. This means arsenic poisoning affects not just the people of the area but also those who consume the produce of the affected region. In food, **rice has the highest sensitivity to arsenic followed by vegetables. In most arsenic-affected states rice is the staple.**
- India's large rift-zone contains iron silicon magnetic rocks, which are rich in arsenic. The presence of arsenic containing minerals, such as biotite, magnetite, limonite, olivine, pyroxene, and amphiboles also **elevate arsenic concentrations in groundwater.** Arsenic poisoning through drinking and cooking with arsenic-laden water is reported across the nation.
- **Crops watered with arsenic-laden groundwater contaminate food grains and vegetables**. These contaminated food grains affect people's lives and livelihoods. Prolonged consumption of arsenic laden water and grains can lead to arsenic poisoning, hormonal disturbance, neurobehavioral abnormalities, tumours, and cancers of the liver, prostrate, kidney, lung and bladder. **Arsenicosis is a deteriorating and disabling disease**, which causes skin lesions and pigmentation on skin, palm and soles. Deterioration in physical appearance makes people socially excluded.
- Arsenic contamination at an elevated range in any region **can impact society through disability, poverty and societal stress.** The majority of people affected by arsenic contamination in India live in rural areas and are not aware of the poisoning and possible treatment procedures.

Concern:

Despite the crisis, groundwater contamination by arsenic **does not get the attention it deserves, especially when compared to surface water contamination because the latter is visible.** Moreover, there is no law yet to check groundwater withdrawal.

Tackling the issue
- This severe environmental-health crisis has to be **contained quickly before it can expand.**
- Along with periodic testing of water in affected areas and individualised testing of each hand pump or tubewell (marking it as safe/unsafe), it is important to **encourage**

people to opt for low-cost, local solutions such as rainwater harvesting that can ensure clean drinking water.

- States such as Bihar have set up filtration units but the maintenance of filters has always been a problem. This needs to be addressed.
- Additionally, **governments have to curb the use of groundwater** and **keep a strict control on agricultural and industrial effluents that pollute aquifers that recharge groundwater.**
- Creating awareness and providing proper medical care to arsenic-affected people can help to reduce the poisoning and extend lives.
- Along with **periodic testing of water from affected areas, individualised testing of each hand pump or tubewell (marking it safe/unsafe), it is important to encourage people to opt for low-cost, local solutions like rainwater harvesting** that can ensure clean drinking water.
- The available **arsenic remediation technologies** are precipitation, adsorption, membrane filtration, reverse osmosis, ion exchange, phytoremediation, and biological treatment. But these technologies are highly dependent on electricity and thus are too costly for poor people.
- Apart from these, an in-situ arsenic remediation technology is a permeable reactive barrier. A permeable reactive barrier is a column filled with different materials such as zero valent iron and furnace slag embedded with sulphur reducing bacteria. These columns adsorb arsenic and restrict them from accumulating in water. **These columns can be fixed into the water table. Ignorance of these remedies is a major challenge for India.**

YELLOW FEVER

In News:

A total 1,191 Indians evacuated from strife-torn Sudan have arrived in the country so far. Of these, 117 passengers are currently in quarantine as they were not vaccinated against yellow fever.

Analysis of Background:

Yellow Fever

- Yellow fever is an acute viral haemorrhagic disease transmitted by infected mosquitoes.
- The "yellow" in the name refers to the jaundice that affects some patients.

Causes and risk factors

- A **flavivirus causes yellow fever.**
- It is transmitted by mosquito bite, usually the **Aedes aegypti mosquito**.
- The mosquito becomes infected by biting an infected human or a monkey.
- An infected mosquito is a source of infection for the rest of its life.
- The flavivirus is endemic among monkeys that live in the tree tops of the jungle, known as the jungle canopy, in many parts of Africa and the Americas.

Symptoms

- Symptoms of yellow fever include fever, headache, jaundice, muscle pain, nausea, vomiting, fatigue, jaundice, which gives the skin and whites of the eyes a yellow tinge, kidney failure, liver failure, hemorrhage, bleeding from the nose, mouth, and eyes.
- Between 20 percent and 50 percent of people who develop toxic stage symptoms die within two weeks.

Treatment

- There is no effective antiviral medication to treat yellow fever, so treatment consists of supportive care in a hospital.
- This includes providing fluids, oxygen, making sure blood pressure is adequate, replacing lost blood, kidney dialysis if there is kidney failure, and treating any secondary infections.

Prevention

- In the middle of the 20th century, scientists developed a safe and effective vaccine that prevents yellow fever.

SECURITY

EKATHA HARBOUR

In News:

Defence Minister Rajnath Singh and his Maldivian counterpart, Mariya Didi, **laid the foundation stone for the Maldives National Defence Forces Coast Guard 'Ekatha Harbour'.**

Analysis of Background:

- The development of the Coast Guard Harbour and repair facility at Sifavaru is **one of the biggest grant-in-aid projects of India**.
- This is the first visit of an Indian Defence Minister to the island nation in 11 years.

Location

- It is located at Sifavaru in **Uthuru Thila Falhu (UTF) atoll**, where India is assisting in construction of a naval dockyard.

Background

- The UTF project, announced during External Affairs Minister's visit in February 2021, has been at the centre of a **political controversy in the Maldives.**
- Allegations that the **project was a cover for Indian military presence** in the Indian Ocean nation were part of an "India Out" campaign, backed by the country's Opposition leader Abdulla Yameen.
- Last year, Maldives President Ibrahim Solih banned anti-India protests as a threat to national security.
- Anti-India campaigners allege that **Indian troops were stationed in a fast patrol vessel India recently gifted to Maldives Coast Guard**. The ship was commissioned as CGS Huravee.
- In 2021, the Solih government told a Parliamentary committee on national security that Yameen had signed off on an **Action Plan on Defence Cooperation between Maldives and India** during his 2016 visit to India when he was the island-nation's President.
- The UTF project was one of 10 areas for cooperation outlined in the signed during that visit, and the steps taken by the present government were part of this plan.
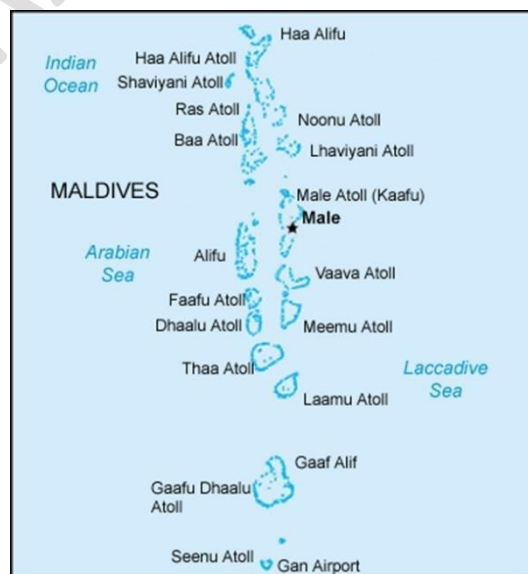
Recent gifts

- In 2020, India had gifted a **Dornier aircraft to Maldives** and in 2019 handed over a **patrol vessel.**
- Last year, New Delhi had also given a **coastal radar system to Male**.
- Last year, Modi had announced that India will provide 24 vehicles and a naval boat and will build police facilities on 61 islands of the country.

Significance

- The handing over of these vessels **are in line with India's vision of Security and Growth for All in the Region (SAGAR)** that seeks to work together with and jointly develop the capabilities of friends and partners for a safe, secure, prosperous and stable Indian Ocean Region.
- Maldives is **among India's key maritime neighbours in the Indian Ocean Region** and New Delhi has been seeking to expand ties with Male — including in areas of defence and security — amid China's efforts to expand its influence in the region.

About Maldives

- The Maldives is an **archipelagic state in South Asia**, situated in the Indian Ocean.
- It **lies southwest of Sri Lanka and India**, about 750 kilometres from the Asian continent's mainland.
- The Maldives' **chain of 26 atolls stretches across the equator from Ihavandhippolhu Atoll in the north to Addu Atoll in the south.**
- Maldives is **one of the world's most geographically dispersed sovereign states** and the smallest Asian country as well as one of the smallest Muslim-majority countries by land area and, the 2nd least populous country in Asia.
- **Malé is the capital** and the most populated city, traditionally called the "King's Island" where the ancient royal dynasties ruled for its central location.
- The Maldivian Archipelago is **located on the Chagos–Laccadive Ridge**, a vast submarine mountain range in the Indian Ocean; this also forms a terrestrial ecoregion, together with the Chagos Archipelago and Lakshadweep.
- The Maldives became a founding member of SAARC. It is also a member of the United Nations, the Commonwealth of Nations, the Organisation of Islamic Cooperation, and the Non-Aligned Movement.
- The World Bank classifies the Maldives as having an **upper-middle income economy**.
- The Maldives was a member of the Commonwealth of Nations from 1982 until withdrawing from the organisation in 2016 in protest of allegations by other nations of its human rights abuses and failing democracy.
- The Maldives **rejoined the Commonwealth in 2020** after showing evidence of functioning democratic processes and popular support.

In News:

A new Battlefield Surveillance System (BSS) under Project Sanjay is in the process of being deployed, after extensive validation carried out in the plains, deserts, and mountains.

Analysis of Background:

Features of the system

- Under BSS, the aim is to have **surveillance centres for all field formations by December 2025**.
- It will **integrate thousands of sensors** which will enable provision of an integrated surveillance picture to commanders and staff at all levels, besides completing the sensor-shooter grid by integrating with the Artillery Combat Command and Control System (ACCCS.
- The system also **integrates data on the movements of India's adversaries** received from various sources across borders, including sensors, satellites, UAVs or unmanned aerial vehicles, and patrols.
- **Bharat Electronics Ltd. (BEL), Ghaziabad, is the project's system integrator**.

Army Information and Decision Support System

- Complementing the BSS is the Army Information and Decision Support System, an **upgraded and redesigned version of the erstwhile Combat Information Decision Support System**, which will integrate inputs from all operational and managerial information systems.
- A decision support system called the **Situational Awareness Module for the Army** (SAMA) has successfully integrated inputs from ACCCS, BSS, e-Sitrep, and the Management Information Systems Organisation.

About Project Sanjay

- Indian Army's BSS, named 'SANJAY', was **conceived to develop an automated system with dedicated intra-communication**.
- It involves integration of surveillance sensors at Division and Corps level on a customized Geographical Information System (GIS) platform with multi sensor data fusion undertaken at the Surveillance Centre for providing inputs to the CIDSS.

Phases

- Phase 1 involved provision of the concept by developing a test bed system, which has been completed and operational validation accorded.

- Phase 2 of Project Sanjay involves equipping all Corps of the Army after successful completion of 'proving phase'.

In News:

The Prime Minister has praised the initiative by Border Roads Organisation Project Dantak to commemorate 64th Raising Day.

Analysis of Background:

About Project Dantak

- It is an **overseas project of the Border Roads Organisation** under the Ministry of Defence of India.
- Project DANTAK was **established on 24 April 1961** as a result of an agreement between Jigme Dorji Wangchuck, the third king of Bhutan and then Prime Minister of India Jawahar Lal Nehru.
- It was established under the provision of the Indo-Bhutan Treaty of Peace and Friendship, 1949.
- The project is involved in **identifying the most important aspects of connectivity and in spurring the socio-economic development and growth of Bhutan.**
- It is tasked to construct and maintain roads suitable for motorised transportation in Bhutan.

About BRO

- The Border Roads Organisation (BRO) is a **statutory body under the ownership of Ministry of Defence, Government of India**.
- BRO develops and maintains road networks in India's border areas and friendly neighboring countries.
- This includes infrastructure operations in 19 states and three union territories (including Andaman and Nicobar Islands) and neighboring countries such as Afghanistan, Bhutan, Myanmar, Tajikistan and Sri Lanka.

Staff

- Officers from the **Border Roads Engineering Service (BRES) and personnel from the General Reserve Engineer Force (GREF)** form the parent cadre of the BRO.
- It is also staffed by officers and troops drawn from the Indian Army's Corps of Engineers on extra regimental employment (on deputation).

Motto

- The organisations motto is **Shramena Sarvam Sadhyam** (everything is achievable through hardwork).

Work

- BRO is instrumental in significantly upgrading and building new India-China Border Roads (ICBRs).
- BRO set a Guinness World Record in November 2021 for the "highest altitude road" at **Umling La.**
- BRO has been instrumental in constructing some of the great Engineering Marvels like Atal Tunnel, **Atal setu, Col Chewang Rinchen Setu** to name a few.

History

- The BRO was **formed on 7 May 1960 to secure India's borders and develop infrastructure in remote areas of the north and north-east states of the country**.
- In order to ensure coordination and expeditious execution of projects, the Government of India set up the Border Roads Development Board (BRDB) with the prime minister as chairman of the board and with the defence minister as deputy chairman.

Role of the BRO

During Peace

- To develop and maintain the operational road infrastructure of General Staff (GS) roads in the border areas.
- To contribute to the socio-economic development of the border states.
- BRO is entrusted for construction of roads, bridges, tunnels, causeways, helipads and airfields.
- The BRO is also in charge of maintenance of its road networks.
- In many places landslides, avalanches and snow block the routes and have to be cleared as quickly as possible.

During War

- To develop and maintain roads to keep line of control through in original sectors and re-deployed sectors.
- To execute additional tasks as laid down by the government contributing to the war effort.

MISCELLANEOUS

TITLE 42

In News:

The **COVID restrictions, known as Title 42**, will expire at the US-Mexico border; it was initially enacted by the former President of the United States Donald Trump in March 2020.

Analysis of Background:

- "Title 42" is a public health order that was invoked by the Trump administration in March 2020 to expel most migrants caught at the U.S.-Mexico border without allowing them to seek asylum.
- The order was based on the premise that migrants posed a risk of spreading COVID-19 in detention facilities and communities. However, many critics argued that Title 42 was a pretext to restrict immigration and violate human rights.

Recent Steps

- President Biden, who promised a more humane approach to immigration, kept Title 42 in place for more than a year, despite legal challenges and pressure from advocacy groups.
- Recently, the USA President announced lifting Title 42. This means that migrants who cross the border will be able to request asylum, a legal right under U.S. and international law.
- The administration expects a surge in border crossings, as many migrants have been waiting in Mexico or other countries for a chance to enter the U.S.
- To prepare, the administration has deployed additional troops and resources to the border and has implemented new measures to deter and deport migrants quickly.
- For example, it plans to issue a new regulation that would deny asylum to most migrants who passed through another country without seeking protection there or who failed to use other legal pathways to enter the U.S.
- The administration also intends to use expedited screenings and removals for certain migrants, such as those who have criminal records or pose security threats.

KHELO INDIA

In News:

The Prime Minister of India inaugurated the Khelo India University Games 2023 via video conferencing. Over 4750 participants from over 200 universities will compete in 21 sports categories during the games.

Analysis of Background:

- The Prime Minister thanked the Uttar Pradesh Government and everyone on the organisation of the Khelo India University Games 2023 and stated that Uttar Pradesh has now become a melting pot of sporting potential.
- According to the Prime Minister, the event has become a fantastic vehicle for **instilling the ethos of 'Ek Bharat Shreshtha Bharat' as well as team spirit.**
- The Prime Minister also stated that approximately 12 National Centres of Excellence have been operationalized, where training and sports science support are provided to boost performance.

Khelo India

- It is a national programme launched by the Government of India in 2018 to promote sports and fitness among the youth of the country.
- It aims to identify and nurture sporting talent, provide them with world-class training and facilities, and create a culture of sports and physical activity in India.

Features

- It provides **annual financial assistance of Rs. 5 lahks per athlete for eight years to selected potential sportspersons under the Khelo India Talent Development Scheme.**
- It **organises the Khelo India Youth Games,** a multi-disciplinary sporting event for under-17 and under-21 athletes, and the Khelo India University Games, a similar event for university students.
- It supports the **creation and upgradation of sports infrastructure** at various levels, such as district, state and national.
- It **implements the Khelo India School Games**, which are competitions among schools in various sports disciplines.
- It conducts mass participation events such as Khelo India Fitness Assessment Programme, Khelo India Pledge and Khelo India Quiz to raise awareness and enthusiasm for sports among the masses.

Significances

- It **helps in developing a sporting ecosystem** in India that can produce world-class athletes and champions.
- It enhances the health and fitness levels of the youth and reduces the risk of lifestyle diseases such as obesity, diabetes and hypertension.
- It **fosters social inclusion and national integration** by bringing together people from different regions, backgrounds and cultures through sports.
- It creates employment opportunities and economic benefits for the sports sector and related industries.
- It boosts the image and prestige of India in the international arena by showcasing its sporting achievements and potential.

Challenges

- The lack of adequate funding and resources to implement the programme effectively and sustainably.
- The poor quality and availability of sports infrastructure and equipment at the grassroots level.
- The low awareness and participation of the people, especially in rural areas, in sports and physical activities.
- The shortage of qualified and trained coaches, trainers, physiotherapists and other support staff for the athletes.
- The issues of doping, corruption, nepotism and politicisation in the sports administration and governance.

Steps need to be taken

- To increase the budgetary allocation and ensure the timely release of funds for the programme.
- To improve the coordination and collaboration among various stakeholders such as central and state governments, sports federations, the private sector, NGOs and media.
- To upgrade the existing sports infrastructure and create new ones as per international standards and norms.
- To expand the reach and coverage of the programme to all parts of the country, especially in remote and backward areas.
- To enhance the quality and quantity of human resources for sports by providing incentives, recognition and opportunities for them.

- To adopt a zero-tolerance policy towards any malpractices or irregularities in the sports sector and ensure transparency and accountability in its functioning.