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green GROWTH

Other topics

- Highlights of Economic Survey and Budget
- Lithium Discovery in India
- Spy Balloons



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A MONTHLY PERIODICAL FOR ASPIRANTS OF UPSC EXAMINATION

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GENERAL STUDIES - I

SANT RAVIDAS

GS-I CULTURE & HERITAGE

Context

- The President of India, Smt. Droupadi Murmu has greeted fellow-citizens on the eve of birthday of Sant Guru Ravidas.

Details

Sant Ravidas:

- Ravidas was an Indian mystic poet-saint of the Bhakti movement during the 15th to 16th century CE.
- Venerated as a guru (teacher) in the modern regions of Uttar Pradesh, Bihar, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Punjab, and Haryana, he was a poet, social reformer and spiritual figure.**
- Scholars believe he was born in 1450 CE.
- He taught removal of social divisions of caste and gender, and promoted unity in the pursuit of personal spiritual freedom.
- Ravidas's devotional verses were included in the Sikh scriptures known as Guru Granth Sahib.**
- The Panch Vani text of the DaduPanthi tradition within Hinduism also includes numerous poems of Ravidas.
- He is also the central figure within the Ravidassia religious movement.

Literary works:

- The Adi Granth and the Panchvani of the Hindu warrior-ascetic group Dadupanthi are the two oldest attested sources of the literary works of Ravidas.
- In the Adi Granth, forty one of Ravidas's poems are included, and he is one of thirty six contributors to this foremost canonical scripture of Sikhism.

Philosophy:

- The songs of Ravidas discuss Nirguna-Saguna themes, as well as ideas that are at the foundation of Nath Yoga philosophy of Hinduism.
- He frequently mentions the term Sahaj, a mystical state where there is a union of the truths of the many and the one.
- Ravidas's poetry is imbued with themes of boundless loving devotion to God, wherein this divine is envisioned as Nirguna.
- In the Sikh tradition, the themes of Nanak's poetry are very broadly similar to the Nirguna bhakti ideas of Ravidas and other leading north Indian saint-poets.

Monistic Brahman or Anthropomorphic God:

- Multiple manuscripts found in Rajasthan and Uttar Pradesh, dated to be from the 18th and 19th centuries, contain a theosophical debate between Kabir and Ravidas on the nature of the Absolute, more specifically whether the Brahman (Ultimate Reality, Eternal Truth) is monistic Oneness or a separate anthropomorphic incarnate.
- Kabir argues for the former. Ravidas, in contrast, argues from the latter premise to the effect that both are one.
- In these manuscripts, Kabir initially prevails, Ravidas accepts that Brahman is monistic, but till the end Kabir didn't accept worshipping a divine avatar (sagun conception).

VISVA-BHARATI UNIVERSITY

GS-I CULTURE & HERITAGE

Context

- Founded by Rabindranath Tagore in 1921, Visva-Bharati University will soon get the 'heritage' tag from UNESCO to take the distinction of world's first living heritage university.

Details

Visva Bharti University:

- When founded in 1921 on 1,130 acres of land, it was named after Nobel Laureate Rabindranath Tagore until Visva-Bharati Society was registered as an organisation in May 1922.
- Rabindranath donated some of his property, including land and a bungalow, to the society.
- Until Independence, it was a college and the institution was given the status of Central University in 1951 through a central Act.**
- Its **first vice-chancellor was Rathindranath Tagore**, the son of Rabindranath Tagore, and the second vice-chancellor was grandfather of another Nobel Laureate economist Amartya Sen.
- Rabindranath believed in open-air education and introduced that system at the university, which prevails to date.
- According to UNESCO website: "In 1922, Visva-Bharati was inaugurated as a Centre for Culture with exploration into the arts, language, humanities, music and these are reflected in diverse institutes that continue in their educational programmes, which are based on the founding principles of excellence in culture and culture studies.

- As originally intended, these serve as institutes for Hindi studies (Hindi Bhavan), Sino-Asian studies (Cheena Bhavan), centre for humanities (Vidya Bhavan), institute of fine arts (Kala Bhavan), and music (Sangit Bhavan)."
- Visva-Bharati was declared to be a Central University and an institution of national importance by an Act of Parliament in 1951.
- The President of India is the Paridarsaka (Visitor) of the University, the Governor of West Bengal is the Pradhana (Rector), and the Prime Minister of India acts as the Acharya (Chancellor).
- The President of India appoints the Upacharya (Vice-chancellor) of the University.

What are World Heritage Sites?

- It is a **landmark or area with legal protection** by an international convention administered by the **United Nations Educational, Scientific and Cultural Organisation (UNESCO)**.
- World Heritage Sites are designated by **UNESCO for having cultural, historical, scientific or other forms of significance**.
- As per the 'Convention concerning the Protection of the World Cultural and Natural Heritage' 1972, UNESCO seeks to **encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity**.
- As of July 2021, a total of 1,154 World Heritage Sites (897 cultural, 218 natural, and 39 mixed properties) exist across 167 countries. With **58 selected areas, Italy is the country with the most sites on the list**.
- **Categories:** A World Heritage Site can be either **cultural or natural areas objects** which are inscribed on UNESCO's World Heritage List for having "**outstanding universal value**".
- These sites are usually considered to have cultural significance to all the people in the world, including future generations.

How are they selected?

- According to **The Operational Guidelines for the Implementation of the World Heritage Convention**, a country must first list its significant cultural and natural sites into a document known as the **Tentative List**.
- The sites selected from that list move onto the Nomination File, which is then evaluated by the International Council on Monuments and Sites and the World Conservation Union.
- Any site that wasn't first included in the Tentative List cannot be nominated.
- The two bodies then make their recommendations to the World Heritage Committee, which consists of diplomatic representatives from 21 countries.
- The committee meets each year to decide whether a nominated property can be inscribed on the World Heritage List.
- The committee makes the final decision if a site meets at least one of the ten selection criteria.

Can a site lose its designation?

- A site **may lose its designation** when the World Heritage Committee determines if it is **not properly maintained or protected**.
- It is first placed in the list of **World Heritage in Danger** as the Committee attempts to find a remedy involving the local authorities. If any remedies fail, the designation is revoked.
- A country can also request the Committee to partially or fully delist a property, generally in such cases when its condition has seriously deteriorated.

How many World Heritage Sites are in India?

- There are **currently 32 cultural, seven natural and one mixed World Heritage Sites** in India.
- **Oldest sites:** Agra Fort, Ajanta Caves, Ellora Caves, and Taj Mahal made it to the list in 1983.
- **Latest sites:** The latest sites to be added to the list Dholavira in Gujarat, Kakatiya Rudreshwara (Ramappa) Temple in Telangana in 2021.
- There are **46 sites in the Tentative List** including a group of monuments at Mandu and the historic ensemble of Orchha in Madhya Pradesh, Satpura tiger reserve, temples of Kanchipuram, temples at Bishnupur in West Bengal, and Sri Harimandir Sahib in Amritsar, Punjab.

Indian Properties inscribed on the World Heritage List (40)

Cultural (32)

- Agra Fort (1983)
- Ajanta Caves (1983)
- Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar (2016)
- Buddhist Monuments at Sanchi (1989)
- Champaner-Pavagadh Archaeological Park (2004)
- Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (2004)
- Churches and Convents of Goa (1986)
- Dholavira: a Harappan City (2021)
- Elephanta Caves (1987)
- Ellora Caves (1983)
- Fatehpur Sikri (1986)
- Great Living Chola Temples (1987,2004)

- Group of Monuments at Hampi (1986)
 - Group of Monuments at Mahabalipuram (1984)
 - Group of Monuments at Pattadakal (1987)
 - Hill Forts of Rajasthan (2013)
 - Historic City of Ahmadabad (2017)
 - Humayun's Tomb, Delhi (1993)
 - Jaipur City, Rajasthan (2019)
 - Kakatiya Rudreshwara (Ramappa) Temple, Telangana (2021)
 - Khajuraho Group of Monuments (1986)
 - Mahabodhi Temple Complex at Bodh Gaya (2002)
 - Mountain Railways of India (1999,2005,2008)
 - QutbMinar and its Monuments, Delhi (1993)
 - Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat (2014)
 - Red Fort Complex (2007)
 - Rock Shelters of Bhimbetka (2003)
 - Sun Temple, Konârak (1984)
 - Taj Mahal (1983)
 - The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement (2016)
 - The Jantar Mantar, Jaipur (2010)
 - Victorian Gothic and Art Deco Ensembles of Mumbai (2018)
- Natural (7)**
- Great Himalayan National Park Conservation Area (2014)
 - Kaziranga National Park (1985)
 - Keoladeo National Park (1985)
 - Manas Wildlife Sanctuary (1985)
 - Nanda Devi and Valley of Flowers National Parks (1988,2005)
 - Sundarbans National Park (1987)
 - Western Ghats (2012)
- Mixed (1)**
- Khangchendzonga National Park (2016)

VIJAYANAGARA EMPIRE

GS-I CULTURE & HERITAGE

Context

- Just six months after being grievously injured by a young religious fanatic, **Salman Rushdie is back with his latest novel, Victory City**. The book is a fictionalised telling of the story of the Vijayanagara Kingdom, narrated by a sorceress and poet named Pampa Kampana, who, over more than two centuries, witnessed Vijayanagara's many victories and defeats.

Details

Kingdom in brief:

- **Founder** - Harihara and Bukka of the Sangama dynasty in 1336.
- **Alternate Names**- Karnata Empire, and the Kingdom of Bisnegar (called by the Portuguese)
- **Ruled till**- 1646. Although its power declined after a major military defeat in the Battle of Talikota in 1565 by the combined armies of the Deccan sultanates.
- **Surrounds**- Hampi, now a World Heritage Site in Karnataka
- **Capital**- Vijayanagara, Penukonda, Chandragiri
- From their capital, now known as Hampi, on the banks of the Tungabhadra river, the kings of Vijayanagara at the peak of their power ruled over a territory of more than 360,000 sq. km.
- It was one of the most powerful kingdoms in the sub-continent.
- Over the course of its existence from 1336 to 1646, the kingdom saw various ups and downs.
- Founded by Harihara I of the Sangama dynasty, Vijayanagara expanded from a strategic position on the banks of the Tungabhadra river. By the 15th century, it had become a force to reckon with.
- The kingdom reached its peak under Krishna Deva Raya (reign 1509-1529), a period in which it enjoyed military superiority to its rival kingdoms such as the Bahmani Sultanate, the Golconda Sultanate and the Gajapatis of Odisha.
- At its peak, the kingdom stretched from Goa in the Konkan coast to parts of southern Odisha in the east and all the way to the very tip of the subcontinent in the south.
- **Common languages:** Kannada, Telugu, Sanskrit

Sequence of Dynasties in Vijayanagara Empire:

- Sangama dynasty
- Saluva dynasty
- Tuluva dynasty
- Aravidu dynasty

Administration in Vijayanagara Empire:

- The Empire was a Monarchy.
- The Vijayanagar Empire gradually developed a centralised administration with all its branches carefully organised.
- The king was the authority in civil, military as well as judicial affairs and also often intervened to settle social disputes.
- For purpose of administration, the empire was divided into 6 provinces.
- A province was called **Prant, or Rajya**.
- Each province was **under a viceroy or Nayak** who was either a member of the royal family or influential noble of the state.

- Every viceroy enjoyed civil, military and judiciary powers within the province.
- He was required to submit regularly account of the income and expenditure to the central government.

Council of Ministers:

- Though the Brahmanas held high offices in the administration and had considerable influence, the ministers were recruited not only from the rank but also from those of the Kshatriyas and the Vaishyas.
- The office of a minister was sometimes hereditary and sometimes rested on selection.

Decentralised administration:

- The rulers of Vijayanagara adopted the principle of the decentralisation of political power.
- The empire was, divided into provinces prants, districts, 'Nadus', 'Melagrams' and 'grams'. Administration of the villages was autonomous.

Local Administration:

- Each village was a self-sufficient unit. The village assembly conducted the administration of the area under its charge- executive, judicial and police, through its **hereditary officers like the senateova or the village accountant, the talara** or the village watchman or the commandant, the **begara or the superintendent** of forced labour and others.
- These village officers were paid by grants of land or a portion of agricultural produce.
- The king maintained a link with the village administration through **his officer called Mahanayakacharya** who exercised a general supervision over it.

Nayankar system of administration:

- Under this system, the ruler assigned a land track to officials in lieu of pay i.e. for maintaining themselves and that of their army from the land track itself.
- These officials or landlords provided military service to the ruler.

Sources of Revenue:

- Land revenue was the chief source of income. Land revenue known as "**sist**".
- Land was divided into four categories for purposes of assessment, wet land, dry land, orchards and woods.
- So, the Vijaynagar rulers adopted the "principle of differential taxation", that is, levied taxes according to the relative fertility of the lands.
- Usually the share was one sixth of the produce.
- Land revenue could be paid in cash or kind.
- The rates varied according to the type of the crops, soil, method of irrigation, etc.
- Apart from land revenue, other taxes were: irrigation tax, grazing tax and import- export duties on merchandise goods.

Military organization:

- The army consisted of infantry, cavalry, artillery and camels.
- The rulers of Vijaynagar had a carefully organised military departments called '**Kandachara**', under the control of the Dandanayaka or Dannayaka (commander - in-chief) who was assisted by a staff of minor officials.
- The State maintained a large and efficient army, the numerical strength of which was not, however, uniform all through.
- The rulers of the Vijayanagara empire neglected naval power.
- The rulers recruited Turkish archers in the army.
- The military organisation was rather weak and its primary weakness was artillery.
- Chariots had gone out of use. The efficiency of the huge army was not proportionate to the number of force.

Orders of the Rulers:

- No written orders were issued by the rulers.
- The royal words were carefully noted down by secretaries, whose record was the sole evidence of the commands issued.

Judiciary:

- The king as the supreme judge, but there were regular courts and special judicial officers for the administration of justice.
- Sometimes, disputes were settled by the State officials with the co-operation of the local bodies.
- The only law of the land was not the law of the Brahmanas, but was based on traditional regulations and customs strengthened by the constitutional usage of the country, and its observance was strictly enforced.
- Severe punishment was inflicted on guilty persons.
- These penalties were chiefly of four kinds- fines, confiscation of property, ordeals and death.
- Death or mutilation was the punishment of crimes like thefts, adultery and treason.

Position of Women:

- Women occupied a high position and took an active part in political, social and literary life of the empire.
- They were educated and trained in wrestling, in the use of various weapons of offence and defense, in music and fine arts.
- Some women also received education of high order.
- Nuniz writes that the kings had women astrologers, clerks, accountants, guards and wrestlers

Social Life:

- The practice of untouchability existed.

- Child marriage, polygamy and sati were prevalent.
- Caste was determined either by individual's occupation or the community they belonged to.

Economy:

- The economy was dependent on Agriculture.
- The empire's capital city was the main business hub.
- The capital city was noted for its markets dealing in spices, textiles and precious stones.
- Land ownership was important.
- Textiles, mining, metallurgy perfumery, and other several industries existed.
- They had commercial relations with, the islands in the Indian Ocean, Abyssinia, Arabia, Burma, China, Persia, Portugal, South Africa, and The Malay Archipelago.

Contribution to Architecture and Literature:

- The Hazara Rama temple and Vittalaswamy temple was built during this period.
- Vijayanagara architecture is the combination of Chalukya, Hoysala, Pandya and Chola styles.
- The bronze image of Krishnadevaraya is a masterpiece.
- Sanskrit, Tamil, Telugu and Kannada literature were developed.
- Sayana wrote commentaries on Vedas.
- Krishnadevaraya wrote **Amuktamalyada in Telugu** and **UshaParinayam and JambavathiKalyanamin** Sanskrit.
- Field surveys indicate that the entire area was dotted with numerous shrines and small temples which proved that variety of cultures existed and were supported by different communities.

About Krishnadevaraya:

- Krishna Devaraya was the emperor of the Vijayanagara Empire during 1509-1529.
- He was the **third ruler of the Tuluva Dynasty** and is considered to be its greatest ruler.
- He possessed the largest empire in India after the decline of the Delhi Sultanate.
- Krishnadevaraya earned the **titles Kannada Rajya Rama Ramana**, Andhra Bhoja and MooruRayaraGanda (lit, "King of Three Kings").
- He became the dominant ruler of the peninsula of India by defeating the Sultans of Bijapur, Golconda, the Bahmani Sultanate and the Gajapatis of Odisha, and was one of the most powerful Hindu rulers in India.
- The Vijayanagar kingdom reached the pinnacle of its glory during his reign.
- He was successful in all the wars he waged. He defeated the king of Odisha and annexed Vijaywada and Rajmahendri.
- Krishnadeva Raya encouraged trade with the western countries.
- He had a cordial relationship with the Portuguese who had at that time established trade centres on the west coast of India.
- The decline of the Vijayanagar kingdom began with the death of Krishnadeva Raya in 1529.
- The kingdom came to an end in 1565, when Ramrai was defeated at Talikota by the joint efforts of Adilshahi, Nizamshahi, Qutubshahi and Baridshahi. After this, the kingdom broke into small states.
- Portuguese travellers **Domingo Paes and FernaoNuniz** also visited the Vijayanagara Empire during his reign.
- The South Indian poet MukuTimmana praised him as the destroyer of the Turks.

His Art and Literature:

- The rule of Krishna Deva Raya was an age of prolific literature in many languages, although it is also known as a **golden age of Telugu literature**.
- Thus, he was not only a great warrior, but was also a playwright and a great patron of learning.
- **Telegu literature flourished under him.**
- Painting, sculpture, dance and music were greatly encouraged by him and his successors.
- Emperor Krishna Deva Raya was fluent in many languages.
- Krishna dev Raya took the title of **Abhinava-Bhoja and Sakala-Kala-Bhoja**("Bhoja of all the arts") in the honour of Parmara emperor Bhoja who was polymath, a master of 64 arts and a military genius.
- The poet MukkuTimma was his great admirer.
- **Ashtadiggajas: A group of eight scholars adorned his court and they were:**
 1. AllasaniPeddanna - the author of Manucharitram, he was also known as Andhra Kavitaipitamaha
 2. Nandi Thimmana - the author of Parijathapaharanam
- MadayagariMallana
 1. Dhurjati
 2. AyyalarajuRamabhadraKavi
 3. PingaliSurana
- RamarajaBhushana
- Tenali Ramakrishna

GRISHNESHWAR TEMPLE

GS-I CULTURE & HERITAGE

Context

- Former U.S. Secretary of State Hillary Clinton visited the historic Ellora Caves in Maharashtra's Aurangabad district during her two-day private visit.

Details

About the temple:

- Grishneshwar* means 'Lord of compassion'.
- It is located in Ellora near Daulatabad in Maharashtra, India.
- This temple has been mentioned in the *Shiva Purana* and *Padma Purana*.
- The site was destroyed by the Delhi Sultanate in the 13th-14th century AD. The temple was reconstructed by Maratha ruler Shivaji's grandfather, MalojuBhisale of Verul, in the 16th century AD.
- The current structure was built by Queen Ahilyabai Holkar of Indore in the 18th century AD after the fall of the Mughal Empire.

Special features of Grishneshwar Temple:

- The temple, built of red rocks, is composed of a five-tier spire or shikara. You can see the Dashavatars (ten avatars) of Lord Vishnu carved in red stone.
- There is a court hall built on 24 pillars on which you will find carvings of various legends and mythologies of Lord Shiva. The sanctum houses the east-facing linga. You will also find a statue of Lord Shiva's mount, Nandi, the bull in the court hall.

Interesting facts about Grishneshwar Jyotirlinga:

- Grishneshwar is also called Ghushmeshwar and Kusumeshwar.**
- Men are required to go bare-chested into the temple.
- This is **the smallest jyotirlinga temple in India.**
- The UNESCO World Heritage site, Ellora caves, is less than a kilometer away.**

Other Jyotirlinga Temples:

- Jyotirlingas* are sacred shrines of Lord Shiva; it is believed that Lord Shiva himself visited these places and hence they have a special place in the hearts of devotees.
- There are 12 of them in India.
- Jyotirlinga* means 'column or pillar of light'. The 'stambha' symbol represents that there is no beginning or end.**
- When Lord Brahma and Lord Vishnu had an argument about who was the supreme god, Lord Shiva appeared as a column of light and asked each one to find the ends. Neither could do it. It is believed that the places where these columns of light fell is where the *jyotirlingas* are located.

11 others:

- | | |
|----------------------------------|--|
| • Somnath - Gujarat | • Vishveshwar/Vishwanath - Uttar Pradesh |
| • Mallikarjuna - Andhra Pradesh | • Triambakeshwar - Maharashtra |
| • Mahakaleshwar - Madhya Pradesh | • Baidyanath - Maharashtra |
| • Omkareshwar - Madhya Pradesh | • Nageshwar - Gujarat |
| • Kedarnath - Himalayas | • Rameshwaram - Tamil Nadu |
| • Bhimashankar - Maharashtra | |

DAWOODI BOHRAS COMMUNITY

GS-I CULTURE & HERITAGE

Context

- The Supreme Court of India referred a petition to a nine-judge bench. **The petition challenged the constitutional validity of the practice of 'excommunicate members' in the Dawoodi Bohra community.**
 - The Supreme Court had upheld the practice in the Sardar Syedna Saifuddin v/s State of Bombay case (1962) and struck down the Bombay Prevention of Excommunication Act (1949), by highlighting that the act violated the fundamental right of a religious denomination to manage its affairs.
 - Now, a Constitution bench said that the 1962 judgment needed a relook.
- The Supreme Court bench held that the review was mainly needed on two grounds:**
 - Balancing the rights under Article 26(b): the right of religious denominations to manage their affairs in matters of religion
 - Under Article 21: whether the practice can be protected under Article 26(b) when tested on the touchstone of constitutional morality.

Details

Dawoodi Bohras:

- The Dawoodi Bohras are Shia Muslims whose leader is known as the Al-Dai-Al-Mutlaq.
- They are mostly self-reliant, and the Bohras are typically traders, businesspersons, and entrepreneurs.
- The word "Bohra", in fact, comes from the Gujarati word *vohrvu* or *vyavahar*, meaning "to trade".
- According to members of the community, **there are around 10 lakhs Dawoodi Bohras spread around the world.**
- Their largest numbers reside in India, Pakistan, Yemen, East Africa, and the Middle East.
- The leader of the Dawoodi Bohra community is recognised by the members as having the right to excommunicate its members. Excommunication means not being allowed to access a mosque belonging to the community or a burial dedicated to the community.

How Draw a Line Between Matters Of Religion And Matters Other Than Religion?

- The 'essential practice' doctrine can be traced to a 1954 decision of the Supreme Court in *Commissioner, Hindu Religious and Charitable Endowments, Madras vs. Sri Lakshmindra Thirtha Swamiar of Sri Shirur Mutt*, commonly known as the 'Shirur Mutt' case.
 - This litigation involved action sought to be taken by the Madras government against a mutt over some disputes over the handling of financial affairs.
 - It was in this context that the court said: "In the first place, what constitutes the essential part of a religion is primarily to be ascertained regarding the doctrines of that religion itself."
- However, this attempt to differentiate what essentially distinguishes a religious matter from other matters was taken up in subsequent judgments to mean that courts are required to distil the essence of religion to see whether a particular practice or act fell under the category of religion or not.
 - Hence, some acts obtained constitutional protection by being declared "essential" to the practice of that religion and some were denied protection on the ground that they were not essential to it.
- In 2016, a three-judge Bench of the Supreme Court upheld the discharge of a Muslim airman from the Indian Air Force for keeping a beard.
- **In *Sardar Syedna Taher Saifuddin Saheb vs. Bombay (1962)***, the Supreme Court struck down a law that prohibited the head of the Dawoodi Bohra community from excommunicating members.
 - The majority ruled that the power of excommunication exercised by the religious head on religious grounds was part of the management of affairs on religious matters, and the Act infringed on the community's rights.
- In the *Sabarimala case (2018)*, the majority ruled that the bar on entry of women in the age group of 10 to 50 was not an essential or integral part of the religion, and denied the status of a separate religious denomination of devotees of Lord Ayyappa.

Way forward

- The Law Commission in its report mentioned that 'Cultural diversity Cannot be Compromised to the extent that our urge for uniformity itself becomes a reason for threat to the unity and integrity of the nation'.
- The difference does not always imply discrimination. Diversity, both religious and regional Should not be Subsumed under the louder voice of the majority.
- **Codification of all religious laws is necessary to avoid controversies related to what is and what is not essential religious practices under the Right to freedom of religion guaranteed by the Indian Constitution.**

AADI MAHOTSAV

GS-I CULTURE & HERITAGE

In News

- The Prime Minister (PM) of India inaugurated the Aadi Mahotsav tribal festival in New Delhi.
 - The PM said that such an event is "giving new heights to unity in diversity".
 - The Prime Minister also paid floral tributes to a statue of tribal freedom fighter Birsa Munda.
- The Mahotsav will place a **special emphasis on exhibiting Shree Anna grown by tribal people because 2023 is being observed as the International Year of Millets.**
 - The United Nations announced 2023 as the International Year of Millets on India's insistence.
 - **To boost the production of millets and increase their exports, GoI is launching several initiatives. One such is the tag name "Shree Anna".** The Indian millets are to be sold under the brand name Shree Anna. To promote this, millets were showcased under the name of "Shree Anna" at the Aadi Mahotsav.
- Apart from millets, the festival also focused on pottery, handloom, jewellery, handloom, etc.

Details

- Addressing the event, the PM said “Today, India goes to some of the world’s biggest stages and presents the Adivasi culture as its own proudly – as a solution to global problems such as climate change and global warming. When people talk about sustainable development, we can proudly say that the world has a lot to learn from the Adivasis,”
- The **Prime Minister also highlighted the important policies taken for the development of tribals.**
 - More than 3,000 Van Dhan Vikas Kendras were set up.
 - 80 lakhs tribal Self Help groups created
 - Increase in the budget for tribal welfare.
 - Promoting Eklavya Model Residential Schools (EMRSs)
 - Increase in the number of forest products that the government was purchasing at the minimum support price.
 - Providing education to Adivasi children.
 - New Education Policy addressed the language barrier, which had been a problem for tribal children, allowing them to learn in their mother tongues.
 - Villages that used to be connected with separatism and extremism are now connected with 4G. The youth are now accessing the Internet and becoming part of the mainstream. This is the stream of Sabka Saath, Sabka Vikas, Sabka Vishwas and SabkaPrayas which reaches every citizen of the country.
- The Aadi Mahotsav 2023 will show and exhibit tribal artefacts, handicrafts, handlooms and other products at the Major Dhyan Chand National Stadium, New Delhi.
- The Tribal Cooperative Marketing Development Federation (TRIFED), an organisation of the **Ministry of Tribal Affairs, has been organising the ‘Aadi Mahotsav’** National Tribal Festival to provide direct market access to the tribal master craftsmen and women in large metros and state capitals.

Tribal Cooperative Marketing Development Federation of India (TRIFED)

- In 1987, TRIFED was established under the Multi-State Cooperative Societies Act, 1984 by the Union Government.**
- It was established as a National level Cooperative body, with the mandate of bringing about socio-economic development of tribals by institutionalizing the trade of Minor Forest Produce (MFP) and Surplus Agricultural Produce (SAP) collected/cultivated by them.
 - TRIFED works as a market developer and service provider.
- Its objective is to ensure the socio-economic development of tribal people by marketing their products on which the lives of tribals depend heavily as they derive a major portion of their income.
- The **approach involves capacity building of the tribal people through sensitization, formation of Self Help Groups (SHGs)** and imparting training to them for undertaking a particular activity, exploring marketing possibilities in national as well as international markets, creating opportunities for marketing tribal products on a sustainable basis and creating a brand.
 - The philosophy behind this approach is to empower tribal people with knowledge, tools and a pool of information so they can undertake their operations more systematically and scientifically.
- To support tribal art and craft it organises the tribal art and craft exhibition called "Aadi Mahotsav"; where tribal craft products from all over the country are exhibited and bought by art lovers.
- The Aadi Mahotsav is TRIFED’s flagship event. It features an exhibition-cum-sale of tribal handicrafts, handloom, paintings, jewellery, cane and bamboo, pottery, food, natural products, and tribal cuisine among other artefacts.

KEELADI FINDINGS

GS-I CULTURE & HERITAGE

Context

- Keeladi is a tiny hamlet in the Sivaganga district in south Tamil Nadu. It is about 12 km south-east to the temple city of Madurai and is located along the Vaigai river. The excavations here from 2015 prove that an urban civilisation existed in Tamil Nadu in the Sangam age on the banks of the Vaigai river.

Details

Sangam Age:

- Sangam Age broadly refers to the Ancient History of the Tamilakam, region **south of the Krishna River.**
- The sources for this age are largely in the literary realm, though archaeological evidences too sprout up over time.
- Kharavelas **Hatigumpha inscription, dated to c. 155 BCE provides the earliest epigraphic evidence** alluding to a confederacy of Tamil states- Tramiradesasanghatanam, which was 113 years old at the time, and had long been a source of danger.
- However, this is only a formative source, as the existence of such a confederacy isn’t attested by literary evidence.

How is Keeladi linked to Sangam age?

- The Sangam age is a period of history in ancient Tamil Nadu which was believed to be from the third century BCE to the third century CE.
- The name is derived from the renowned Sangam poets of Madurai from that time.
- Excavations by the Archaeological Survey of India (ASI) and Tamil Nadu State Archaeology Department (TNSDA) has pushed the Sangam age further back.
- **In 2019, a TNSDA report dated the unearthed artefacts from Keeladi to a period between sixth century BCE and first century BCE.**
- **The findings in the TNSDA report placed Keeladi artefacts about 300 years earlier than the previously believed third century BCE.**
- A recent ASI report by K. Amarnath Ramakrishna, the Superintendent Archaeologist who discovered Keeladi in 2015, has **pushed the Sangam age to 800 BCE based on these archaeological findings.**
- **Keeladi could also provide crucial evidence for understanding the missing links of the Iron Age (12th century BCE to sixth century BCE) to the Early Historic Period (sixth century BCE to fourth century BCE) and subsequent cultural developments.**

Links to Indus Valley

- The unearthed Keeladi artefacts have led academics to describe the site as part of the Vaigai Valley Civilisation.
- The findings have also invited comparisons with the Indus Valley Civilisation while acknowledging the cultural gap of 1,000 years between the two places.
- **Till now, the gap is filled with Iron Age material in south India, which serve as residual links.**
- **However, some of the symbols found in pot sherds of Keeladi bear a close resemblance to Indus Valley signs.** A lot of digging and study has to be done to establish the links between these two civilisations.
- TNSDA affirms that Keeladi has all the characteristics of an urban civilisation, with brick structures, luxury items and proof of internal and external trade.
- It comes across as an industrious and advanced civilisation and has given evidence of urban life and settlements in Tamil Nadu during the Early Historic Period.
- Keeladi has also added to the credibility of Sangam Literature.

Findings

- Unearthing of heaps of pottery suggest the existence of a pottery making industry, mostly made of locally available raw materials.
- Over 120 potsherds containing Tamil Brahmi inscriptions have been found.
- **Keeladi, along with other Tamil Nadu sites which have over a thousand inscribed potsherds, clearly suggest the long survival of the script.**
- Spindle whorls, copper needles, terracotta seal, hanging stones of the yarn, terracotta spheres and earthen vessels to hold liquid suggest various stages of a weaving industry. There also existed a dyeing industry and a glass bead industry.
- Gold ornaments, copper articles, semi-precious stones, shell bangles, ivory bangles and ivory combs reflect the artistic, culturally rich and prosperous lifestyle of the Keeladi people.
- Agate and carnelian beads suggest import through commercial networks while terracotta and ivory dice, gamesmen and evidence of hopscotch have been unearthed revealing their pastime hobbies.

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| SALT LAKE | ELGIN ROAD | BHUBANESWAR



Context

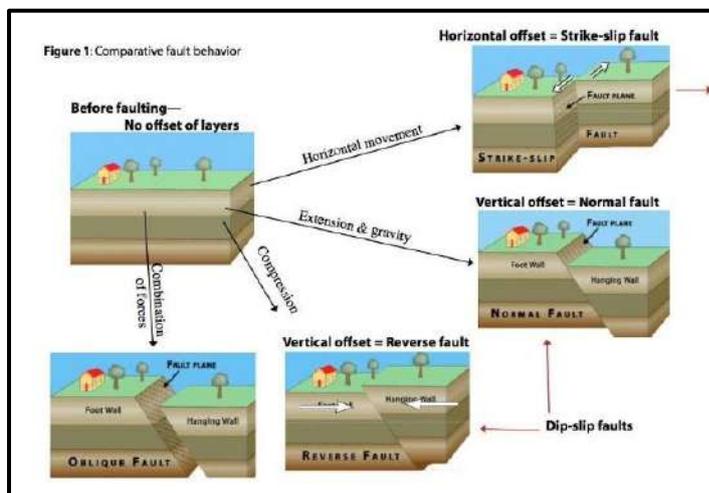
- Three Earthquake measuring -- 7.8, 7.6, and 6.0 -- magnitude on the Richter scale has devastated Turkey and Syria.

Earthquake

- An earthquake is the shaking of the Earth when two blocks of the earth suddenly slip past one another.
- The surface where they slip is called the fault or fault plane.
- The location below the earth's surface where the earthquake starts is **called the hypocenter**, and the location directly above it on the surface of the earth is **called the epicenter**.

Types of Earthquakes

- **Tectonic:** A tectonic earthquake is one that occurs when the earth's crust breaks due to geological forces on rocks and adjoining plates that cause physical and chemical changes.
- **Volcanic:** A volcanic earthquake is any earthquake that results from tectonic forces which occur in conjunction with volcanic activity.
- **Collapse:** A collapse earthquake are small earthquakes in underground caverns and mines that are caused by seismic waves produced from the explosion of rock on the surface.
- **Explosion:** An explosion earthquake is an earthquake that is the result of the detonation of a nuclear and/or chemical device.
- **Reservoir induced Earthquakes:** These occur in the areas of huge reservoirs like dams.

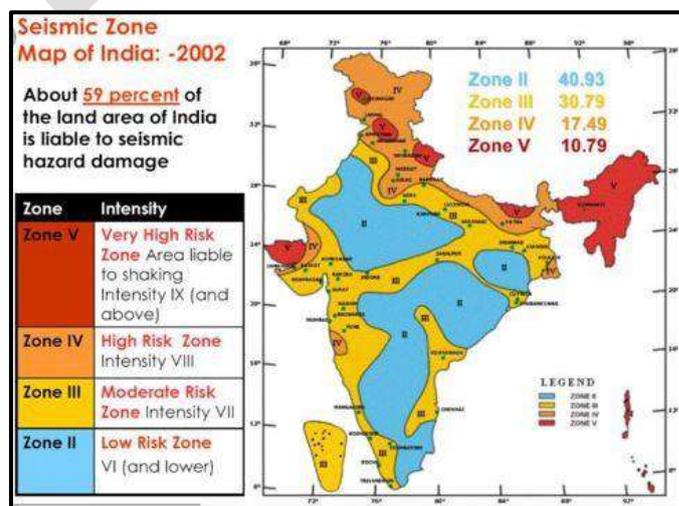


Seismic Zones of India

- Seismic zones in Indian subcontinent is divided into four seismic zones (II, III, IV, and V) based on
- scientific inputs relating to seismicity,
- earthquakes occurred in the past and
- tectonic setup of the region.
- The **Bureau of Indian Standards** is the official agency for publishing the seismic hazard maps and codes.
- It has brought out versions of seismic zoning map: a six zone map in 1962, a seven zone map in 1966, and a five zone map 1970/1984

Seismic Active Zones

- Seismic Zone II
- Seismic Zone III
- Seismic Zone IV
- Seismic Zone



Mercalli Scale: a twelve-point scale for expressing the local intensity of an earthquake, ranging from I (virtually imperceptible) to XII (total destruction).

Richter scale: It is a scale of numbers used to tell the power (or magnitude) of earthquakes.

Types of Seismic Waves

1. **BODY WAVES**

- Traveling through the interior of the earth, body waves arrive before the surface waves emitted by an earthquake. These waves are of a higher frequency than surface waves.
- Body waves are of two types: Primary waves (also called P-waves, or pressure waves) and Secondary waves (S-waves, or shear waves).

P-Waves	S-Waves
Recorded first on the seismograph.	Recorded last on Seismic Waves
Longitudinal waves: Shake the medium in the direction in which they are propagating	Transverse waves: Shake the medium in the direction perpendicular to which they are moving
Compressional waves	Sheer waves
Least destructive	Slightly higher destructive power
Can travel in all mediums; Solid, Liquid and Gas	Can only move through solids
Velocity: 5 to 8 km/s.	60% the speed of P waves
Faster than the S-waves.	Slower
Shadow Zone: 103° and 142° away from the epicentre	Zone beyond 103° does not receive S-waves

2. SURFACE WAVES

- Travelling only through the crust, surface waves are of a lower frequency than body waves. Though they arrive after body waves, it is surface waves that are almost entirely responsible for the damage and destruction associated with earthquakes.
- The two types of surface waves are named Love waves and Rayleigh waves.

India and Earthquakes

- More than 60% of the land in India is prone to moderate to very high-intensity earthquakes.
- Some major past earthquakes in India
 - 1934 Bihar-Nepal Earthquake : 8.4 magnitude
 - 1967 Koyna Earthquake : 6.5 magnitude
 - 2001 Bhuj : 7.7 magnitude
 - 2005 Jammu Kashmir Earthquake

Love Waves
Love waves are transverse waves that vibrate the ground in the horizontal direction perpendicular to the direction that the waves are traveling. They are formed by the interaction of S waves with Earth's surface and shallow structure and are dispersive waves. The speed at which a dispersive wave travels depends on the wave's period. In general, earthquakes generate Love waves over a range of periods from 1000 to a fraction of a second, and each period travels at a different velocity but the typical range of velocities is between 2 and 6 km/second.

Rayleigh Waves
Rayleigh waves are the slowest of all the seismic wave types and in some ways the most complicated. Like Love waves they are dispersive so the particular speed at which they travel depends on the wave period and the near-surface geologic structure, and they also decrease in amplitude with depth. Typical speeds for Rayleigh waves are on the order of 1 to 5 km/s.

The diagram illustrates three types of surface waves. At the top, 'Surface Waves' is labeled. Below it, 'Love Wave' is shown as a transverse wave moving horizontally. 'Rayleigh Wave' is shown as a complex wave moving both horizontally and vertically. At the bottom, another 'Love Wave' is shown moving horizontally.

Causes of Earthquakes in India

- North -East region:** Collision zones of the Himalayan belt and Sumatran belt. Kopili fault is currently the most active seismic zone in North East India.
- Himalayan belt**—Collision between Indo-Austral plate with Eurasian plate and Burma Plate with Java Sumatra.
- Andaman and Nicobar Islands**—Seafloor displacement and underwater volcanoes.
- Deccan Plateau**—Fault line and energy build-up along the fault line of the river Bhima (Krishna) near Latur and Osmanabad (Maharashtra).
- Anthropogenic:** Increasing population and unscientific land use in construction.

Impact of Earthquakes

- Loss of Human Lives
- Change in River Course
- Landslide
- Floods
- Land Slide
- Tsunami
- Floods
- Avalanches
- Damage to property

Steps taken by Government to manage Earthquakes

- National Center for Seismology, Ministry of Earth Sciences: For Earthquake surveillance and Hazard Reporting
- National Earthquake Risk Mitigation Project
- National Building Code (NBC): To regulate building construction
- Building Materials & Technology Promotion Council (BMTPC): **Areas of work-**
- National Retrofitting Program
- 'India Quake' mobile app to disseminate real-time earthquake information.



International Cooperation

- 2019 Shanghai Cooperation Organization Joint Exercise on **Urban Earthquake Search and Rescue-'SCOJtEx-2019'** held in New Delhi.
- BIMSTEC Disaster Management Exercise in Odisha.

- India is a signatory to the Sendai Framework for Disaster Risk Reduction.
- Coalition for Disaster Resilient Infrastructure (CDRI) launched by India at the 2019 UN Climate Action Summit.

Challenges and Gaps in Earthquake management in India

- **Incomprehensive Policies:** Scientific research findings on the Kopili fault earthquake zone have hardly made it into disaster reduction policies. Bridging this gap is key to formulating any meaningful earthquake damage mitigation plans.
- **Hilly and mountainous region:** Retrofitting is difficult and costly in these regions
- **Lack of Skilled Human Resource:** for resistant design and building.
- Poor/no campaign of sensitizing the decision-makers and Government on the need for earthquake preparedness.
- **Lack of formal competency based licensing** of structural engineers and masons.
- Even today most consulting engineers do not follow even the available Indian Standard design provisions for making earthquake-resistant constructions,
- Restricted earthquake engineering and preparedness education.
- **Inadequate monitoring and enforcement** of earthquake-resistant building codes;
- **Faulty construction:** NDMA said that close to 4,000 multi-storied buildings in Ahmedabad won't survive a high magnitude earthquake due to a faulty design.
- **Paucity of funds:** Insufficiency in fund mobilization.
- **Disaster response regime not swift:** Testimony - Uttarakhand floods
- **Lack of awareness:** and training of the local population.

Way Forward

- Strengthening of emergency response capability in earthquake-prone areas.
- Implementation of NDMA guidelines on earthquake in letter and spirit.
- Exclusive earthquake management department.
- Investing in prevention is important, but is not a substitute for preparedness;
- Promotion of traditional Khasi model of houses in the hilly region.
- Single point contact mechanism to address coordination challenges.
- Training and capacity building of Local population at war footing.
- Research and development institutes for Earthquakes.
- **Learning from other countries:** Over the last century, seismic engineering has evolved in countries like Japan, New Zealand and USA, and is reasonably well documented. The Indian professional community can learn from this vast experience available across the world.

The Case of Japan:

- Japan has a long history of devastating natural disasters – from lightning strikes that have destroyed entire castles to the 2011 Tohoku earthquake and tsunami that wiped out entire towns.
- Yet, Japan remains a thriving country. Japan's effective and contextualized Disaster Management System is important **for all countries to see how theory is put into practice.**

GEOMAGNETIC STORM

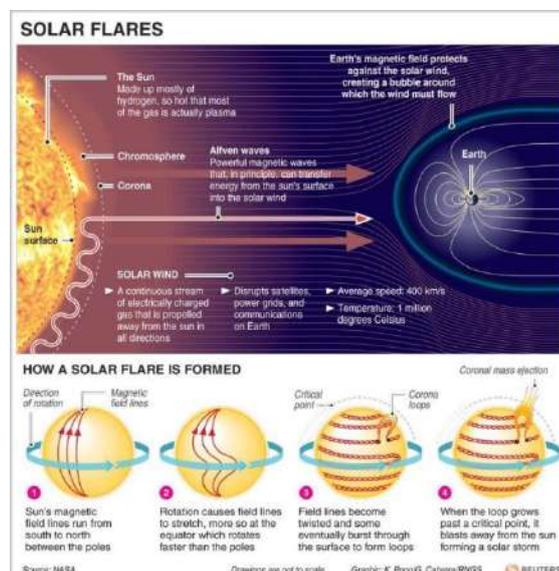
GS-I GEOGRAPHY

Context

- The National Oceanic and Atmospheric Administration revealed that a Geomagnetic storm recently hit Earth and it caused power grid fluctuations & auroras.

About Geomagnetic Storms

- A **geomagnetic storm**, is a temporary disturbance of the Earth's magnetosphere caused by a solar wind shock wave and/or cloud of magnetic field that interacts with the Earth's magnetic field.
- The disturbance that drives the magnetic storm may be a solar coronal mass ejection (CME) or a high-speed stream of solar wind originating from a coronal hole.
- The frequency of geomagnetic storms increases and decreases with the sunspot cycle. During solar maximum, geomagnetic storms occur more often, with the majority driven by CMEs.
- Several space weather phenomena tend to be associated with or are caused by a geomagnetic storm. These include solar energetic particle (SEP) events, geomagnetically induced currents (GIC),



ionospheric disturbances that cause radio and radar scintillation, disruption of navigation by magnetic compass and auroral displays at much lower latitudes than normal.

Hale Cycle

The solar cycle, also known as the solar magnetic activity cycle, sunspot cycle, or **Schwabe cycle**, is a nearly periodic **11-year change in the Sun's activity measured in terms of variations in the number of observed sunspots on the Sun's surface**. Over the period of a solar cycle, levels of solar radiation and ejection of solar material, the number and size of sunspots, solar flares, and coronal loops all exhibit a synchronized fluctuation from a period of minimum activity to a period of a maximum activity back to a period of minimum activity.

The magnetic field of the Sun flips during each solar cycle, with the flip occurring when the solar cycle is near its maximum. **After two solar cycles, the Sun's magnetic field returns to its original state, completing what is known as a Hale cycle.**

Impact on Earth

Not all solar flares reach Earth, but solar flares/storms, solar energetic particles (SEPs), high-speed solar winds, and coronal mass ejections (CMEs) that come close can impact space weather in near-Earth space and the upper atmosphere.

- **Space-dependent services:** Solar storms can hit operations of space-dependent services like global positioning systems (GPS), radio, and satellite communications.
- **Radio communication:** Geomagnetic storms interfere with high-frequency radio communications and GPS navigation systems.
- **Magnetosphere:** CMEs, with ejectiles loaded with matter travelling at millions of miles an hour, can potentially create disturbances in the magnetosphere, the protective shield surrounding the Earth.
- **Astronauts:** Astronauts on spacewalks face health risks from possible exposure to solar radiation outside the Earth's protective atmosphere.
- **Other:** Aircraft flights, power grids, and space exploration programmes are vulnerable.

Do you know?

- The largest recorded geomagnetic storm, the Carrington Event in September 1859, took down parts of the recently created US telegraph network, starting fires and electrocuting telegraph operators. In 1989, a geomagnetic storm energized ground induced currents that disrupted electric power distribution throughout most of Quebec and caused aurorae as far south as Texas.
- **Geomagnetic storm intensity is reported in several different ways, including:**
 - K-index
 - A-index
- The G-scale used by the U.S. National Oceanic and Atmospheric Administration, which rates the storm from G1 to G5 (i.e. G1, G2, G3, G4, G5 in order), where G1 is the weakest storm classification (corresponding to a Kp value of 5), and G5 is the strongest (corresponding to a Kp value of 9).

DEEP SEA MINING AND ITS THREATS

GS-I GEOGRAPHY

Context

- Commercial-scale operations have the potential to damage the oceans in ways we do not fully understand and at the expense of species that have been the focus of conservation efforts for many years, said a preliminary evaluation published in journal *Frontiers in Marine Science*.

Deep Sea Mining

- Deep-sea mining is the process of retrieving mineral deposits from the deep seabed – the ocean below 200 metres – and covers two-thirds of the total seafloor.
- There is growing interest in the mineral deposits of the seabed. This is mainly due to depleting terrestrial deposits of metals such as copper, nickel, aluminium, manganese, zinc, lithium and cobalt. Demand for these metals is also increasing to produce smartphones, wind turbines, solar panels and batteries.
- Polymetallic nodules are a potential mineral resource for copper, nickel, cobalt, iron, manganese, and rare earth elements. These nodules are found in various deep ocean regions, including the deep Pacific and Indian Oceans.
- The nodules are approximately potato-sized and sit on the sediment surface across abyssal plains in the **Clarion-Clipperton Zone (CCZ)**, a region spanning 5,000 kilometres (3,100 miles) across the central Pacific Ocean at depths of 4,000 - 5,500 metres.

Threats posed by Deep Sea Mining

Noise Pollution

- If allowed, commercial-scale mining is expected to operate 24 hours a day, causing noise pollution. The mining noise can overlap with the frequencies at which cetaceans communicate, which can cause auditory masking and behaviour change in marine mammals.

Smother species

- Settlement of sediment plumes generated by mining vehicles could smother the species at the bottom of the ocean, or benthic species, in the vicinity. Sediment discharged from processing vessels can also increase turbidity in the water column.

Harm to cetaceans

- The CCZ is a habitat for cetaceans, including baleen (mysticetes) and toothed whales (odontocetes).
- Up to 30 cetacean populations, including globally endangered species like blue whales, can be found in the CCZ, where 17 exploratory deep-sea mining licenses have been granted.

Way Ahead

- The “two-year rule” clause of the UNCLOS requires to put in place the governance infrastructure - the rules, regulations and procedures governing the contours of deep sea mining within two years (in this case, July 2023).
- In case of failure, it must evaluate the mining proposal by the end of two years.

UNCLOS

The United Nations Convention on the Law of the Sea was adopted in 1982. It lays down a comprehensive regime of law and order in the world's oceans and seas establishing rules governing all uses of the oceans and their resources. It embodies in one instrument traditional rules for the uses of the oceans and at the same time introduces new legal concepts and regimes and addresses new concerns. The Convention also provides the framework for further development of specific areas of the law of the sea.

STEP UP PROGRAMME

2023

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SCIENCE & TECHNOLOGY

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POLITY

GENERAL STUDIES - II

JUDICIAL MAJORITARIANISM

GS-II POLITY

About

- Recently the Constitution bench of the Supreme Court in a majority opinion (4:1) **upheld the Union Government's demonetization order** of 8th November 2016 to **demonetize currency notes** of Rs 500 and Rs 1,000.
- The majority of judges (4:1) accepted all arguments of the Union Government**
 - Section 26(2) of the Reserve Bank of India Act, 1934 gives the Union government the power to demonetize currency "on the recommendation of the Central Board" of the RBI.
 - The majority view found that the word 'recommendation' would mean a consultative process between the Central Board and the Central Government."
 - The judges highlighted that **it cannot be expected that the RBI and the Central Government acted in two isolated boxes. An element of interaction/consultation in such important matters cannot be denied.**
 - The majority verdict states that **curbing fake currency, black money and terror funding are legitimate interests of the state and have a rational nexus with demonetization.**
 - The court said that the Centre is the best judge since it has all the inputs about fake currency, black money, terror financing & drug trafficking.
 - The majority stated that the **court cannot determine the effectiveness of the economic policy.** It agreed with the Centre's contention that the **decision had to be made in secrecy and haste for it to be effective.**
- Justice B V Nagarathna disagreed with the reasoning and conclusions in the majority opinion**
 - The Justice stated that demonetization was a violation of Section 26(2) of the RBI Act as the recommendation for the demonetization originated from the Centre and not the RBI's Central Board.

Judicial Majoritarianism

- Many Social activists criticized the above situation and **raised questions concerning the blind acceptance of numerical majorities in judicial decision-making** and the constitutional disregard of analysis and appreciation of arguments and evidence in dissenting judgments.
- Unlike the standard matters heard by Division Benches consisting of two judges, **numerical majorities are of particular importance to cases which involve a substantial interpretation of constitutional provisions.**
- Constitutional Benches consisting of five or more judges are set up in consonance with Article 145(3) of the Indian Constitution. **Such Benches usually consist of five, seven, nine, 11 or even 13 judges.**
 - This is done to facilitate decision-making by ensuring numerical majorities in judicial outcomes.
- All judges on a particular Bench give their rulings on the same set of facts, laws, arguments and written submissions.
 - Any differences in judicial decisions can be attributed to a difference in either the methodology adopted or the logic applied by the judges in their interpretation, In such circumstances, the majority may fall into either methodological fallacies and errors or be limited by their 'judicial hunch' respectively.
- The absence of a critical discourse on judicial majoritarianism represents one of the most fundamental gaps in our existing knowledge regarding the functioning of our Supreme Court.**
 - As pending Constitutional Bench matters are listed for hearing and judgments are reserved, we must reflect upon the arguments of judicial majoritarianism based on which these cases are to be decided.

PRESIDENT'S ADDRESS

GS-II POLITY

In News

- The President of India "Droupadi Murmu" **addressed the joint sitting of Parliament** for the first time after assuming office in July 2022.
- In her speech, she lauded Prime Minister Narendra Modi's government, saying that it "respects honesty" and is "stable, fearless and decisive, and works to fulfil big dreams".

Historical Background

- In the United Kingdom, the practice of the monarch addressing the Parliament began in the 16th century.
 - In the USA, President George Washington addressed Congress for the first time in 1790.
- In India, **the practice of the President addressing Parliament was started after the implementation of the Government of India Act in 1919.**
 - The act gave the Governor-General of India the right of addressing the Legislative Assembly and the Council of State.
 - It did not have a provision for a joint address but the Governor-General of India did address the Assembly and the Council together on multiple events.
 - There was no address to the Constituent Assembly (Legislative) between 1947 and 1950.
- After the Indian Constitution came into force, the President of India 'Rajendra Prasad' addressed members of Lok Sabha and Rajya Sabha for the first time in January 1950.

Constitutional Provision

- **Article 87 of the Indian Constitution provides two special occasions on which the President addresses a joint sitting.**
 - To address the opening session of a new legislature after a general election.
 - To address the first sitting of Parliament each year.
- A new session of a new or continuing legislature cannot begin without fulfilling this requirement.
- Earlier, the Indian President was required to address each session of Parliament.
 - In 1950, the President of India gave an address before every session.
- In 1951, the **First Amendment to the Constitution made the President's address an annual affair.**

Role of Government

- There is **no set format for the President's or Governor's speech.** The Indian Constitution expresses that the President of India shall "inform the Parliament of the cause of the summons".
 - In the Constitutional Assembly, Prof K T Shah suggested that the President's address be more specific.
 - ✓ His recommendation was inspired by the US Constitution, according to which the President "shall from time to time give to the Congress information on the State of the Union, and recommend to their consideration such measures as he shall judge necessary and expedient".
 - ✓ The Constituent Assembly didn't accept Prof Shah's amendment.
- The President's **address highlights the government's achievements** from the last year and sets the general governance agenda for the coming year.
- The President's **speech is mainly the viewpoint of the government and is also written by it.**
 - Generally, in December, the Prime Minister's Office (PMO) asks the various ministries to send their inputs for the speech.
 - The Ministry of Parliamentary Affairs asks ministries about legislative proposals that need to be included in the President's address.
 - All information is collated and shaped into a speech, which is then delivered to the President of India.

If the President disagrees with some portion of the speech?

- Under the Indian Constitution, the **President or Governor cannot refuse to perform this constitutional duty of delivering an address to the legislature.**
- There can be situations when the President or Governor deviates from the text of the speech prepared by the government.
 - **Till now, there have been no instances of a President doing so.**
- However, there are **many instances when a Governor skipped or changed a portion of the address to the Assembly.**
 - Most recently, Tamil Nadu's Governor made changes to the prepared speech he read out in the Assembly.
 - In 2020, Kerala Governor, during his address to the Assembly, stopped before reading out his speech which related to the Kerala government's opposition to the Citizenship Amendment Bill.
 - In 1969, West Bengal's Governor skipped a few paragraphs of the speech written by the state government.

After the President's address

- After the President's address, the two Houses move a motion to thank the President for her speech.
 - Members in the two Houses debate and raise issues, after that the Prime Minister addresses the house and also replies to the motion of thanks.
- **According to the Article 87 of the Indian Constitution,** "the President should address both Houses of Parliament assembled and tell Parliament of the causes of its summons at the start of the first session after each general election to the House of the People and at the start of the first session of each year".
- **Content of motion of thanks**

- The President's Address is the Government's policy statement, and it is written by the Government.
- The Address includes an assessment of the government's many actions and accomplishments over the previous year, as well as the policies, projects, and programmes that the current government intends to pursue concerning major national and international issues.
- The Address also outlines, in broad terms, the items of legislative business that will be brought forward during the year's sessions.
- The president's message, known as the "speech from the Throne in Britain," is debated in both Houses of Parliament on a resolution known as the "Motion of Thanks."
- The motion is then put to vote and MPs can express their disagreement by moving amendments to the motion.
- **The House must approve the Motion of Thanks. Otherwise, it equates to the government's defeat.** It is one of the methods by which the Lok Sabha can express its dissatisfaction with the government.

PRIVILEGE MOTION

GS-II POLITY

In News

- Recently, a breach of privilege motion was moved against a member of the Rajasthan State Assembly.

Parliamentary Privileges

- Article 105 and Article 194 of the Indian Constitution mentioned certain privileges for the Member of Parliament and State Assembly respectively so that they can perform their duties without any obstruction.
- They are the **special rights, immunities and exemptions enjoyed by the Members of Parliament/State Assembly, its committees and their members.**
 - These privileges do not extend to the president who is also an integral part of the Parliament.
- These privileges are necessary to secure their independence in working.
- **Without these privileges;**
 - The Houses cannot maintain their authority, dignity and honour.
 - The House cannot protect its members from any obstacle in the discharge of their parliamentary responsibilities.
- The Indian Constitution has also extended these privileges to the persons who are authorised to speak and take part in the Parliamentary procedures or any of its committees.
 - These include the attorney general of India and Union ministers.
- **These Privileges can be classified into two broad categories:**
 - Collective Privileges - Those that are collectively enjoyed by the each House of Parliament.
 - Individual Privileges - Those that are individually enjoyed by the members.

Sources of Privileges

- The Parliament, till now, has not made any special law to exhaustively codify all the privileges.
- **At Present, all the privileges are based on 5 sources:**
 - Constitutional provisions.
 - Various laws made by Parliament.
 - Rules of both the Houses.
 - Parliamentary conventions.
 - Judicial interpretations

Collective Privileges

- Parliament/State Assembly has the **right to publish its reports, debates and proceedings and also the right to prohibit others from publishing the same.**
 - The 44th Amendment Act of 1978 restored the freedom of the press to publish true reports of parliamentary proceedings without prior permission of the House.
 - But this is not applicable in the case of a secret sitting of the House.
- It can **exclude strangers from its proceedings and hold secret sittings** to discuss some important matters.
- It can make rules to regulate its procedure and the conduct of its business.
- It can **punish members as well as outsiders for breach of its privileges.**
- It has the right to receive immediate information about the arrest, detention, conviction, imprisonment and release of a member.
- **The courts are prohibited to inquire into the proceedings of a House or its committees.**
- No person (either a member or outsider) can be arrested, and no legal process (civil or criminal) can be served within the House without the permission of the presiding officer.

Individual Privileges

- Members of Parliament/State Assembly **cannot be arrested during the session of Parliament and 40 days before the beginning and 40 days after the end of a session.**
 - **This privilege is available only in civil cases and not in criminal cases or preventive detention cases.**
- They have freedom of speech in Parliament. No member is liable to any proceedings in any court for anything said or any vote given by him in Parliament or its committees.
- They are **exempted from jury service**. They can refuse to give evidence and appear as a witness in a case pending in a court when Parliament is in session.

Privilege Motion

- All Members of Parliament (MPs) enjoy rights and immunities, individually and collectively, so that they can discharge their duties and functions effectively.
- **Any instance when these rights and immunities are disregarded by any member of Lok Sabha or Rajya Sabha is an offence, called 'breach of privilege',** which is punishable under the Laws of Parliament.
- Any member from either house can move a notice in the form of a motion against the member who he/she thinks is guilty of the breach of privilege.
- Both Houses of Parliament reserve the right to punish any action of contempt (not necessarily a breach of privilege) which is against its authority and dignity, as per the laws.

Rules concerning the privilege Motion

- The rules governing the privilege are mentioned in Rule No 222 in Chapter 20 of the Lok Sabha Rule Book and Rule 187 in Chapter 16 of the Rajya Sabha
- The rules explain that any member of the House may, with the consent of the Speaker or the Chairperson, raise a question involving an incident that he or she considers a breach of privilege either of a member or of the House or a committee.

Role of Speaker and Chairperson

- The speaker of Lok Sabha and the Chairperson of Rajya Sabha are the first levels of scrutiny of a privilege motion in the two Houses of Parliament.
- They can either decide on the privilege motion or can also refer it to the privileges committee of Parliament.

History of Privilege Motions in Parliament

- Most of the privilege motions passed in the Parliament in the past have been rejected. Penal actions have been recommended only in a few, so far.
- Among the most significant privilege motions passed so far was in 1978 against Indira Gandhi. Indira Gandhi, who had just won the Lok Sabha elections from Chikmagalur, was expelled from the House
- In 1976, BJP MP Subramanian Swamy was expelled from Rajya Sabha for bringing disgrace to Parliament through his interviews with foreign publications.

JHARKHAND DOMICILE BILL

GS-II POLITY

In News

- The State Governor of Jharkhand has **returned the State domicile Bill; which defines a 'local' in the state based on 1932 land records.**
- The Governor said that the Bill mentions that only local persons, as identified under it, would be eligible for appointment in class 3 and 4 positions of the state government Jobs. **This goes against Article 16 of the Indian Constitution, which guarantees equality in employment.**
 - The Governor also said that only Parliament has been empowered to impose any kind of conditions in matters of employment. The State Legislature does not have this power.

Background

- In September 2022, the **state cabinet of Jharkhand accepted the demand of Adivasi (original inhabitants) to make 1932 the cut-off year for domicile under the title 'Jharkhand Definition of Local Persons and for Extending the Consequential, Social, Cultural and Other Benefits of such Local Persons Bill, 2022'.**
 - State Governments issue the domicile certificate to prove that a person is a resident of a certain State. The procedure for obtaining a domicile certificate varies from State to State.
- In November 2022, the State Assembly of Jharkhand **cleared two Bills;**

- **Increasing reservation** in vacant government posts and services in the state to 77%.
- Use land records with 1932 as the cut-off year to determine domicile status and the definition of 'residents'.
- The '**Jharkhand Reservation of Vacancies in Posts and Services (Amendment) Bill, 2022**', raised the reservation limit to 77%.
 - The Scheduled Castes will get a quota of 12%, up from 10%.
 - 27% for OBCs, up from 14%.
 - 28% for Scheduled Tribes, from 26%.
 - 10% for Economically Weaker Sections.
- '**Jharkhand Definition of Local Persons and for Extending the Consequential, Social, Cultural and Other Benefits to Such Local Persons Bill, 2022**', aimed at granting residents "certain rights, benefits, and preferential treatment" over their land.
- The Chief Minister of Jharkhand said that the provisions of the bill would into force only after the Centre carried out amendments to include these in the 9th Schedule of the Indian Constitution.
 - The 9th Schedule of the Constitution contains a **list of central and state laws which cannot be challenged in courts**.

New Proposed Domicile Policy

- In Jharkhand; various tribal groups have been demanding 1932 as the cut-off year because that year the land survey and revenue register was done in large parts of the State.
- According to the proposed domicile policy, people who have their names or their ancestor's name in the land records of 1932 or before, will be considered local inhabitants of Jharkhand.
 - Those who have lost their land records or have land records which are illegible or are landless people can approach their respective Gram Sabhas for their inclusion.
- The **State government argues that 1932 was fixed as the cut-off year for domicile policy as the migration from other States (undivided Bihar) had negatively affected the "original inhabitants."**
 - Since the 1941 census, The percentage of the population of the aboriginals/[STs] has been a steady decline in Jharkhand.
 - The government stated that affirmative action at the policy level is needed for the development of STs and the identification of local persons is necessary to provide social, cultural, and educational services and other benefits".
- Several Political parties and social activists have raised concern that marking 1932 as the only cut-off year for domicile policy would leave lakhs of citizens of the State as "refugees".

Why State asked the Union to include the bill in the 9th Schedule?

- The **77% reservation breaches the 50% ceiling set by the Supreme Court in the 1992 Indra Sawhney v Union of India verdict. However, including legislation in the 9th Schedule protects it from judicial scrutiny.**
- **Not the 1st time**
 - The Tamil Nadu Backward Classes, Scheduled Castes and Scheduled Tribes (Reservation of Seats in Educational Institutions and Appointments or Posts in the Services under the State) Act, 1993, reserves 69% of the seats in colleges and jobs in the state government.
 - When it ran into legal obstacles in the 1990s after the Supreme Court verdict, the then Chief Minister led a delegation to meet the then Prime Minister. The **reservation provision was then included** in the 9th Schedule.

What is the Ninth Schedule?

- **After independence, zamindari abolition and land reform laws were passed, but the Government faced several problems, the land legislation was challenged in the various courts.**
 - The first case challenging the land law was **Kameshwar Singh V/s State of Bihar**, in this case, the Bihar Land Reforms Act 1950 was challenged on the ground that the classification of zamindars made to give compensation was discriminatory and denied equal protection of laws guaranteed to the citizen under Article 14 of the Constitution.
 - The Patna High Court held this piece of legislation as violative of Article 14 as it classified the zamindars for payments of compensation in a discriminatory manner.
- **As a result of these judicial pronouncements, the Government amended the Constitution in the year 1951 which inserted the 9th Schedule.**
- The 9th Schedule contains a list of Union and state laws which cannot be challenged in court. Currently, 284 such laws are shielded from judicial review.
 - Most of the laws protected under the Schedule concern agriculture/land issues.

What the law says

Article 102 (1)(a) says a person shall be disqualified from being a member of either House of Parliament if he holds any office of profit, among other grounds

Article 103 says if a question arises whether a member has incurred such disqualification, it will be referred to the President's decision. The President shall obtain the Election Commission's opinion and act accordingly

Article 191(1) contains a similar provision for MLAs and MLCs in the States. Legislators in Delhi are covered by corresponding provisions in the Government of National Capital Territory Act, 1991



- While the Ninth Schedule provides the law with a “safe harbour” from judicial review, the **protection is not blanket**.
- In **IR Coelho v State of Tamil Nadu** case, the Supreme Court ruled in a unanimous nine-judge verdict that while laws placed under Ninth Schedule cannot be challenged on the grounds of violation of fundamental rights, they can be challenged on the ground of violating the basic structure of the Constitution.

OFFICE OF PROFIT**GS-II POLITY****Context**

- The Governor of Jharkhand was recently appointed as the Governor of Maharashtra.
- **The Governor left the Raj Bhavan in Ranchi without disclosing the Election Commission’s opinion on whether the current Chief Minister of Jharkhand should be disqualified for allegedly allocating a mining lease to himself when he was the mining and forest minister of Jharkhand.**
 - The Governor maintained silence on the EC’s opinion for more than five months since August 2022.
- The EC’s communication to the Governor is confidential, but information from unofficial sources widely believed that the EC had recommended the disqualification of the Chief Minister of Jharkhand.
 - However if the Governor had acted upon the EC recommendation, it would have led to immediate political instability in Jharkhand.
- It is now up to the new Governor of Jharkhand to act on the EC’s opinion in this matter.

Allegations against the Chief Minister

- In February 2022, the **Opposition parties accused the Chief Minister of Jharkhand of “misusing his post” to get “in-principle approval” for a stone quarrying lease.**
 - He violates the provisions of The Representation of the People Act, of 1951 and the Prevention of Corruption Act, of 1988.
- **Opposition parties filed a petition in the Jharkhand High Court to prosecute the CM.** The court defined the allegations as serious and asked the government to file a response.
 - The **Jharkhand government admitted that it had committed “a mistake”,** and after that, the Chief Minister had “disassociated himself from by surrendering the lease in November 2022.

Under which law the matter was referred to the Election Commission?

- **Articles 191 and 192 of the Indian Constitution deal with “Disqualifications for membership” of a state Legislative Assembly or Council,** and “Decision on questions as to disqualifications of members” respectively.
 - **Article 191(1) expresses** that “a person shall be disqualified for being chosen as, and for being, a member” of a state House “if he holds any office of profit under the Government of India or the Government of any State..., other than an office declared by the Legislature...not to disqualify its holder”.
 - **Article 192(1) says** that if “any question arises as to whether a member...has become subject to...disqualification..., the question shall be referred for the decision of the Governor and his decision shall be final”.
 - Under Article 192(2), “Before giving any decision on any such question, the Governor shall obtain the opinion of the Election Commission and shall act according to such opinion.”

Election Commission's opinion on this matter

- In August 2022, the Commission sent its opinion to the Governor in a sealed envelope. **The opinion is not in the public domain.**
- Sources have claimed that the Commission recommended the “disqualification” of the CM from the membership of the Jharkhand House.
 - However, despite repeated demands to disclose the EC’s recommendation, the Governor declined to make the EC’s opinion public or to act on it.

Is the Governor bound to act on the EC’s recommendation?

- Article 192(2) of the Indian Constitution says that the Governor “shall act” according to the EC’s opinion.
 - However, it does not lay down a time frame for the Governor to act.

Office of Profit

- Members of Parliament (MPs) and Members of the Legislative Assembly (MLA), as members of the legislature, hold the government accountable for its work.
- **Under the Representation of People Act, holding an office of profit is grounds for disqualification.**
- **The rationality behind the disqualification under the office of profit law is that if legislators hold an ‘office of profit’ under the government, they might influence the government, and may not discharge their constitutional duty.**

- Disqualification under “office of profit” ensures that there should be no conflict between the duties and interests of an elected member.
- Disqualification based on the office of profit **upholds the principle of separation of power between the legislature and the executive**; an essential feature of the Indian Constitution.
- Under Article 102 (1) and Article 191 (1) of the Indian Constitution, an MP or an MLA (or an MLC) is barred from holding any office of profit under the central or state government, but Indian Constitution or any law does not clearly define what constitutes an office of profit, the definition has evolved over the years with various court judgments.
 - **An office of profit is defined as a position that brings to the officeholder some financial gain, advantage, or benefit.**
- The **Supreme Court ruled that several questions need to be considered in deciding the matter of office of profit:**
 - Whether the government is the appointing authority.
 - Whether the government has the power to terminate the appointment.
 - Whether the government determines the remuneration.
 - What is the source of remuneration?
 - The power that comes with the position.

The new appointments	
Justice S Abdul Nazeer Andhra Pradesh	Lakshman Prasad Acharya: Sikkim C P Radhakrishnan: Jharkhand Shiv Pratap Shukla: Himachal Pradesh
Ramesh Bais Maharashtra	Lt Gen KT Parnaik (retd): Arunachal Pradesh
Brig (Dr) BD Mishra (Retd) Ladakh	Biswa Bhusan Harichandan: Chhattisgarh Phagu Chauhan: Meghalaya Rajendra Vishwanath Arlekar: Bihar
Gulab Chand Kataria Assam	Anusuiya Uikye: Manipur La Ganesan: Nagaland

Other reasons for the Disqualification of the member

- If he holds any office of profit under the Union or state government.
- If he is of unsound mind and stands so declared by a court.
- If he is an undercharged insolvent.
- If he is not a citizen of India or has voluntarily acquired the citizenship of a foreign state or is under any acknowledgement of allegiance to a foreign state.
- If he is so disqualified under any law made by Parliament.
- The **Parliament has prescribed several additional disqualifications in the Representation of People Act (1951).**
 - He must not have been found guilty of certain election offences or corrupt practices in the elections.
 - He must not have been convicted for any offence resulting in imprisonment for two or more years. But, the detention of a person under a preventive detention law is not a disqualification.
 - He must not have been dismissed from government service for corruption or disloyalty to the state.
 - He must not have been convicted for promoting enmity between different groups or for the offence of bribery.
 - He must not have been punished for preaching and practising social crimes such as untouchability, dowry and sati.
- To decide whether a member has become subject to any of the above disqualifications, **the governor’s decision is final.**
 - However, Governor should obtain the opinion of the Election Commission and act accordingly.
- Indian Constitution also lays down that a person shall be disqualified from being a member of either House of state legislature if he is so disqualified on the ground of defection under the provisions of the 10th Schedule.
 - The **question of disqualification under the 10th Schedule is decided by the Chairman, in the case of the legislative council and, the Speaker, in the case of the legislative assembly (and not by the governor).**
 - The decision of the **Chairman/Speaker is subject to judicial review.**

Way forward

- In modern polity, the concept of separation of power becomes too thin because the government function becomes so wide that the government can't work in its limited power which is given to the government.
- We must bear in mind the objective of the disqualification under ‘the office of profit’ is to avoid conflict between the different branches of the state.
- **The need of the hour is to enact a comprehensive national law to clearly define the ‘office of profit’.**

APPOINTMENTS OF GOVERNORS

GS-II POLITY

Context

- The President of India has appointed new Governors in 12 states and the Union Territory of Ladakh. This includes both first-time appointments as well as transfers of Governors from one state to the other.
- **New appointments;**
 - Lt Gen KT Parnaik as Governor of Arunachal Pradesh.
 - Lakshman Prasad Acharya as Governor of Sikkim.
 - C P Radhakrishnan as Governor of Jharkhand.
 - Shiv Pratap Shukla as Governor of Himachal Pradesh.
 - Gulab Chand Kataria as Governor of Assam.
 - Justice (Retd.) S Abdul Nazeer as Governor of Andhra Pradesh.
- **Transfers of Governors;**
 - BiswaBhusanHarichandan (Governor of Andhra Pradesh) has been appointed Governor of Chhattisgarh.
 - AnusuiyaUikye (Governor of Chhattisgarh) has been appointed as Governor of Manipur.
 - La. Ganesan (Governor of Manipur) has been appointed as Governor of Nagaland.
 - Phagu Chauhan (Governor of Bihar) has been appointed as Governor of Meghalaya.
 - Rajendra Vishwanath Arlekar (Governor of Himachal Pradesh) has been appointed as Governor of Bihar.
 - Ramesh Bais (Governor of Jharkhand) has been appointed as Governor of Maharashtra.
 - B D Mishra (Governor of Arunachal Pradesh) appointed as Lt Governor of Ladakh.

Governor

- **Part VI of the Indian constitution deals with the state executive under Articles 153 to 167.**
 - The Governor, the chief minister, the council of ministers, and the state's attorney general comprise the state executive.
- Article 153 of the **Indian constitution requires that there shall be a Governor for each State.**
 - Normally, each state has its governor, but the **7th constitutional Amendment Act of 1956 made it easier to appoint the same individual to serve as governor of two or more states.**
- Article 154 vests the executive power of the State in the Governor.
- Article 155 says that the Governor of a State shall be appointed by the President by warrant under his hand and seal.
- Article 156 provides that –The Governor shall hold office at the pleasure of the President.
- Article 157 lay down two **qualifications for the office of the Governor:**
 - He should be a citizen of India.
 - Must have completed the age of 35 years.
- The term of the Governor is prescribed as 5 years.
 - He can quit at any time by writing the President a letter of resignation.
- Article 158; **Conditions of the Governor's office as the following:**
 - Shall not be a member of either House of Parliament or State Legislature, and if such a member is appointed Governor, he shall be deemed to have vacated his seat in that House on the date on which he enters upon his office as Governor.
 - Shall not hold any other office of profit.
- The Governor has to take oath/affirmation before entering upon his office, in the presence of the Chief Justice of the High Court exercising jurisdiction to the State, or, in his absence, the senior-most Judge of that Court available to faithfully discharge the functions.

Executive Powers of Governors

- The Governor is the chief executive of the state; all executive actions must be conducted in his or her name.
- **The executive power of the state is vested in the Governor.**
- He exercises it either directly or through officers subordinate to him.
- It has been held that ministers are officers subordinate to them.
- The executive power of the state extends to all matters concerning which the State Legislature has the power to make laws.
- All executive is expressed to be taken in the name of the Governor.

Legislative Powers of Governors

- **The Governor is a part of the state legislature (Art. 168). He undertakes the following legislative tasks in this capacity:**
 - The legislative Assembly is summoned, prorogued, and then dissolved.
 - Right to speak to and send messages to the legislature.
- **No Bill can become law unless it receives the Governor's approval.**

- He has the option of giving his consent, withholding his assent, or exercising his pocket veto over a state bill.
- **He lays the reports of the State Finance Commission, the State Public Service Commission and the Comptroller and Auditor General relating to the accounts of the state, before the state legislature.**

Financial Power of Governors

- **The annual financial statement is put before the legislature (Art-202).**
- Without the Governor's permission, a money bill cannot be introduced in the State Legislative Assembly.
- **In the name of the Governor, the annual and supplemental budgets are introduced in the Assembly.**
- **No grant request can be made unless he recommends it.**
- The State Contingency Fund is under the jurisdiction of the Governor, and it cannot be used without his approval.

Judicial Power

- **According to Article 161**, the Governor has the authority to suspend, remit, or commute the sentence of anyone guilty of violating the law that the state's executive power extends.
 - **Pardon:** the accused is fully free of any consequences.
 - **Reprieves** are temporary halts in the execution of the punishment.
 - **Respite** is a reduction of the severity of a penalty for a specific reason.
 - **Remission:** a reduction in the length of a sentence without changing its nature.
 - **Commutation** is the process of substituting one form of punishment for a less severe one.

Concern

- **Misuse of discretionary powers:** States allege that the Governor acts on behalf of the Union government for political gains.
- **Appointment by Centre:** The post has become a retirement package for politicians.
- **Arbitrary removal before the expiration of their tenure:** Even after the Supreme Court Judgement in B.P. Singhal v/s Union of India, a fixed tenure for Governors to encourage neutrality and fairness in the discharge of their duties, is not being implemented on the ground.

Way Forward

- **Punchhi Commission** elaborated that the governor should follow "Constitutional Conventions" in a case of a hung Assembly.
- **Bomma Case** mentioned that the discretion of the Governor does not apply to hung assembly but it emphasized floor tests in the house within 48 hours.
- **Sarkaria Commission recommended that;**
 - The governor must be an important figure.
 - He must be a distant person who has no strong political ties or has not recently participated in politics.
 - He must not be a member of the ruling party.
 - If possible, the governor's term should be five years.
 - He should only be dismissed before his term for reasons stated in the constitution, or for reasons such as his morality, dignity, or constitutional order.
- The constitution does not allow the governor to run a parallel government and does not hold him personally responsible for his actions as governor.
- The governor must be a high constitutional authority, function within the terms of the constitution, and be a friend, philosopher, and leader of his government.

NATIONAL COMMISSION FOR SCHEDULED TRIBES (NCST)

GS-II POLITY

Context

- The Union Ministry of Tribal Affairs (MoTA) presented a report in the Lok Sabha that disclosed that currently, the National Commission for Scheduled Tribes (NCST) is functioning with less than 50% of its approved strength.

Key findings of the report

- The report highlighted that the National Commission for Scheduled Tribes (NCST) rules provide for the ST panel to have one Chairperson, one Vice-Chairperson, and 3 Members (2 among VC and Members must be from the ST community), but **currently the commission is functioning with just a Chairperson and one Member, with all other positions, are vacant for the last 3 years.**
- **As on 31st January 2023;**
 - The total sanctioned posts for the commission are 124, but only 54 posts are filled and 70 are still vacant.
 - Group A posts in the NCST are filled by the Ministry of Tribal Affairs, and Groups B and C posts are the NCST's

responsibility.

- The commission has sanctioned one Superintendent of Police, one Law Officer and one Accounts Officer (all Group A posts), but no appointments are made to the post since 2004, and also the recruitment rules for them have not been framed yet.
- **Several key positions like Research Officers, Investigators and Directors are vacant.**
- Many positions in the Commission Secretariat are also vacant.
- The vacancy affected the functioning and effectiveness of the Commission.

Government Response

- In the Parliament, the Government responded by making a statement that “the Ministry of Tribal Affairs and National Commission for Scheduled Tribes are in the process of filling vacant positions on a priority basis.”

National Commission for Scheduled Tribes (NCST)

- The National Commission for Scheduled Tribes (NCST) was established by amending Article 338 and inserting a new Article 338A in the Indian Constitution through the 89th Constitution Amendment Act, of 2003.
- By the 89th amendment, the erstwhile National Commission for Scheduled Castes and Scheduled Tribes was replaced by two separate Commissions namely;
 - The National Commission for Scheduled Castes (NCSC).
 - The National Commission for Scheduled Tribes (NCST).
- **The separate National Commission for STs came into existence in 2004.**
 - It consists of a chairperson, a vice-chairperson and three other members.
 - They are appointed by the President by warrant under his hand and seal.
 - Their conditions of service and tenure of office are also determined by the President
- The term of office of the Chairperson, Vice-Chairperson and each member is 3 years from the date of assumption of charge.
 - The Chairperson has been given the rank of Union Cabinet Minister, the Vice-Chairperson that of a Minister of State and other Members have the rank of Secretary to the Government of India.

The functions of the Commission are

- To investigate and monitor all matters relating to the constitutional and other legal safeguards for the STs and to evaluate their work.
- To inquire into specific complaints concerning the deprivation of rights and safeguards of the STs.
- **To participate and advise on the planning process of socio-economic development of the STs** and to evaluate the progress of their development under the Union or a state.
- To recommend measures that should be taken by the Union or a state for the effective implementation of those safeguards and other measures for the protection, welfare and socio-economic development of the STs.
- To discharge such other functions concerning the protection, welfare and development and advancement of the STs as the President may specify.
- The **President specified that the Commission would also discharge the following other functions concerning the protection, welfare and development & advancement of the Scheduled Tribes, namely:-**
 - Measures to be taken over conferring ownership rights in respect of minor forest produce to STs Living in forest areas.
 - Measures to be taken to safeguard the rights of the tribal communities over mineral resources, water resources etc., as per law.
 - Measures are to be taken for the development of tribals and to work for more viable livelihood strategies.
 - Measures to be taken to reduce and ultimately eliminate the practice of shifting cultivation by tribals that lead to their continuous disempowerment and degradation of land and the environment
- The Commission presents an annual report to the President. The President places all such reports before the Parliament, along with a memorandum explaining the action taken on the recommendations made by the Commission.
 - The memorandum should also contain the reasons for the non-acceptance of any of such recommendations.
 - The President also forwards any report of the Commission about a state government to the state governor.
 - ✓ The governor places it before the state legislature, along with a memorandum explaining the action taken on the recommendations of the Commission.
 - ✓ The memorandum should also contain the reasons for the non-acceptance of any of such recommendations.

Powers of the Commission

- The Commission is vested with the power to regulate its procedure.
- The Commission, while investigating any matter or inquiring into any complaint, has all the powers of a civil court trying a suit and in particular in respect of the following matters:
 - Summoning and enforcing the attendance of any person from any part of India and examining him on oath.

- Requiring the discovery and production of any document.
- Receiving evidence on affidavits.
- Requisitioning any public record from any court or office.
- Issuing summons for the examination of witnesses and documents.
- Any other matter which the President may determine.
- The Central government and the state governments are required to consult the Commission on all major policy matters affecting the STs.

SECTION 69 (A) OF IT ACT

GS-II POLITY

Context

- Under Section 69(A) of the Information Technology Act, 2000, the Union Ministry of Electronics and Information Technology (MeitY) recently issued orders to block 138 online betting platforms and 94 money lending apps on an "urgent" and "emergency" basis.
 - The decision to block these platforms was based on a recommendation of the Ministry of Home Affairs (MHA), which had received inputs from central intelligence agencies that some of the sites and apps were allegedly linked to China and contained "material prejudicial to the sovereignty and integrity of India".
- Several police complaints have been received of extortion and harassment from people who borrowed small amounts through such money-lending apps.
 - For example- The Cyber Police Station of Pune received 699 complaints of loan app crimes in 2020. The number increased to 928 in 2021.

Section 69A of the IT Act 2000

- Section 69A of the Information Technology (IT) Act empowers the government to restrict access to any online content to protect the interest of;
 - Sovereignty and Integrity of the Nation.
 - Security of the State.
 - Friendly relations with foreign states.
 - Public order.
- All orders to restrict information or content **must be recorded in writing**.
- Social media intermediaries failing to comply with the rules and regulations are liable to be **monetarily penalized along with an imprisonment term which may extend up to 7 years**.
- The procedures for executing the provisions of the act are mentioned in the Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009.
 - **Step 1:** It mentioned that an officer along with an examination committee reviews the content in question within 48 hours of receiving the takedown request.
 - **Step 2:** Provide an opportunity to the author or originator of the content for clarification.
 - **Step 3:** The recommendations are then sent to the Secretary of the Dept of Information Technology for approval and then a request is forwarded to the social media intermediary for restricting access.
- Emergency provisions specify that clarification is required within 48 hours after the content has been blocked for specified reasons.
 - **Blocking Orders can be revoked after review or examination.**
- Rule 16 of the act states that strict **confidentiality should be maintained on all requests and actions taken**, but without compromising transparency and accountability.
- **The Act complies with Article 19 of the Indian Constitution** which guarantees freedom of speech and expression. However, **Clause 2 of the article allows the state to impose reasonable restrictions for the same reasons as those for Section 69A.**

Concern

- The **Confidentiality Clause under the act is preventing legal challenges to content-blocking orders**; it is difficult to understand the Government's reasoning.
- It **doesn't come under the purview of the Right to Information (RTI)**, recently Bharat Sanchar Nigam Limited (BSNL) rejected many RTI requests that asked for the list of blocked websites.
- The lack of transparency, Clear guidelines and a monitoring mechanism under the act mean that there are various forms of arbitrary behaviour involved.
- The concerns are raised mainly when the orders are aimed at blocking individual accounts and not the specific content.

Way Forward

- The Supreme Court in the Superintendent, Central Prison, Fatehgarh vs Ram Manohar Lohia (1960) case has stated **that restrictions made in the public interest must include a reasonable connection with the purpose being achieved.**
- In Shreya Singhal vs Union of India (2012) the **Supreme Court stated a mandatory hearing for the author of the content as well as the intermediary.** It is also guaranteed under Rule 8 of the act.
- **India needs clarity about the rationality behind limitations and restrictions of free speech** which may also guide legislative drafting and judicial decisions in the future.

PRESIDENT'S RULE

GS-II POLITY

Context

- The Prime Minister of India stated in the Rajya Sabha that Union governments in the past had dismissed 90 elected state governments by “misusing” Article 356 of the Indian Constitution.

Emergency Provisions in the Indian Constitution

- **The Emergency provisions are contained in Part XVIII of the Constitution, from Articles 352 to 360.**
 - **These provisions enable the Central government to meet any abnormal situation effectively.**
- The rationality behind the incorporation of these provisions in the Constitution is to safeguard the sovereignty, unity, integrity and security of the country, the democratic political system, and the Constitution.
- **During an Emergency, the Central government becomes all-powerful and the states go into total control of the Centre.** It converts the federal structure into a unitary one without a formal amendment of the Constitution.
- This kind of transformation of the political system from federal during normal times to unitary during Emergencies is a unique feature of the Indian Constitution.
- **Indian Constitution prescribed three types of emergencies:**
 - **An emergency due to war, external aggression or armed rebellion (Article 352). This is popularly known as a ‘National Emergency’.**
 - ✓ However, the Constitution employs the expression ‘proclamation of emergency’ to denote an emergency of this type.
 - **An Emergency due to the failure of the constitutional machinery in the states (Article 356). This is popularly known as ‘President’s Rule’.**
 - ✓ It is also known by two other names—‘State Emergency’ or ‘constitutional Emergency’. However, the Constitution does not use the word ‘emergency’ for this situation.
 - Financial Emergency due to a threat to the financial stability or credit of India (Article 360).

Article 356 of the Indian Constitution

- The article says about the **emergency provisions due to the failure of the constitutional machinery in the states, this is popularly known as ‘President’s Rule’.**
 - It is also known by two other names ‘State Emergency’ or ‘constitutional Emergency’.
 - ✓ However, the Constitution does not use the word ‘emergency’ for this situation.
- **The Article contains provisions for the imposition of “President’s Rule” in a state, by removing an elected government.**
 - The Constitution intended Article 356 to be used only under extraordinary circumstances.
 - However, Union governments over the period repeatedly used the provision to settle political scores.
- According to the provisions of Article 356, the President’s Rule in a state can be imposed for six months at a time for a maximum duration of 3 years.
 - Every six months, Parliamentary approval to impose President’s Rule will be required again.

President’s Rule

- It is also known by two other names—‘State Emergency’ or ‘constitutional Emergency’.
- **Grounds of Imposition** - Article 355 imposes a duty on the Centre to ensure that the government of every state is carried on following the provisions of the Constitution.
 - **It is this duty in the performance of which the Centre takes over the government of a state under Article 356 in case of failure of constitutional machinery in the state.**
- **The President’s Rule can be proclaimed under Article 356 on two grounds—one mentioned in Article 356 itself and another in Article 365:**
 - Article 356 empowers the **President to issue a proclamation if he is satisfied that a situation has arisen in which the government of a state cannot be carried on per the provisions of the Constitution.** Notably, the president can act either on a report of the governor of the state or otherwise too (ie, even without the governor’s report).
 - **Article 365 says that whenever a state fails to comply with or to give effect to any direction from the Centre, it will be**

lawful for the president to hold that a situation has arisen in which the government of the state cannot be carried on per the provisions of the Constitution.

- **Parliamentary Approval and Duration - A proclamation imposing President's Rule must be approved by both Houses of Parliament within 2 months from the date of its issue.**
 - **If approved by both Houses of Parliament, the President's Rule continues for 6 months.**
 - **It can be extended for a maximum period of 3 years with the approval of the Parliament, every 6 months.**
 - Every resolution approving the proclamation of the President's Rule or its continuation can be passed by either House of Parliament only by a simple majority, that is, a majority of the members of that House present and voting.
 - **The 44th Amendment Act of 1978 introduced a new provision to put a restraint on the power of Parliament to extend a proclamation of President's Rule beyond one year.** Thus, it provided that, beyond one year, the President's Rule can be extended by six months at a time only when the following two conditions are fulfilled:
 - ✓ Proclamation of National Emergency should be in operation in the whole of India, or the whole or any part of the state.
 - ✓ The Election Commission must certify that the general elections to the legislative assembly of the concerned state cannot be held on account of difficulties.
 - **A proclamation of the President's Rule may be revoked by the President at any time by a subsequent proclamation. Such a proclamation does not require parliamentary approval.**
- **Consequences of President's Rule -** The President acquires the following extraordinary powers when the President's Rule is imposed in a state:
 - **He can take up the functions of the state government and powers vested in the governor or any other executive authority in the state.**
 - He can declare that the powers of the state legislature are to be exercised by the Parliament.
 - He can take all other necessary steps including the suspension of the constitutional provisions relating to anybody or authority in the state.
- **When the President's Rule is imposed in a state, the President dismisses the state council of ministers headed by the chief minister.**
- The state governor, on behalf of the President, carries on the state administration with the help of the chief secretary of the state or the advisors appointed by the President. This is the reason why a proclamation under Article 356 is popularly known as the imposition of 'President's Rule' in a state.
- **The President either suspended or dissolved the state legislative assembly.**
- The Parliament passes the state legislative bills and the state budget. When the state legislature is thus suspended or dissolved.
 - A law made by the Parliament or president or any other specified authority continues to be operative even after the President's Rule. This means that the period for which such a law remains in force is not coterminous with the duration of the proclamation. But it can be repealed or altered or re-enacted by the state legislature.
- **The constitutional position, status, powers and functions of the concerned state high court remain the same even during the President's Rule.**
- **Use of Article 356 Since 1950**
 - The President's Rule has been imposed on more than 125 occasions.
 - On several occasions, the President's Rule has been imposed arbitrarily for political or personal reasons.
 - Hence, **Article 356 has become one of the most controversial and most criticized provisions of the Constitution.**

PRESIDENT'S RULE

WHAT IT MEANS

HOW CAN IT BE IMPOSED IN A STATE

- 1 On recommendation of Governor in case of failure of constitutional machinery
- 2 If a state legislature is unable to function according to constitutional provisions

Article 356
of the Indian Constitution has the provision of President's Rule

DURATION

6 months

A maximum of 3 years by approval of Parliament after every 6 months

EXECUTIVE AUTHORITY
Exercised through the centrally appointed Governor



TERMINATION
By President, any time (s)he deems fit; does not need Parliament's approval

PARLIAMENT'S ROLE
Every such proclamation must get Parliament's approval within two months from date of issue



A NEW PROVISION
The 44th Constitutional Amendment 1978 states that the President's Rule can't be imposed in any state beyond 1 year unless

- 1 A Proclamation of National Emergency is in operation
- 2 The Election Commission certifies that the continuance of President Rule is necessary to hold Assembly elections

Origins of Article 356

Article 356 was **inspired by Section 93 of the Government of India Act of 1935.**

Section 93 stated that if a Governor of a province was satisfied that a situation had arisen in which the government of the province cannot be carried on per the provisions of the said Act, he could assume to himself all or any of the powers of the government and discharge those functions in his discretion. However, the Governor could not encroach upon the powers of the high court.

Application of Article 356 in Independent India

- During the early decades of Independence, the Union government used Article 356 against opposition governments in the states.
- Until 1959, the government had used the article six times.
- In 1966, Indira came to power, and after that Article 356 was used seven times between 1967 and 1969.
- Between 1970 and 1974, President's Rule was imposed 19 times.
- Post-emergency, the Janata Party government used it in 1977 to summarily dismiss 9 state governments.
- In 1980, when Indira Gandhi returned to power her government imposed President's Rule in 9 states.
- In 1992-93, the government dismissed 3 State Governments.

Supreme Court Verdict to curb misuse of Article 356

- In 1989, the Union Government dismissed the S R Bommai government in Karnataka. In its judgment in **the S. R. Bommai v/s Union of India case, a 9-judge bench of the Supreme Court discussed the provisions of Article 356.**
 - The court held that Article 356 can be invoked only in the situation of the physical breakdown of the Constitutional Government or when there is a 'hung assembly'.
 - However, the provision cannot be used without giving the state government a chance to either prove its majority in the House or without instances of a violent breakdown of the constitutional machinery.
- Since the Court judgment, the **arbitrary use of Article 356 has been largely controlled.**

DEPUTY SPEAKER

GS-II POLITY

Context

- The Supreme Court of India issued notices to the Union Government and five states Governments (Rajasthan, Uttarakhand, Madhya Pradesh, Uttar Pradesh, and Jharkhand) over the failure to elect a Deputy Speaker.

Details

- A Supreme Court Bench led by the Chief Justice of India sought responses from the Union and 5 state Governments on a Public Interest Litigation (PIL) that claims **that not electing a Deputy Speaker to the 17th (present) Lok Sabha, which was constituted on June 19, 2019, is "against the letter and spirit of the Constitution".**
 - The deputy speaker post has been lying vacant in the 5 state Assemblies as well.

Indian Constitution about the Deputy Speaker

- **Article 93 of the Indian Constitution says that** "The House of the People shall, as soon as may be, choose two members...to be...Speaker and Deputy Speaker...and, so often as the office of Speaker or Deputy Speaker becomes vacant; the House shall choose another member..."
 - **Article 178 of the Constitution** contains the corresponding position for Speaker and Deputy Speaker of the Legislative Assembly of a state.
- Constitutional experts highlighted that both Articles 93 and 178 use the word "shall", indicating that the **election of Speaker and Deputy Speaker is mandatory under the Indian Constitution.**

How soon the Deputy Speaker must be elected

- **Articles 93 and 178 of the constitution** say "As soon as may be", but they do not lay down a specific time frame.
- In general, both Lok Sabha and the state Assemblies elect the Speaker during the first session of the new House.
 - The election of the Deputy Speaker usually takes place in the second session – and is generally not delayed.
- **Rule 8 of The Rules of Procedure and Conduct of Business in Lok Sabha** expresses the election of Deputy Speaker "shall be held on such date as the Speaker may fix".
 - The Deputy Speaker is elected once a motion proposing his name is carried in the House.
 - Once elected, the Deputy Speaker usually continues in office for the entire duration of the House.

Can the courts intervene in the election of the Deputy Speaker?

- Courts usually don't intervene in the procedural conduct of the Parliament.
 - **Article 122(1) of the Indian Constitution says:** "The validity of any proceedings in Parliament shall not be called in question on the ground of any alleged irregularity of procedure."
- However, experts said that the courts do have jurisdiction to at least inquire into why there has been no election to the post of Deputy Speaker since the Constitution mentioned an election "as soon as may be".

Deputy Speaker of Lok Sabha

- Like the Speaker, the **Deputy Speaker is also elected by the Lok Sabha itself from amongst its members.**
- He is elected after the election of the Speaker has taken place. The date of election of the Deputy Speaker is fixed by the Speaker.
- Whenever the office of the Deputy Speaker falls vacant, the Lok Sabha elects another member to fill the vacancy.
- Like the Speaker, **the Deputy Speaker remains in office usually during the life of the Lok Sabha. However, he may vacate his office earlier in any of the following three cases:**
 - If he ceases to be a member of the Lok Sabha.
 - If he resigns by writing to the Speaker.
 - If he is removed by a resolution passed by a majority of all the then members of the Lok Sabha.
 - ✓ Such a resolution can be moved only after giving 14 days' advance notice.
- The Speaker and the Deputy Speaker, while assuming their offices, do not make and subscribe to any separate oath or affirmation.
- The Deputy Speaker performs the duties of the Speaker's office when it is vacant. **He also acts as the Speaker when the latter is absent from the sitting of the House.**
 - In both cases, he assumes all the powers of the Speaker.
 - He also presides over the joint sitting of both Houses of Parliament, in case the Speaker is absent from such a sitting.
- The Deputy Speaker is not subordinate to the Speaker. He is directly responsible to the House.
- Whenever a deputy speaker is appointed as a member of a parliamentary committee, he automatically becomes its chairman.
- Like the Speaker, the Deputy Speaker, while presiding over the House, cannot vote in the first instance; he can only exercise a casting vote in the case of a tie.
 - When a resolution for the removal of the Deputy Speaker is under consideration by the House, he cannot preside at the sitting of the House, though he may be present.
- **When the Speaker presides over the House, the Deputy Speaker is like any other ordinary member of the House.**
 - He can speak in the House, participate in its proceedings and vote on any question before the House.
- The **Deputy Speaker is entitled to a regular salary and allowance fixed by Parliament** and charged to the Consolidated Fund of India.
- Upto the 10th Lok Sabha, both the Speaker and the Deputy Speaker were usually from the ruling party.
 - Since the 11th Lok Sabha, there has been a consensus that the Speaker comes from the ruling party (or ruling alliance) and the post of Deputy Speaker goes to the main opposition party.

DELIMITATION COMMISSION

GS-II POLITY

Context

- The Supreme Court of India has **rejected the petition that challenged the constitution of the Jammu and Kashmir Delimitation Commission to readjust constituencies.** The Court stated that **Articles 2 and 3 of the Indian Constitution enable the Parliament to create new States and Union territories.**

Details

- The Supreme Court has rejected the petition and highlighted that **"Once the Delimitation Commission was established, there is nothing wrong if the central government extended the period of appointment of the Chairperson till the task of delimitation/readjustment was completed,".**
- The petition questioned why the delimitation of J&K has been initiated when Article 170 of the Constitution said that such an exercise for the entire country was due only in 2026.
 - The petitioners had argued that only the Election Commission of India, under Section 60 of the 2019 Act, was empowered to conduct the delimitation exercise.
 - ✓ The petition argued that the Centre had seized the jurisdiction of the Election Commission of India by notifying the delimitation of J&K.
- The Supreme Court said that **the J&K Reorganization Act which created the two new Union territories assigns the role of readjustment of constituencies to the Delimitation Commission under the Delimitation Act, 2002...** a law made under

Article 3 can always provide for readjustment of the Constituencies in the newly constituted States or Union territories through the Delimitation Commission.

Delimitation Commission for the Jammu and Kashmir

- Recently, the 3-member **Jammu and Kashmir Delimitation Commission** headed by a former Supreme Court judge, **Justice Ranjana Prakash Desai**, has submitted the final draft report, notifying the new boundaries, names and numbers of Assembly seats.
- The Delimitation report has added 6 Assembly seats to Jammu, 1 to Kashmir, and redrawn Assembly as well as Lok Sabha seats.
- Out of the 90 Assembly Constituencies in the region, **43 will be part of the Jammu region and 47 of the Kashmir region.**
- Under the draft published, **some villages in one constituency are surrounded by villages in another.**
- **The Delimitation Commission of Jammu and Kashmir is chaired by retired Justice Ranjana Prakash Desai** and includes Chief Election Commissioner Sushil Chandra and the State Election Commissioner as ex-officio members.
- **As per Article 170**, the states get classified into territorial constituencies after every census, according to the Delimitation Act.

Present Status of Jammu and Kashmir

- Jammu and Kashmir lie to the north of the Indian states of Himachal Pradesh and Punjab and to the west of Ladakh, which is also subject to the dispute as a part of Kashmir, and administered by India as a union territory.
- **Some areas have been disputed between India and Pakistan since 1947 and between India and China since 1962.**
- The **Line of Control** separates Jammu and Kashmir from the Pakistani-administered territories of Azad Kashmir and Gilgit-Baltistan in the west and north.
- Unrest and violence persisted in the Kashmiri Valley and, following a disputed state election in 1987, an insurgency persisted in protest over autonomy and rights.
- **A resolution to repeal Article 370 was passed by both houses of the Parliament of India in August 2019.** At the same time, a reorganisation act was also passed, which reconstituted the state into two union territories, Jammu, Kashmir and Ladakh. The reorganisation took effect on 31 October 2019.
 - **This also suspended Article 35A.**
 - **Article 35A** had allowed J&K to define who its 'permanent residents' are and what rights and privileges are attached to such residency.
- **Currently, the union territory of Jammu and Kashmir is administered under Article 239 of the Constitution of India.**
 - Article 239A, originally formulated for the union territory of Puducherry, will also apply to Jammu and Kashmir.
- The union territory is under the jurisdiction of the Jammu and Kashmir High Court, which also serves as the high court for Ladakh.
- In Parliament: **Jammu and Kashmir now have 5 Lok Sabha Seats and 4 Rajya Sabha Seats.**

Key facts about Jammu and Kashmir

- Jammu and Kashmir is the home to several valleys such as the **Kashmir Valley, Tawi Valley, Chenab Valley, Poonch Valley, Sind Valley and Lidder Valley.**
- The Himalayas divide the Kashmir valley from the Tibetan plateau while the Pir Panjal range, which encloses the valley from the west and the south, separates it from the Punjab Plain of the Indo-Gangetic Plain.
- The Jhelum River is the major Himalayan river which flows through the Kashmir valley. The Tawi, Ravi and Chenab are the other important rivers flowing through the region.
- The union territory of Jammu and Kashmir is divided into 20 districts and consists of two divisions: the Jammu Division and the Kashmir Division.
- **Important Tribes;** Gujjar, Bakerwal, and Gaddi.
- The most widely spoken language in Jammu and Kashmir is Kashmiri, the mother tongue of 52.72% of the population according to the 2011 census. The second most spoken language is Dogri, spoken by 20% of the population.
- According to the 2011 census, the literacy rate in Jammu and Kashmir was 67.17%.

About the Delimitation Commission of India

- **Delimitation means the act or process of fixing limits or boundaries** of territorial constituencies in a country or a province having a legislative body.
- **Article 82** - Parliament by law enacts a Delimitation Act after every Census.
- **The Delimitation Commission is appointed by the President of India** and works in collaboration with the Election Commission of India.
- The main task of the commission is redrawing the boundaries of the various assembly and Lok Sabha constituencies based on a current census.

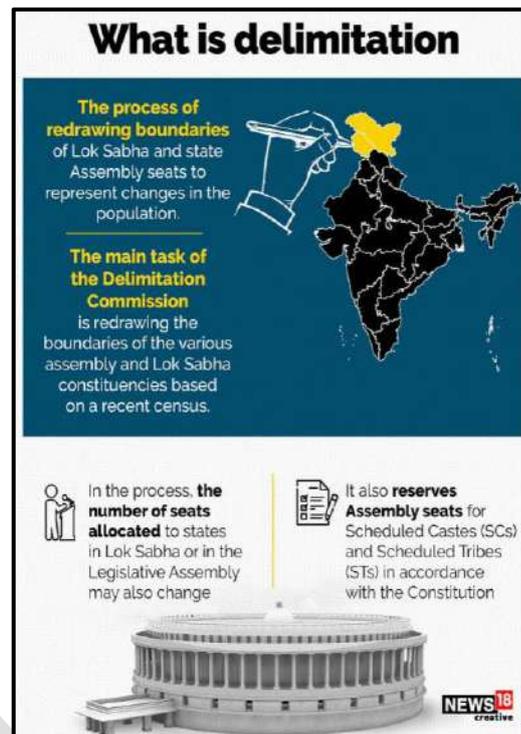
- The representation of each State is not changed during this exercise. However, the number of SC and ST seats in a state has changed under the census.
- The present delimitation of constituencies has been done based on the 2001 census under the provisions of the Delimitation Act, of 2002.
- The Commission is a powerful and independent body whose orders cannot be challenged in any court of law.
- The orders are laid before the Lok Sabha and the respective State Legislative Assemblies. However, modifications are not permitted.
- Delimitation commissions have been set up four times in the past; 1952, 1962, 1972 and 2002, under the Delimitation Commission Acts of 1952, 1962, 1972 and 2002.
- The present delimitation of parliamentary constituencies within states has been done based on the 2001 census.
- According to the 84th amendment, the present constituencies carved out based on the 2001 census shall continue to be in operation till 2026.

Functions of the Delimitation Commission

- The Delimitation Commission has to determine the number and boundaries of constituencies in such a manner that the population of all seats is the same, as far as practically possible.
- The Commission also identifies the seats to be reserved for the scheduled castes and scheduled tribes communities, in areas where their population is significant.
- The Commission releases draft proposals to the public through the Gazette of India and the official gazettes of states, and also in regional language newspapers.
- It also conducts public sittings wherein the public's opinion is heard through written or oral representations.
- If found appropriate, changes are made to the draft proposal.
- The final order is published in the Gazettes and comes into effect by a date specified by the President.

Delimitation challenges

- The present delimitation is based on the census of 2001, whereas the total number of seats in the Parliament and the Legislative Assemblies is fixed as per the census of 1971.
- The Constitution of India has put a cap on the maximum number of seats in the Lok Sabha to 550 and Rajya Sabha 250. Therefore an increasing number of populations are being represented by a single representative.
- The southern states that worked and promoted family planning effectively face the possibility of declining the number of seats in parliament.
 - And states that take little interest in population control would get a greater number of seats in Parliament.



COMMITTEE OF PRIVILEGES

GS-II POLITY

Context

- The Chairman of the Rajya Sabha has asked a parliamentary committee to investigate the allegations of privilege breach against 12 MPs for repeatedly entering the well of the House, shouting slogans and obstructing the house proceedings.

Details

- Some Members of the Rajya Sabha made complaints to the chairman that frequent disruptions by some members were a breach of their privilege.
- A Member can't directly make complaints to Privilege Committee, therefore the matter came to the Chairman, who as per rule referred it to Privilege Committee to examine, investigate and report.

Parliamentary Privileges

- Article 105 and Article 194 of the Indian Constitution mentioned certain privileges for the Member of Parliament and State Assembly respectively so that they can perform their duties without any obstruction.
- They are the special rights, immunities and exemptions enjoyed by the Members of Parliament/State Assembly, its committees and their members.
 - These privileges do not extend to the president who is also an integral part of the Parliament.
- These privileges are necessary to secure their independence in working.

- **Without these privileges;**
 - The Houses cannot maintain their authority, dignity and honour.
 - The House cannot protect its members from any obstacle in the discharge of their parliamentary responsibilities.
- The Indian Constitution has also extended these privileges to the persons who are authorised to speak and take part in the Parliamentary procedures or any of its committees.
 - These include the attorney general of India and Union ministers.
- **These Privileges can be classified into two broad categories:**
 - **Collective Privileges** - Those that are collectively enjoyed by the each House of Parliament.
 - **Individual Privileges** - Those that are individually enjoyed by the members.

Sources of Privileges

- The Parliament, till now, has not made any special law to exhaustively codify all the privileges.
- **At Present, all the privileges are based on 5 sources:**
 - Constitutional provisions.
 - Various laws made by Parliament.
 - Rules of both Houses.
 - Parliamentary conventions.
 - Judicial interpretations

Collective Privileges

- Parliament/State Assembly has the **right to publish its reports, debates and proceedings and also the right to prohibit others from publishing the same.**
 - The 44th Amendment Act of 1978 restored the freedom of the press to publish true reports of parliamentary proceedings without prior permission of the House.
 - But this is not applicable in the case of a secret sitting of the House.
- It can **exclude strangers from its proceedings and hold secret sittings** to discuss some important matters.
- It can make rules to regulate its procedure and the conduct of its business.
- It can **punish members as well as outsiders for breach of its privileges.**
- It has the right to receive immediate information about the arrest, detention, conviction, imprisonment and release of a member.
- The **courts are prohibited to inquire into the proceedings of a House or its committees.**
- No person (either a member or outsider) can be arrested, and no legal process (civil or criminal) can be served within the House without the permission of the presiding officer.

Individual Privileges

- Members of Parliament/State Assembly **cannot be arrested during the session of Parliament and 40 days before the beginning and 40 days after the end of a session.**
 - **This privilege is available only in civil cases and not in criminal cases or preventive detention cases.**
- They have freedom of speech in Parliament. No member is liable to any proceedings in any court for anything said or any vote given by him in Parliament or its committees.
- They are **exempted from jury service.** They can refuse to give evidence and appear as a witness in a case pending in a court when Parliament is in session.

Committee of Privileges

- Each House of Parliament and its Committees collectively and members of each House individually enjoy certain rights, privileges and immunities without which they cannot perform their functions efficiently and effectively.
 - The object of parliamentary privilege is to safeguard the freedom, authority and dignity of Parliament.
- The Committee consists of **15 members** (10 members in the case of Rajya Sabha) **nominated** by the Speaker (Chairman in the case of Rajya Sabha).
 - **In the Lok Sabha, the Speaker nominates** the head of the committee of privileges.
 - **In the Rajya Sabha, the deputy chairperson** heads the committee of privileges.
- Its function is to examine every question involving a breach of privilege of the House or the members of any Committee.
 - It determines concerning the facts and makes suitable recommendations in its report.

Privilege Motion

- All Members of Parliament (MPs) enjoy rights and immunities, individually and collectively, so that they can discharge their duties and functions effectively.

- Any instance when these rights and immunities are disregarded by any member of Lok Sabha or Rajya Sabha is an offence, called 'breach of privilege', which is punishable under the Laws of Parliament.
- Any member from either house can move a notice in the form of a motion against the member who he/she thinks is guilty of the breach of privilege.
- Both Houses of Parliament reserve the right to punish any act of contempt (not necessarily a breach of privilege) which is against its authority and dignity, as per the laws.

Rules concerning the privilege Motion:

- The rules governing the privilege are mentioned in Rule No 222 in Chapter 20 of the Lok Sabha Rule Book and Rule 187 in Chapter 16 of the Rajya Sabha
- The rules explain that any member of the House may, with the consent of the Speaker or the Chairperson, raise a question involving an incident that he or she considers a breach of privilege either of a member or of the House or a committee.

Role of Speaker and Chairperson:

- The speaker of Lok Sabha and the Chairperson of Rajya Sabha are the first levels of scrutiny of a privilege motion in the two Houses of Parliament.
- They can either decide on the privilege motion or can also refer it to the privileges committee of Parliament.

History of Privilege Motions in Parliament

- Most of the privilege motions passed in Parliament in the past have been rejected. Penal actions have been recommended only in a few, so far.
- Among the most significant privilege motions passed so far was in 1978 against Indira Gandhi. Indira Gandhi, who had just won the Lok Sabha elections from Chikmagalur, was expelled from the House
- In 1976, BJP MP Subramanian Swamy was expelled from Rajya Sabha for bringing disgrace to Parliament through his interviews with foreign publications.

MENTAL HEALTHCARE ACT 2017

GS-II POLITY

Context

- The National Human Rights Commission (NHRC) in a recently released report raised serious concern over the "inhuman and deplorable" condition of all 46 government mental healthcare institutions across the country.

Details

- The report mentions that the government facilities are "illegally" keeping patients long after their recovery, in what is an "infringement of the human rights of mentally ill patients".
- NHRC reports were made after the study team visited all operational government facilities, to assess the implementation of the Mental Healthcare Act, 2017 (MHA).

Mental Healthcare Act, 2017

- Mental Health Care Act was passed in 2017 and came into force in May 2018.
 - This Act superseded the previously existing Mental Health Act of 1987.
- Indian Parliament passed the act to **provide mental healthcare and services for persons with mental illness** and to protect, promote and fulfill the rights of such persons during the delivery of mental healthcare and services and for matters connected.
- The Act states that mental illness is determined "in accordance with nationally and internationally accepted medical standards as may be notified by the Central Government.
- The Act aims at **decriminalizing the attempt to Commit Suicide by seeking to ensure that the individuals who have attempted suicide are offered opportunities for rehabilitation** from the government as opposed to being tried or punished for the attempt.
- The Act seeks to fulfil India's international obligation under the Convention on Rights of Persons with Disabilities and its Optional Protocol.
- The Act aims to **safeguard the rights of people with mental illness**, along with access to healthcare and treatment without discrimination from the government.
 - Additionally, insurers are now bound to make provisions for medical insurance for the treatment of mental illness on the same basis as is available for the treatment of physical ailments.
- The Act **includes provisions for the registration of mental health-related institutions and for the regulation of the sector.**
 - These measures include the necessity of setting up mental health establishments across the country to ensure that no

person with mental illness will have to travel far for treatment, as well as the creation of a mental health review board which will act as a regulatory body.

- The Act has restricted the usage of Electroconvulsive therapy (ECT) to be used only in cases of emergency, along with muscle relaxants and anaesthesia.
 - Further, ECT has additionally been prohibited to be used as a viable therapy for minors.
- The responsibilities of other agencies such as the police concerning people with mental illness have been outlined in the Act.
- The Act acknowledged **that external factors; such as income, social status, and education – impact mental wellbeing, and therefore, recovery needs a psychiatric as well as a social input.**
- Under the Act, the government was made responsible for creating opportunities to access less restrictive options for community living – such as halfway homes, sheltered accommodations, rehab homes, and supported accommodations.
- The Act also discourages using physical restraints (such as chaining), and unmodified electroconvulsive therapy (ECT) and pushes for the right to hygiene, sanitation, food, recreation, privacy, and infrastructure.

Evaluation of the Act

- The Act safeguards the rights of people in mental healthcare establishments, but enforcement challenges remain.
- Almost 36.25% of residential service users at state psychiatric facilities were found to be living for one year or more in these facilities.
- Under the Act, all States are required to establish a State Mental Health Authority and Mental Health Review Boards (MHRBs); that can further draft standards for mental healthcare institutes, oversee their functioning and ensure they comply with the Act.
 - In the Majority of States, these bodies are yet to be established or remain defunct.
- The Act takes on a human rights lens by shifting the obligation of care onto different stakeholders – including caregivers, government institutions, police officials, and mental health practitioners.
- **Poor budgetary allocation and utilization of funds** create a scenario where shelter homes remain under-equipped, establishments are understaffed, and professionals and service providers are not adequately trained to deliver proper healthcare.

Important Initiatives taken to improve Mental Health

- **National Mental Health Programme (NMHP):** India launched NMHP in 1982 to improve the status of mental health in India. It has three important components. Such as Treatment of the mentally ill, Rehabilitation, Prevention and promotion of positive mental health.
- **Central and State Mental Health Authorities:** The Act established these authorities for the regulation & coordination of mental health services in India.
- **Right to make an Advance Directive:** Under this, every person can state how to be treated or not be treated for the illness during a future mental health situation.
- **Right to appoint a Nominated Representative:** Every person also has the right to appoint a nominee to take, on his/her behalf, all health-related decisions.
- **Changes in Section 309 of the Indian Penal Code:** This section of IPC criminalized the attempt to commit suicide. After the enactment of the Act, a person who attempts to commit suicide will be presumed as a person “suffering from severe stress”. The person will also not be subject to any investigation or prosecution.
- **KIRAN helpline:** It is a 24/7 toll-free helpline launched by the Ministry of Social Justice and Empowerment. This helpline provides support to people facing anxiety, stress, depression, suicidal thoughts, and other mental health concerns.
- **Manodarpan Initiative:** It is an initiative launched by the Ministry of Education under Atmanirbhar Bharat Abhiyan. The initiative provides psychosocial support to students, family members, and teachers for their mental health and well-being during the times of Covid-19.
- **RAAH app:** It is a mobile application that provides free information to the public on mental healthcare professionals and mental healthcare centres. The National Institute of Mental Health and Neuro-Sciences (NIMHANS) has compiled a one-stop source online mental health care directory.
- **MANAS App:** MANAS stands for Mental Health and Normalcy Augmentation System. It is a comprehensive, scalable, and national digital well-being platform. It has been developed to promote the mental well-being of Indian citizens.

Way Forward

- Urgent investment in child and adolescent mental health across sectors, not just in health, to support a whole-of-society approach to prevention, promotion and care.
- Urgent investment in strategies to promote good mental health including the prevention of gender-based and other forms of violence
- Integrating interventions across health, education and social protection sectors - including parenting programmes and ensuring schools support mental health
- Breaking the silence surrounding mental illness, through addressing stigma and promoting a better understanding of mental health.

Context

- The Union Environment Ministry has suspended all discussions about the Great Nicobar project that the official Forest Advisory Committee (FAC) had proposed.

Details

- The **Union Home Ministry recommended that the 8.45 square kilometre airport portion of the Great Nicobar Development project has to be kept secret**, claiming a "strategic" requirement.
- The Environment Ministry has also withheld all discussions on the forest clearance for the entire 166.10-sq km project recommended by the statutory Forest Advisory Committee (FAC) in which the airport falls.
- The FAC is an expert body that examines and authorises the diversion of forest land for projects.
- According to the Ministry of Home Affairs, **the proposed airport will be "developed as a joint military-civil, dual-use airport, under the operational control of the Indian Navy"**.
- According to the statement, the project "is for public, national, strategic, and defence purposes. Because of its strategic importance, the part of the decision-making process for the airport component may not be made public.

Forest Advisory Committee (FAC)

- The FAC is an expert body that examines and authorises the diversion of forest land for projects.
- The FAC is a statutory body constituted under the Forest (Conservation) Act, 1980 to advise the government on granting approvals for forest clearance.
- It meets at least once a month to discuss proposals from an agenda pre-published by the ministry which also uploads the minutes of FAC meetings on its designated website.

The Great Nicobar project

- A "greenfield city" has been proposed, including an International Container Transshipment Terminal (ICTT), a greenfield international airport, a power plant, and a township for the personnel who will implement the project.
- The proposed port will allow Great Nicobar to participate in the regional and global maritime economy by becoming a major player in cargo transshipment.
- The port will be controlled by the Indian Navy, while the airport will have dual military-civilian functions and will cater to tourism as well.
- Roads, public transport, water supply and waste management facilities, and several hotels have been planned to cater to tourists
- A total of 166.1 sq km along the southeastern and southern coasts of the island have been identified for the project along a coastal strip of width between 2 km and 4 km.
 - Some 130 sq km of forests have been sanctioned for diversion, and 9.64 lakh trees are likely to be felled.
- More than 1 lakh new direct jobs and 1.5 lakh indirect jobs are likely to be created on the island throughout development.

The purpose

- The island has a lot of tourism potential, but the government's greater goal is to leverage the locational advantage of the island for economic and strategic reasons.
- Great Nicobar is equidistant from Colombo to the southwest and Port Klang and Singapore to the southeast and positioned close to the East-West international shipping corridor, through which a very large part of the world's shipping trade passes. The proposed ICTT can potentially become a hub for cargo ships travelling on this route.
- The proposal to develop Great Nicobar was first floated in the 1970s, and its importance for national security and consolidation of the Indian Ocean Region has been repeatedly underlined.
- Increasing Chinese assertion in the Bay of Bengal and the Indo-Pacific has added great urgency to this imperative in recent years.

The concerns

- The proposed massive infrastructure development in an ecologically important and fragile region, including the feeling of almost a million trees, has alarmed many environmentalists.
- The loss of tree cover will not only affect the flora and fauna on the island, but it will also lead to increased runoff and sediment deposits in the ocean, impacting the coral reefs in the area, they have also cautioned.
- Coral reefs, already under threat from warming oceans, are of enormous ecological importance.
- Environmentalists have also flagged the loss of mangroves on the island as a result of the development project.

The Island

- Great Nicobar, the southernmost of the Andaman and Nicobar Islands, has an area of 910 sq km.
- The Andaman and Nicobar Islands are a cluster of about 836 islands in the eastern Bay of Bengal, the two groups of which are separated by the 150-km wide Ten Degree Channel.
- The Andaman Islands lie to the north of the channel, and the Nicobar Islands to the south.
- Indira Point on the southern tip of Great Nicobar Island is India's southernmost point, less than 150 km from the northernmost island of the Indonesian archipelago.
- Great Nicobar is home to two national parks, a biosphere reserve, and the Shompen and Nicobarese tribal peoples, along with ex-servicemen from Punjab, Maharashtra, and Andhra Pradesh who were settled on the island in the 1970s.
- The Shompen are hunter-gatherers who depend on forest and marine resources for sustenance.
- The Nicobarese, who lived along the west coast of the island were mostly relocated after the 2004 tsunami.
- An estimated 237 Shompen and 1,094 Nicobarese individuals now live in a 751 sq km tribal reserve, some 84 sq km of which is proposed to be denotified.
- The approximately 8,000 settlers who live on the island are engaged in agriculture, horticulture, and fishing.
- The Great Nicobar Island has tropical wet evergreen forests, mountain ranges reaching almost 650 m above sea level, and coastal plains.
- Fourteen species of mammals, 71 species of birds, 26 species of reptiles, 10 species of amphibians, and 113 species of fish are found on the island, some of which are endangered.
- The leatherback sea turtle is the island's flagship species.



SIXTH SCHEDULE

GS-II GOVERNANCE

In News

- Sonam Wangchuk (resident of Ladakh, innovator and engineer) is on "climate fast" to draw the attention of Indian leaders towards the fragile ecology of Ladakh and to secure its protection under the Sixth Schedule of the Indian Constitution.
- **Sonam Wangchuk** is an education reformist and an engineer and is known for improving the lives of the people of Ladakh and protecting the region's ecosystems.
 - He has received various prizes, including the prestigious Ramon Magsaysay award.
- Wangchuk released a video message to draw attention towards melting glaciers in the Ladakh region and its effects on the region's ecology.
 - He highlighted that Ladakh and the Himalayas form the 'third pole' of the world and are important sources of freshwater for the Indian sub-continent

Details

- On 5th August 2019, the former State of Jammu & Kashmir was bifurcated into two Union Territories; Jammu & Kashmir, and Ladakh, the latter without a Legislative Assembly.
 - Since then several political groups have been demanding that land, employment, and the cultural identity of Ladakh, should be protected under the 6th Schedule.
- The 6th Schedule under Article 244 of the Indian Constitution protects tribal populations, providing autonomy through the creation of Autonomous Development Councils, which can frame laws on land, public health and agriculture.
 - At present, 10 autonomous councils exist in Assam, Meghalaya, Tripura and Mizoram.
- According to the 2011 Census, the tribal population in the Union Territory of Ladakh is 79.61% of the total population.
 - The Parliamentary Standing Committee on Home Affairs recommended granting special status to the Union Territory of Ladakh considering the developmental requirements of the tribal population.

THE CONSTITUTION OF INDIA PLACES TRIBAL DOMINATED AREAS IN CERTAIN STATES UNDER TWO SCHEDULES: FIFTH AND SIXTH. THIS ALLOWS THESE AREAS INCREASED AUTONOMY IN TERMS OF THE LOCAL ADMINISTRATION, BUT THESE TWO CATEGORIES HAVE DIFFERENCES WITHIN THEMSELVES.	
<p style="text-align: center;">Fifth Schedule</p> <p>Areas under this category are called 'Scheduled Areas'.</p> <p>Tribal dominated areas in 10 States: Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana.</p> <p>Tribal Advisory Committees in Scheduled Areas do not perform administrative duties directly and do not have much autonomy.</p> <p>Panchayat Extension to Scheduled Areas is applicable here.</p>	<p style="text-align: center;">Sixth Schedule</p> <p>Areas under this category are called 'Tribal Areas'.</p> <p>Tribal dominated areas in Assam, Meghalaya, Tripura and Mizoram.</p> <p>Autonomous District Councils in Tribal Areas have much autonomy, and carry out local level governance.</p> <p>Panchayat Extension to Scheduled Areas is not applicable here as these areas already have autonomy in their self governance.</p>

Autonomous District Councils

- The 6th Schedule of the Indian Constitution deals with the administration of the tribal areas in the 4 northeastern states of Assam, Meghalaya, Tripura and Mizoram as per Article 244.
- The 6th Schedule of the Indian Constitution allows for the formation of autonomous administrative divisions which have been given autonomy within their respective states.
 - Each autonomous district has a district council consisting of 30 members, of whom 4 are nominated by the Governor and the remaining 26 are elected based on adult franchise.
 - There shall be a separate Regional Council for each area constituted as an autonomous region.
- The State Governor is authorized to increase or decrease the areas or change the names of the autonomous districts.
- Executive powers of the State extend to 6th Scheduled areas concerning their administration.
- The acts of the Parliament or the state legislature do not apply to these autonomous districts and autonomous regions or apply with specified modifications and exceptions.
- These Autonomous Councils have been granted wide civil and criminal judicial powers, such as establishing village courts etc.
 - The jurisdiction of these councils is under the jurisdiction of the concerned High Court.

Tribal Area

- The Indian Constitution states two types of areas:
 - Scheduled Areas in terms of the 5th Schedule of the Constitution.
 - Tribal Areas in terms of the 6th Schedule.
- “The “Tribal Areas” are also mentioned under Article 244(2) of the Constitution.
- For the declaration of Scheduled Areas, the criteria followed are:
 - The predominance of the tribal population.
 - Closeness and reasonable size of the area.
 - Presence of a viable administrative unit such as a district, block or taluk.
 - Economic backwardness of the area as compared to neighbouring areas.

K.G. BALAKRISHNAN COMMISSION

GS-II GOVERNANCE

Context

- The Government of India has formed a three-member Commission under Justice K.G. Balakrishnan, the former Chief Justice of India.
 - The Commission will examine whether the Scheduled Caste (SC) status can be accorded to Dalits who have converted to religions other than Sikhism or Buddhism.

Details

- Recently several petitions were filed before the Supreme Court related to SC to reservation benefits for Dalits who converted to Christianity or Islam.
- The Indian Constitution (Scheduled Castes) Order, 1950, under Article 341 of the Indian constitution mentioned that no person professing a religion different from Hinduism, Sikhism or Buddhism can be supposed to be a member of a Scheduled Caste.
 - On the recommendation of the Kalelkar panel, the order was amended in 1956 to include Sikhs, and in 1990 to cover Buddhists.
- The proposed commission will also study the impact of adding more members to the current SC list.
- According to some activists, “a person can’t be punished or deprived of benefits only based on his/her faith, as this would violate the Right to freedom of religion, which is a fundamental right under the Indian constitution.

Hanging questions

A look at the present status of the law, the past amendments and the Centre’s argument in the case:

<p>What does the law say now? The 1950 law provides for only those belonging to Hindu, Sikh or Buddhist communities to be categorised as SCs</p> <p>How were Sikhs and Buddhists included? The Kalelkar panel report (1955) and the high-powered panel report (1983) were the basis for amending the Order to include Dalit Sikhs and Dalit Buddhists as SCs in 1956 and 1990 respectively</p>	<p>Centre’s argument The religions included as SCs under the law are branches of Hinduism. Dalits who converted to Islam or Christianity “cannot claim to be backward” since untouchability is a feature of Hindu religion and its branches alone</p> <p>The three-member Commission is headed by ex-CJI K.G. Balakrishnan</p>
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Constitutional Articles related to Freedom of Religion

- Article 25 says that all persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate religion.
 - **Freedom of conscience:** Inner freedom of an individual to frame his relation with God or Creatures in whatever way he desires.
 - **Right to Profess** Declaration of one’s religious beliefs and faith openly and freely.
 - **Right to Practice:** Performance of religious worship, rituals, ceremonies and exhibition of beliefs and ideas.

- **Right to Propagate:** Transmission and promotion of one's religious beliefs to others. But, it does not include a right to convert another person to one's religion.
- Article 25 covers religious beliefs and also religious practices (rituals).
- **Article 26: Freedom to Manage Religious Affairs,** every religious denomination or any of its sections shall have the following rights:
 - Right to establish and maintain institutions for religious and charitable purposes.
 - Right to manage its affairs in matters of religion.
 - Right to own and acquire movable and immovable property.
 - Right to administer such property under the law.
- **Article 27 - Freedom from Taxation for the Promotion of a Religion**
 - No person shall be forced to pay any taxes for the promotion or maintenance of any particular religion or religious denomination.
 - **The State should not spend the public money collected by way of tax for the promotion or maintenance of any particular religion.**
 - This provision **prohibits the State from favouring and supporting one religion over the other.** This also means that taxes can be used for the promotion or maintenance of all religions.
 - This provision **prohibits only the levy of a tax and not a fee.**
- **Article 28 - Freedom from Attending Religious Instruction**
 - **No religious instruction shall be provided in any educational institution wholly maintained out of State funds.**
 - No person attending any educational institution recognised by the State or receiving aid out of State funds shall be required to attend any religious instruction or worship in that institution without his consent.
- **Article 29 - Protection of Interests of Minorities**
 - It provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
 - No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, or language.
- **These rights are subject to public order, morality, health and other provisions relating to fundamental rights.**
 - The State is permitted to regulate or restrict any economic, financial, political or other secular activity associated with religious practice.

Way Forward

- There is **no religion-specific mandate for STs and OBCs.** According to the Department of Personnel and Training website, "The rights of a person belonging to a Scheduled Tribe are independent of his/her religious faith,"
- In 2007, the **Ranganath Misra Commission in its report recommended that SC status be completely delinked from religion and be made religion-neutral like STs.**
- A study commissioned by the National Commission for Minorities in 2007 concluded that Dalit Christians and Dalit Muslims need to be accorded SC status.
- **Any decision in future to change the status of these groups must be taken after due consideration of all the relevant factors, consulting with all stakeholders and must be based on ground-level studies.**

CUSTODIAL DEATHS

GS-II GOVERNANCE

Context

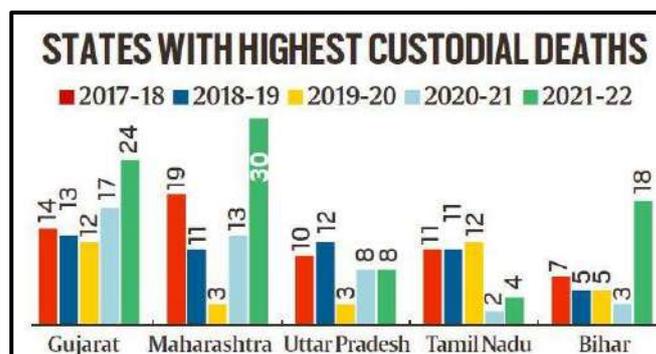
- The Union Ministry of Home Affairs (MHA) informed the Rajya Sabha about the Custodial deaths.

Details

- The Union Minister of State for Home Affairs shared the details of the custodial deaths reported between 1st April 2017 and 31st March 2022 in all states and Union Territories across India.
- The **Minister highlighted that a total of 146 cases of death in police custody were reported during 2017-2018,**
 - 136 in 2018-2019,
 - 112 in 2019-2021,
 - 100 in 2020-2021,
 - 175 in 2021-2022.
- The highest number of custodial deaths (80) has been reported in Gujarat, followed by Maharashtra (76), Uttar Pradesh (41), Tamil Nadu (40) and Bihar (38).
- The Minister said that the National Human Rights Commission (NHRC) has recommended monetary relief in 201 cases, and disciplinary action in one case.

About Custodial deaths

- **Custodial torture ranging from an assault of various types to death by the police** for extortion of confessions and imputation of evidence is not uncommon.
 - Such a method of investigation and detection of a crime, in the backdrop of expanding the idea of 'humane' administration of criminal justice, not only disregard the human rights of an individual and thereby undermines his dignity but also exposes him to unwarranted violence and torture by those who are expected to 'protect' him.
- Since the enactment of Section 176(1A) in 2005, the National Human Rights Commission has recorded 24,043 custodial deaths/rapes between 2005-2006 and 2018-2019.
- National Crimes Records Bureau's annual reports from 2005 to 2017 state that judicial inquiry was not conducted in about 80% of the cases recorded by it.
- Concerning 476 cases of "death or disappearance of persons remanded in police custody by the court," 266 cases were registered and 54 police officers were charge-sheeted, but not a single police officer was convicted.
- Out of the 827 cases of death or disappearance of persons in police custody without court remand, a judicial inquiry was ordered only in 166 cases – 20% of the total cases.



Reasons behind custodial death

- **Non-accountability of the Police.** In 2015, for instance, the police registered cases against fellow police officers in only 33 of the 97 custodial deaths. These deaths were labelled as suicide or natural deaths.
- There is a lack of transparency and poor communication with the family of the person.
- **The poor socio-economic background of the accused** also helps police to use their torture mechanism as they are unaware of the law.
- Custodial deaths are also the result of the accused not able to fulfil the demands of local police.
- Overcrowding of jails leads to higher no of deaths due to space crunch and lack of infrastructure.
- Medical checkups are not done regularly.
- **No scientific investigation methods are followed by police.** They still indulge in brute force methods of interrogation.
- Our police force is understaffed and overburdened. Continuous pressure to solve the crime on a fast basis exhorts them to employ such methods.
- Overcrowding of jails: due to the high no of under trials around 68% of the total as highlighted by recent prisons statistics India (NCRB)

Constitutional Provisions against Custodial death

- Article 21(1) provides that no person who is arrested shall be detained in custody without being informed as soon as possible of the ground for such arrest.
- Article 22(2) provides that **every person who is arrested and detained in custody shall be produced before the nearest magistrate within 24 hours of such arrest.**
- Article 20 ensures that the administration of the criminal justice system should not be so designed or implemented as to destroy the deeper and moral values of justice itself.

Court Judgement on Custodial death

- **D.K. Basu v. State of West Bengal:**
 - The ubiquity of torture and third-degree methods in police investigations lamented the 'growing incidence of torture and deaths in police custody.
 - A crime suspect must be interrogated - indeed subjected to sustained and scientific interrogation determined under the provisions of law.
 - He can't however be tortured or subjected to third-degree methods or eliminated with a view to eliciting information, extracting a confession or deriving knowledge about his accomplices, weapons etc.
 - The burden of explaining a custodial death lay on the police rather than the victim.
 - The court granted compensation on a constitutional basis in public law for the infringement of fundamental rights.
 - Realizing the essential connection between the provisions of Articles 22(1) and 22(2), the courts have held that the provision of clauses (1) and (2) of Article 22 is mandatory.
- **Other Verdicts:**
 - A punishment which has an element of torture is unconstitutional.

- Prison restrictions amounting to torture, pressure or infliction and going beyond what the court order authorizes are unconstitutional.
- An under-trial or convicted prisoner cannot be subjected to physical or mental restraint.

Measures to prevent Custodial death

- **Under the 7th Schedule of the Indian constitution Police and public order are State subjects.** It is primarily the responsibility of the state government concerned to ensure the protection of human rights.
 - However, the Central Government issues advisories from time to time and also has enacted the Protection of Human Rights Act (PHR), 1993, which s establishment of the NHRC and State Human Rights Commissions to look into alleged human rights violations by public servants.
- **Ensuring the presence of a lawyer** through contact with the nearest legal aid committee as soon as a person is taken into custody.
- The **National Legal Services Authority should design processes** that ensure lawyers are either stationed at police stations on a rotational basis or available on call.
- Ensuring Accountability of Police - any such crime must be fast-tracked within a specified period through an Independent investigation Agency.
- Inculcation of the scientific method of investigation in the Police force and curtailing the practice of third-degree torture.
- **Strict Implementation of DK Basu case guidelines as well as NHRC guidelines by States.**
- Behavioural change in the Police force through training and awareness campaigns.
- Encouraging civil societies, Human Rights NGOs, NHRC & SHRCs to play an active role in creating awareness and accountability of Police.
- Implementation of SC's recent directive to publish FIRs online within 24 hours.
- Video conferencing through prisons.
- The passing of the Prevention of Torture Bill.

THE FOUNDATIONAL LITERACY AND NUMERACY REPORT

GS-II GOVERNANCE

Context

- The 2nd version of the Foundational Literacy and Numeracy report was released by the chairman of the Economic Advisory Council to the Prime Minister (EAC-PM).

Highlights of the Report

- The report underlines the value of language in education and the **use of appropriate evaluations and teaching methods to enhance outcomes.**
- It highlights the **unique difficulties faced in a multilingual environment** and captures the key ideas that kids need to understand to become good learners.
- The report says that **'It is important to understand the importance of integrating the medium of instruction and teaching in children's native languages'**.
- The report specifically focuses on the various projects that are being carried out at the national and state levels in cooperation with public-private groups.
- The report highlighted the initiatives taken at the national and state level to achieve foundational learning goals as outlined in **NIPUN Bharat Scheme.**
- The report's **findings focus on the significance of nutrition, digital technology access, and language-focused training.** Furthermore, it is suggested to carry out a variety of assessments of the linguistic system (including phonology and vocabulary).
- The report mentioned that the **system must include clearly defined outcome-based indicators on the teaching method and education** in India, as well as data monitoring at a national or regional level for measuring outcomes.

Significance of the Report

- The study serves as a benchmark for states and union territories as they can compare their progress towards achieving universal foundational education by 2026–2027.

Economic Advisory Council

- **Economic Advisory Council to the Prime Minister (PMEAC) is a non-constitutional, non-permanent and independent body that is formed to give economic advice** to the Union Government, specifically the Prime Minister.
- The council serves to highlight key economic issues from a neutral viewpoint.
- It advises the Prime Minister on economic issues like inflation, microfinance, and industrial output.

- **Terms of reference as defined by the PMEAC are as follows:**
 - Analyzing any issue, economic or otherwise, referred to it by the Prime Minister and advising him thereon.
 - Addressing issues of macroeconomic importance and presenting views thereon to the Prime Minister. This could be either suo-moto or a reference from the Prime Minister or anyone else.
 - Submitting periodic reports to the Prime Minister on macroeconomic developments and issues with implications for economic policy.
 - Attending to any other task as may be desired by the Prime Minister from time to time.
- The primary role of the PMEAC is to give a neutral viewpoint on economic policy matters that are referred to it by the Prime Minister. Additionally, it prepares a monthly report of economic developments that need to be highlighted to the PM. For this purpose, it closely monitors national and international economic developments and trends and develops appropriate policy responses for the PM.
- It publishes reports on the annual Economic Outlook and Review of the Economy of India

Nipun Bharat Scheme

- In July 2021, the Union Ministry of Education launched the National Mission on Foundational Literacy and Numeracy called National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) as a part of the National Education Policy (NEP) 2020.
- The Mission has been launched **under the aegis of the centrally sponsored scheme of Samagra Shiksha.**
- The Ministry has launched NIPUN Bharat, for ensuring that every child in the country necessarily attains foundational literacy and numeracy (FLN) by the end of Grade 3, by 2026-27.
- **The mission will focus on children of the age group of 3 to 9 years including preschool to Grade 3.**
- The children who are in Classes 4 and 5 and have not attained the foundational skills will be provided individual teacher guidance and support, peer support and age-appropriate and supplementary graded learning materials to acquire the necessary competencies.

LIVE TRANSCRIPTION OF COURTROOM PROCEEDINGS

GS-II GOVERNANCE

Context

- The Supreme Court of India started a project to transcribe its proceedings live using Artificial Intelligence (AI).

Details

- The Chief Justice of India said that the project to transcribe its proceedings lives using Artificial Intelligence (AI) helps judges and lawyers.
 - It will also help students in law colleges. They can analyse how matters are argued.
- The court transcription **uses the 'Teres' platform** which is used generally for transcribing arbitration proceedings.
 - The platform is run by Nomology Technology Private Limited, a Bengaluru-based company.
 - The platform will **clear up the errors in the voice which cause a little bit of a problem.**
- The transcript will also be **shared with lawyers** who argued cases for verification and are likely to be uploaded on the SC website every evening.

Significance of this step

- The transcribing is the second major decision towards making the court more transparent after the SC decided to live stream its proceedings before Constitution Benches.

Transcripts in other countries' courts

- In the US, court transcripts are available to litigants and the public.
 - The US Supreme Court provides audio and text transcripts of the proceedings.
 - Many local courts in the US also make a stenographic record of most court proceedings.
- In the UK, a litigant can ask for a transcript of the court proceedings for a fee if the hearing is recorded.

Recently the Supreme Court of India has decided to live stream its proceedings in important Constitution Bench cases.

Present status of live streaming of judicial proceedings in India

- In 2018, a Supreme Court bench had agreed to hear a PIL (Public Interest Litigation) aspiring live streaming of judicial proceedings on important matters of constitutional and national importance.
- The **Supreme Court approved a set of guidelines and also did not allow live streaming in the cases involving:**
 - Matrimonial matters.

- Matters involving juveniles or the protection and safety of the private life of young offenders.
- Matters of National security.
- To ensure that victims, witnesses or defendants can depose truthfully and without any fear. Special protection must be given to vulnerable or intimidated witnesses.
 - ✓ It may provide for face distortion of the witness if she/he consents to the broadcast anonymously.
 - ✓ To protect confidential or sensitive information, including all matters relating to sexual assault and rape.
- Cases which may provoke sentiments and arouse passion and provoke enmity among communities.
- Currently, the Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Orissa, and Patna High Courts live stream their proceedings.

Live streaming of judicial proceedings around the Globe

- **In the USA:** The US Supreme Court has rejected appeals for the broadcast of its proceedings, but since 1955 allowed audio recording of oral arguments.
- **In Australia:** Live or delayed broadcasting is allowed but the practices differ across courts.
- **In Brazil:** Since 2002, live video and audio broadcasts of court proceedings are allowed.
- **In Canada:** Court Proceedings are broadcast live on Parliamentary Affairs Channel.
- **In the United Kingdom:** Court Proceedings are broadcast live with a one-minute delay on the court's website, but coverage can be withdrawn in sensitive appeals.

Significance of the step

- Broadcasting court proceedings will ensure transparency and greater access to the justice system.
- **Citizens have a right to know what arguments** are made and the responses of the judges as their judgments bind us all.
- The principle "justice should not only be done but seen to be done".
- **Live Streaming would empower, and provide access to citizens who cannot personally come to court due to social, economic, health, or physical disability-related limitations.**
- It would enable citizens to have first-hand information on case proceedings on issues of constitutional importance that affect them directly or indirectly.

Concern

- **The individuality of judges is more likely to become a subject of public debate through live-streaming, creating problems of its own.**
- **Lawyers aspiring to publicize themselves through their addresses to the Bench.**
- It will affect the normalcy of the proceedings.
- Video clips of court proceedings are already on social media platforms with sensational titles and little context, such as "HIGH COURT super angry on IAS/IPS officer". This irresponsible use of content could spread disinformation among citizens.

Way Forward

- **Live streaming is neither required in all types of matters nor all courts.**
- Live streaming or videography could be avoided in the matters which have a privacy dimension, such as family matters or criminal matters.
- **Any Kind of Misuse of court proceedings video must be dealt with strictly by the law and also need to formulate guidelines to promote the positive impact while curbing the negative one.**

NATIONAL MOBILE MONITORING SYSTEM (NMMS)

GS-II GOVERNANCE

Context

- The Union Ministry of Rural Development's data shows that 41.3% of the gram panchayats have reported no National Mobile Monitoring System (NMMS) usage.

Details

- Recently the government made it **mandatory to capture the attendance of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) workers through a mobile application "National Mobile Monitoring System (NMMS)".**
 - The Union Ministry of Rural Development's statistics highlights that 41.3% of the gram panchayats have reported no NMMS usage.
 - As per the Ministry statistics, the NMMS usage has been reported only in 1,58,390 of the total 2,69,637 gram panchayats.
- However, according to Ministry officials, an average of 85% of MGNREGS worksites currently use the NMMS app to collect data.
- The Union Rural Development Ministry data shows that only 8 States have recorded usage of the app at 90% or more

worksites. They are;

- Assam (93.42%)
- Odisha (92%)
- Tamil Nadu (93%)
- Karnataka (92%)
- Kerala (91.5%)
- Tripura (91%)
- Uttarakhand (91%)
- Puducherry (99%).

Background

- The Union government has introduced the mandatory implementation of a national mobile monitoring system for the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- The **National mobile monitoring system was initiated to capture attendance through the mobile system at worksites with more than 20 workers.**
- The new system has **resulted in the delay of wage payments to workers.**
 - According to some social activists, the new system was launched without addressing various technical issues.
 - Many districts are unable to process wage payments.
 - Inability to upload attendance data.
- Critics say that the Union government has implemented these changes unilaterally without studying the ground reality.
- Several Social activists and organizations have requested the Union Rural Development Ministry to withdraw its order to suspend manual attendance for MGNREGS work sites and use a Mobile application for recording attendance.
 - The **Mobile app wants MGNREGA workers to upload two photos daily.**
 - The **app can record the attendance even if there is no Internet connectivity** and it will get uploaded whenever they reach a place which has the necessary signal strength.
- They raised concern over the guidelines that made it mandatory to upload two time-stamped photos daily.
 - **Many women from poorer households do not have access to smartphones.**
 - The app has been completely designed in English and there is no technical help available to redress problems.
- **According to the officials, this step will;**
 - Promote Transparency and Accountability.
 - Reduce financial mismanagement
 - Curb Corruption
 - Promote rural development
 - Ensure timely payment of wages.

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) 2005

- The MGNREGA is Indian labour law and social security programme that aims to **guarantee the 'right to work'**.
- It provides a **legal right for 100 days of employment in every financial year to at least one member of every rural household** whose adult members agree to do **unskilled manual work**.
- **The Ministry of Rural Development is monitoring** the implementation of this scheme.
- **Women were guaranteed one-third of the jobs** made available under the MGNREGA.
- The MGNREGA programme also helps in **creating durable assets** (such as roads, canals, ponds and wells).
- **Work is to be provided within 5 km of workers' residence** and minimum wages are to be paid.
- **Right to get unemployment allowance** in case employment is not provided within 15 days of applying.
- MGNREGA is implemented mainly by gram panchayats. Adult members of rural households submit their details to the Gram Panchayat. The Gram Panchayat registers households after enquiring and issues a job card. The job card contains the details of the adult member enrolled and his /her photo
- **The involvement of contractors is banned.**
- **The Social Audit of MGNREGA works is mandatory**, which ensures accountability and transparency.

Significance of MGNREGA

- MGNREGA provides a 'right to work' in accordance with Article 41 which directs the State to secure for all citizens the **right to work**.
- It also protects the environment through sustainable rural works, which is **consistent with Article 48A which directs the State to protect the environment.**
- Article 21 guarantees the right to life with dignity to every citizen of India, this act promotes dignity among the rural people through an assurance of livelihood security.
- Article 16 guarantees equality of opportunity in matters of public employment and prevents the State from discriminating against anyone in matters of employment on the grounds only of religion, race, caste, sex, descent, place of birth, place of residence or any of them.
- **NREGA also follows Article 46** which requires the State to promote the interests of and work for the economic uplift of the

scheduled castes and scheduled tribes and protect them from discrimination and exploitation.

- **Article 40 mandates the State to organize village panchayats** and award them with such powers and authority as may be necessary to enable them to function as units of self-government.
- The programme is providing **economic security and creates rural assets**.
- It also helps in protecting the environment, reducing rural-urban migration and promoting social equity, etc.
- It focuses on the economic and social empowerment of women.
- It provides **“Green” and “Decent” work**.
- Works under MGNREGA help to address the climate change vulnerability and protect the farmers from such risks and conserve natural resources.

Conclusion

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a significant policy initiative aiming to provide livelihood security to rural populations. It provided a legal guarantee of employment and promised to reduce poverty in rural areas. The scheme has been successful in providing a fallback option to the rural populace, ensuring there is some income when other sources fail. It has also been instrumental in increasing agricultural productivity by providing related infrastructure.

URBAN PLANNING

GS-II GOVERNANCE

Context

- Land subsidences are growing more frequent in hilly urban India. An estimated 12.6% of India's land area is vulnerable to Land subsidence, particularly in Sikkim, West Bengal, and Uttarakhand.

Details

- **Land subsidence is a gradual settling or sudden sinking of the Earth's surface due to the removal or displacement of subsurface earth materials.** The principal causes include aquifer-system compaction associated with groundwater withdrawals and drainage of organic soils.
- **Many factors, both natural and man-made**, including mining operations and the loss of water, oil, or other natural resources, can cause it. Subsidence has many well-known causes, including earthquakes, soil erosion, and soil compaction.

Urban planning

- Urban planning, also referred to as town planning, city planning, regional planning, or rural planning, is a technical and political process that focuses on the design and development of land use and the built environment, including air, water, and infrastructure that enters and exits urban areas, such as transportation, communications, and distribution networks, as well as the accessibility of these networks.
- Traditionally, urban planning followed a top-down approach in planning human settlements. The public's welfare was the main priority, and this included taking into account issues like effectiveness, hygienic conditions, environmental preservation and utilisation, as well as how the master plans would affect social and commercial endeavours.
 - Urban planning now prioritizes the social and environmental bottom lines, emphasizing the use of planning as a tool to enhance people's health and well-being while upholding sustainability norms.

Why India Needs Urban Planning

- In India, the **rate of urbanisation is quickly rising. The urban population was over 30% in 2011 and is projected to increase to 41% by 2030.**
- Urbanization has aided in social, political, and economic advancement, but it has also brought up significant socioeconomic issues. The main causes of this situation are the huge expansion of the metropolitan population, the unplanned and uncontrolled growth of urban areas, and a severe shortage of infrastructure.
- **Public services like housing, sanitation, transportation, water, energy, health, and education have been under a lot of pressure as a result of the rapid growth of the urban population, both naturally and through migration.** Beggary, thievery, dacoities, burglaries, underemployment, poverty, and other social ills are common among rural immigrants. Metropolises have shown signs of bad planning, as evidenced by the severe pollution issue in Delhi, the Mumbai and Chennai floods, and so on.

Challenges with urban planning

- Our urban planning machinery has not grown at the pace of the demands posed by urbanization and global technological advancements.
- Urban local bodies face a massive shortage of skilled and trained human resources as well as financial challenges.

- Furthermore, poor quality of planning is a huge limiting factor to realising the true economic potential of urbanization.
- Urban planning, which is the foundation for the integrated development of cities, citizens, and the environment, has not received adequate attention.
- 65% of the 7933 urban settlements do not have any master plan. This leads to piecemeal interventions, haphazard constructions, urban sprawl, and environmental pollution, which can further aggravate issues such as traffic congestion, flooding, etc.
- In many cities, development control regulations were formulated several decades ago and have been updated arbitrarily without sufficient empirical evidence of their impacts.
- An inadequate number of urban planners in the State planning machinery and a lack of multi-disciplinary teams are serious issues.

Recently NITI Aayog in its report on urban planning capacity in India has recommended

- Every city should strive to become a "Healthy City for All" by the year 2030. This is a programmatic intervention for planning healthy cities. The research suggests a Central Sector Scheme called the "500 Healthy Cities Plan" that would last for five years and choose priority cities and towns collaboratively with local governments.
- **Administrative Intervention for Optimal Use of Urban Land:** All cities and towns included in the proposed "Healthy Cities Programme" should tighten development control laws based on data from studies to increase the effectiveness of urban land (or planning area). For this reason, the paper suggests a sub-scheme called "Preparation/Revision of Development Control Rules."
- There is a severe lack of town planners in state departments of town and country planning, so it is important to ensure qualified professionals are carrying out urban planning. This is made worse by the hilarious fact that, in certain states, a town planning degree is not even a requirement for such positions. States may need to make the necessary adjustments to their hiring procedures to guarantee the entry of eligible applicants into town planning roles.
- To address urban difficulties, it is necessary to bring in more institutional clarity and multidisciplinary knowledge. The paper suggests creating a powerful committee to redesign the current governance framework for urban planning.
- **Revision of Town and Country Planning Acts:** The Town and Country Planning Acts, which give states the ability to create and announce master plans for execution, have been passed by the majority of States. Nonetheless, many require examination and improvement. Thus, it is advised that a state-level apex committee be established to carry out an ongoing assessment of planning laws (including town and country planning or urban and regional development acts or other relevant acts).
- **Popularizing Planning and Engaging Citizens:** While maintaining the technical rigour of master plans is necessary, it is also crucial to demystify them so that individuals can participate at pertinent stages. To demystify urban planning, the committee strongly advises launching a "Citizen Outreach Campaign."
- **Steps to Improve the Private Sector's Role:** To improve the country's overall planning capacity, the study calls for concerted action at various levels to strengthen the private sector's involvement. These include the involvement of private sector consultants, the adoption of fair procurement practises for technical consulting services, and improvements to public sector project structuring and management capacities.

Way Forward

- Recent government programmes include JNNURM, Smart City, AMRUT, Digital India, Rajiv AwasYojna, Swachh Bharat, and HRIDAY, all of which are geared towards urban planning and administration. For these programmes to be successful, they require solid support from effective planning and management. The Ministry of Urban Development has launched a programme to help urban local authorities strengthen their capability. The growth of urban regions has a significant impact on the economic development of India. As a result, efficient urban planning and administration emerge as the key to inclusive, sustainable growth.

STRENGTHENING COOPERATIVE MOVEMENT

GS-II GOVERNANCE

Context

- The Union Cabinet approved the establishment of new primary agricultural credit societies (PACS) and dairy-fishery cooperatives in uncovered villages and panchayats to strengthen the cooperative sector.

Details

- The initial target is to establish **2 lakhs multipurpose PACS/ Dairy/ Fishery Cooperatives in the next 5 years** with the objectives;
 - To enable PACS/dairy/fishery cooperative societies to set up and modernize necessary infrastructure to diversify their business activities.
 - To provide farmers with requisite forward and backward linkages to market their produce, enhance their income; obtain

credit facilities and other services at the village level.

- A national cooperative database will be created by the Ministry of Cooperation, and with the help of the Registrar of Cooperative Societies of States/Union Territories, cooperatives to be mapped nationwide at the Panchayat and village levels.
- A full database of PACS was created in January 2023, and by the end of February, a database of primary dairy and fishing cooperative societies will be created.

Cooperatives

- A cooperative is a self-governing group of people who have come together voluntarily to work towards the same goals in terms of economic, social, and cultural development. Each cooperative member has one vote for the board of directors, which is elected democratically by the cooperative's members.
- **Many cooperatives follow the following Principles:**
 - Voluntary and open membership
 - Economic participation by members
 - Autonomy and independence
 - Education, training and information
 - Cooperation among cooperatives
 - Concern for community
- Amul, one of the most well-known cooperative brands in the nation, was established by the Gujarat Co-operative Milk Marketing Federation, which is owned by 36 lakh Gujarati milk farmers. It is an example of a cooperative marketing association founded by small producers and manufacturers who have difficulties selling their goods on their own

Cooperative Societies in India

- The roots of cooperative Societies in India were sown when the first Cooperative Societies Act was passed in 1904.
- The Government Passed the Co-operative Societies Act of 1912.
- In 1958, the National Development Council (NDC) recommended a national policy on cooperatives and the setting up of Cooperative Marketing Societies.
- National Cooperative Development Corporation (NCDC) was set up under the National Cooperative Development Corporation Act, of 1962.
- Union Government announced a National Policy on Cooperatives in 2002.
- The **97th Constitutional Amendment** Act of 2011 granted constitutional status and protection to cooperative societies. This Amendment **introduced 3 changes in the constitution:**
 - It made the right to form cooperative societies a fundamental right (Article 19).
 - It included a new Directive Principle of State Policy on the promotion of cooperative societies (Article 43B).
 - It added Part IX-B in the Constitution "The Co-operative Societies" (Articles 243-ZH to 243-ZT).
- **Provisions under the Indian Constitution**
- Indian Constitution under Part IX-B contains various provisions related to cooperative societies.
- The state legislature may make provisions for the incorporation, election, regulation and winding-up of cooperative societies.

Organization Structure of Cooperative Societies

- The board shall consist of several directors as may be provided by the state legislature, but, the maximum number of directors of a cooperative society shall not exceed 21.
- The state legislature shall provide for the reservation of one seat for the Scheduled Castes or the Scheduled Tribes and two seats for women on the board of every cooperative society having members from such a category of persons.
- The functional directors of a cooperative society shall also be the members of the board and such members shall be excluded to count the total number of directors (21).
- The term of office of elected members of the board and its office bearers shall be 5 years from the date of the election.

Significance of Cooperative Societies

- The village cooperative societies provide important inputs for the agricultural sector.
- Consumer societies meet their consumption requirements at concessional rates.
- Marketing societies help the farmer to get remunerative prices.
- The Cooperative processing units help in value additions to the raw products.
- They also help in building up storage, warehouse, cold storage, rural roads and in providing facilities like irrigation, electricity, transport, education and health.
- They play the role of a balancing factor between the public and private sectors and also supplement the work of the government and its agencies.
- Many Cooperative societies have successfully promoted rural development.

- They play an important role in poverty reduction, promoting women's empowerment, and improving literacy rate and skill development.

Concern

- Cooperative Societies usually do not come forward to organize cooperatives of their consensus; many times it is done by the government or local administration.
- The cooperatives have limited resources.
- They grant loans only for agricultural operations. Farmers approach the money lenders to meet their other requirements.
- **Lack of co-operation**, as the people rarely understand the importance of cooperation in their lives. The absence of willing cooperation on their part hinders the growth of the cooperative movement.
- **Political interference** acts as a barrier to the growth of cooperative societies. The selection of beneficiaries is mostly done on political relations.
- The cooperative credit structure is criticized on the ground that it is mostly managed by landlords and large farmers.
- **Poor performance, increasing debt and overdue**, inefficient administration and management of Cooperative societies.

Reforms suggested for strengthening cooperatives

- Improve governance including Cooperative principles.
- Democratic control of Cooperatives.
- Increasing member participation.
- Promote transparency.
- Conduct regular elections.
- Improve and Strengthen Policy framework.
- Adopt International and National best practices.
- Improve account keeping and auditing.
- Strengthening infrastructure.
- Ensure access to capital.
- Diversification of activities.
- Promoting entrepreneurship, promoting branding, marketing, business plan development, innovation, technology adoption and exports.
- Focus on Training, Education, knowledge sharing and Awareness.
- Linking training with entrepreneurship, the inclusion of Women, Youth & Weaker Sections.

Way Forward

- We must make sure that all procedures are transparent and that boards operate independently. Establishing accountability, clear objectives, effective planning, and performance evaluation metrics are all components of good cooperative management. In their long-term plan, they must take the cooperative societies' goals into account.
- Access to competitive and affordable external funding should be improved through enhanced strategic decision-making and improved operational and financial performance. Adopt a comprehensive strategy that involves collaborating with the public, other institutions, and the government. Adopt a down-to-earth, pragmatic strategy.
- At the board meeting, introduce expertise and make the decision-making process better. Don't let internal organizational structures be politically affected; instead, place the right people in the right positions.

Conclusion

- Cooperatives play a vital role in promoting collectivism and safeguarding the nation's social capital base. The spirit of democracy and collectivism can best be maintained through cooperatives. Large networks of social organisations, such as cooperatives, would facilitate the creation and use of social capital, and "the bigger the social capital, the greater the possibilities of development," as the saying goes.

In News

- In the Union Budget 2023-24, the Union Finance Minister announced a mission for the welfare of **Particularly Vulnerable Tribal Groups (PVTGs)**.
 - The Finance Minister announced that Rs.15,000 crore will be allocated to implement the Mission in the next three years under the Development Action Plan for the Scheduled Tribes.
- The Mission will be **launched as part of 'Reaching The Last Mile', one of the 7 Saptarishi priorities enlisted in this year's Budget.**
 - There are 75 PVTG groups in India that will get benefit from this scheme.

Particularly Vulnerable Tribal Groups

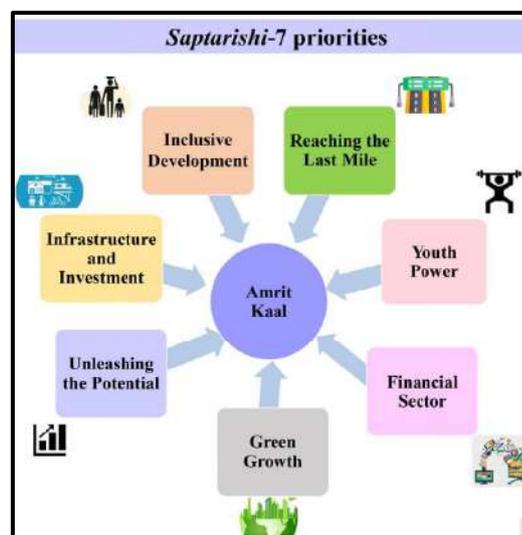
- Particularly Vulnerable Tribal Groups are **more vulnerable among the tribal groups.**
- Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development.
- In 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups, while in 1993 an additional 23 groups were added to the category, making it a **total of 75 PVTGs out of 705 Scheduled Tribes, spread over 17 states and one Union Territory (UT), in the country (2011 census).**
- **The government of India follows the following criteria for the identification of PVTGs.**
 - Pre-agricultural level of technology
 - Low level of literacy
 - Economic backwardness
 - A declining or stagnant population
- **Odisha has the highest number of PVTGs** in India while no PVTGs are found in the states of Punjab and Haryana.
- The Scheme for Development of Primitive Vulnerable Tribal Groups (PVTGs), came into effect on 1st April 2008.
- The Scheme defines PVTGs as the most vulnerable among the Scheduled Tribes and the Scheme, therefore, seeks to priorities their protection and development.

The Union Finance Minister listed seven priorities of the Union Budget and said that they complement each other and act as the 'Saptarishi' guiding us through the Amrit Kaal. They are as follows:

- 1) Inclusive Development
- 2) Reaching the Last Mile
- 3) Infrastructure and Investment
- 4) Unleashing the Potential
- 5) Green Growth
- 6) Youth Power
- 7) Financial Sector

Key Initiatives under "Priority 2: Reaching the Last Mile"

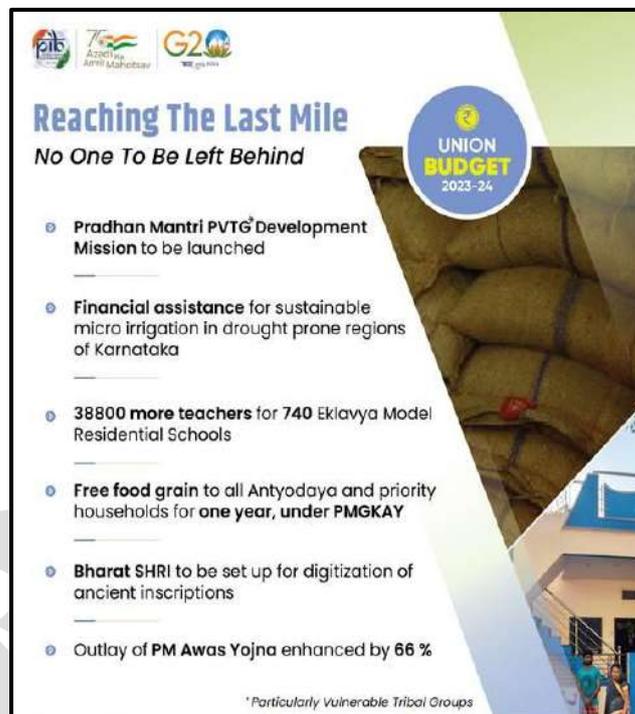
- **Pradhan Mantri PVTG Development Mission** will be launched to improve the socio-economic conditions of the particularly vulnerable tribal groups (PVTGs).
 - This will ensure PVTG families and habitations with basic facilities such as safe housing, clean drinking water and sanitation, improved access to education, health and nutrition, road and telecom connectivity, and sustainable livelihood opportunities.
- **Eklavya Model Residential Schools:** 38,800 teachers and support staff will be recruited for the 740 Eklavya Model Residential Schools.
- **Aspirational Districts and Blocks Programme:** The Programme has been launched covering 500 blocks for saturation of essential government services across multiple domains such as health, nutrition, education, agriculture, water resources, financial inclusion, skill development, and basic infrastructure.
- **PM Awas Yojana:** The outlay for PM Awas Yojana is to be increased by 66% to over Rs.79,000 crore.



- **Water for Drought Prone Region:** Central assistance of Rs.5, 300 crores in Karnataka for the Upper Bhadra Project to provide sustainable micro irrigation and filling up of surface tanks for drinking water.
- **Bharat Shared Repository of Inscriptions (Bharat SHRI)** to set up a digital epigraphy museum, with the digitization of one lakh ancient inscriptions in the first stage.
- **Support for poor prisoners:** Required financial support will be provided to poor persons who are in prisons and unable to afford the penalty or the bail amount.

Other Important Schemes for the development of Tribal

- **The Pre and Post Matric schemes** are demand-based schemes and every ST student whose family income is up to Rs 2.5 lakhs is entitled to a scholarship for pursuing education from class IX to Post Doctorate across India.
 - The states send the proposal for the estimated expenditure during the financial year based on the expenditure incurred in previous years and advance up to 50% of the Central share is released to the States.
 - After the State has disbursed the scholarship to the students and has submitted certificates, the balance amount is released to the State provided the State has contributed its share.
- **Pradhan Mantri Aadi Adarsh Gram Yojna:**
 - Comprehensive development of 36,428 villages will be undertaken to develop these villages as Adarsh Gram, under 'Pradhan Mantri Aadi Adarsh Gram Yojana'.
 - **These villages have a tribal population of more than 500 and are 50% tribal.**
- **Pradhan Mantri Janjatiya Vikas Mission**
 - The Mission seeks to achieve livelihood-driven tribal development in the next five years through the formation of Van Dhan groups that have been organized into VandhanKendras.
 - New haats bazaar and warehouses will be developed in the next 5 years as part of "Atmanirbhar Bharat Abhyan".
 - TRIFED would be the nodal agency for implementing the scheme. The products produced will be marketed through Tribe India Stores.
- **Venture Capital Fund for STs**
 - An amount of Rs. 50 cr. has been sanctioned for the new scheme of 'Venture Capital Fund for Scheduled Tribes' (VCF-ST), which is aimed at promoting Entrepreneurship among the STs.
 - The VCF-ST scheme would be a social sector initiative to promote ST entrepreneurship and to support and incubate the start-up ideas of ST youth.
- **Central Sector Scholarship Scheme for ST students** was introduced in the academic year 2007-08 to encourage meritorious ST students for pursuing studies at the Degree and Postgraduate level in any of the Institutes identified by the Ministry of Tribal Affairs for the purpose.
- **Vocational Training Centers in Tribal Areas**
 - The main aim of this scheme is to upgrade the skills of the tribal youth in various traditional/ modern vocations depending upon their educational qualification, present economic trends and the market potential, which would enable them to gain suitable employment or enable them to become self-employed.



NATIONAL TRIBAL FESTIVAL

GS-II SOCIAL JUSTICE

Context

- The Prime Minister (PM) of India inaugurated the Aadi Mahotsav tribal festival in New Delhi.

Details

- The Prime Minister also paid floral tributes to a statue of tribal freedom fighter Birsa Munda.
- The PM said that such an event is "giving new heights to unity in diversity". The Mahotsav will place a **special emphasis on exhibiting Shree Anna grown by tribal people because 2023 is being observed as the International Year of Millets.**
 - The **United Nations announced 2023 as the International Year of Millets on India's insistence.**

- To boost the production of millets and increase their exports, GoI is launching several initiatives. One such is the tag name "Shree Anna". The Indian millets are to be sold under the brand name Shree Anna. To promote this, millets were showcased under the name of "Shree Anna" at the Aadi Mahotsav.
- Apart from millets, the festival also focused on pottery, handloom, jewellery, handloom, etc.

Key Points of the PM's address

- Addressing the event, the PM said "Today, India goes to some of the world's biggest stages and presents the Adivasi culture as its own proudly – as a solution to global problems such as climate change and global warming. When people talk about sustainable development, we can proudly say that the world has a lot to learn from the Adivasis,"
- The **Prime Minister also highlighted the important policies taken for the development of tribals.**
 - More than 3,000 Van Dhan Vikas Kendras were set up.
 - 80 lakhs tribal Self Help groups created
 - Increase in the budget for tribal welfare.
 - Promoting Eklavya Model Residential Schools (EMRSs)
 - Increase in the number of forest products that the government was purchasing at the minimum support price.
 - Providing education to Adivasi children.
 - New Education Policy addressed the language barrier, which had been a problem for tribal children, allowing them to learn in their mother tongues.
 - Villages that used to be connected with separatism and extremism are now connected with 4G. The youth are now accessing the Internet and becoming part of the mainstream. This is the stream of Sabka Saath, Sabka Vikas, Sabka Vishwas and SabkaPrayas which reaches every citizen of the country.
- The Aadi Mahotsav 2023 will show and exhibit tribal artefacts, handicrafts, handlooms and other products at the Major Dhyan Chand National Stadium, New Delhi.
- The Tribal Cooperative Marketing Development Federation (TRIFED), an organisation of the **Ministry of Tribal Affairs, has been organising the 'Aadi Mahotsav'** National Tribal Festival to provide direct market access to the tribal master craftsmen and women in large metros and state capitals.

Tribal Cooperative Marketing Development Federation of India (TRIFED)

- In 1987, TRIFED was established under the Multi-State Cooperative Societies Act, 1984 by the Union Government.
- It was established as a National level Cooperative body, with the mandate of bringing about socio-economic development of tribals by institutionalizing the trade of Minor Forest Produce (MFP) and Surplus Agricultural Produce (SAP) collected/cultivated by them.
 - TRIFED works as a market developer and service provider.
- Its objective is to ensure the socio-economic development of tribal people by marketing their products on which the lives of tribals depend heavily as they derive a major portion of their income.
- The **approach involves capacity building of the tribal people through sensitization, formation of Self Help Groups (SHGs)** and imparting training to them for undertaking a particular activity, exploring marketing possibilities in national as well as international markets, creating opportunities for marketing tribal products on a sustainable basis and creating a brand.

ORISSA'S INITIATIVE TO CURB CHILD MARRIAGE

GS-II SOCIAL JUSTICE

Context

- Odisha has adopted a long-term approach to bringing about social and behavioural change to end child marriage in the state.

Child Marriage in Odisha

- In Odisha, **the prevalence of child marriage decreased overall from 21.3% in the NFHS-4 to 20.5% in the NFHS-5.** However, the Southern Odisha district of Nabarangpur had 39.4% of girls married under the age of 18 years in comparison to the State average of 20.5% and the national average of 23.3%.
- Nearly 50 panchayats were identified as vulnerable based on high incidences of child marriages.
- Last year, an inquiry was ordered after the Odisha state government discovered that 43,000 students were not present for the Class X exams. One of the causes for the examinees' absence was found to be child marriage.

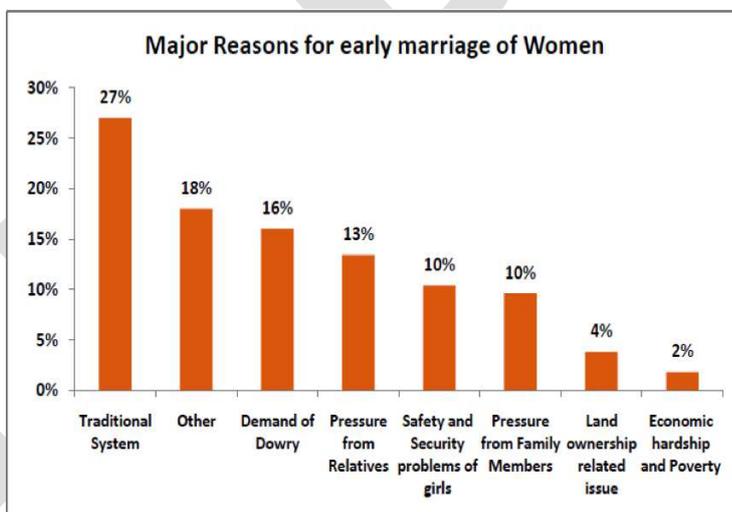
Steps taken by Odisha to end child marriage

- To eradicate child marriage in the state, Odisha has taken a **long-term approach to bring about societal and behavioural change.** The focus has been multidimensional: all districts keep track of the number of girls who are missing from their classes and their communities, reporting these figures to the district administration, which immediately appoints personnel for counselling.

- The platform "Advika - Every Girl is Unique" connects all programmes for females between the ages of 10 and 19 years.
- The Chief Minister of Odisha has come out with guidelines to declare villages child-marriage-free.
- The government announced monetary incentives for particularly vulnerable tribal groups.
- Many districts have come up with ways of tackling the problem.
- **District administration engages with the community**, especially girls in the age group of 15 to 18 who are dropouts and retains them in educational institutions.
- **The Odisha police hold monthly community meetings to discuss school dropout and child marriage with members of the panchayat, parents, and children.**
 - The topics of discussion include the loss of schooling, the health risks associated with teenage pregnancies, and young females' empowerment.
- Police stations were made child friendly so that girls would feel empowered to approach the police.
- **To raise public awareness against child marriages, community leaders from various castes, tribes, and religious groups were engaged.** UNICEF and ActionAid Association India, a non-profit working with women and children, supported the district administrations to engage with them.
- From district to district, different strategies are used to prevent child marriage. The Ganjam district administration in southern Odisha has made the production of an Aadhaar number necessary in all marriages, whereas Nayagarh, around 90 km from Bhubneshwar, maintains a database of nearly 50,000 adolescent girls by recording information.

Child Marriage in India

- As per Census 2011, over 12 million child marriages were reported in the country.
- Child Marriage is defined as a marriage of a girl or boy before the age of minimum legal age (18 years).
- **According to the data released by National Family Health Survey-5**
 - In India, 8 States have a higher prevalence of child marriage than the national average; West Bengal, Bihar and Tripura top the list with more than 40% of women aged 20-24 years married below 18.
 - States with a large population of tribal poor have a higher prevalence of child marriage. In Jharkhand, 32.2% of women in the age bracket 20-24 got married before 18 years.
 - Infant mortality stood at 37.9%
 - 65.8% of women in the 15-19 years age bracket are anaemic.
 - Assam too has a high prevalence of child marriage (31.8% in 2019-20).
 - States with high literacy levels and better health and social indices have performed much better; In Kerala, women who got married before the age of 18 years stood at 6.3% in 2019-20.
- **The reason behind Child Marriage**
 - It is a widely practised social custom.
 - Poverty and Illiteracy of a Child's parents.
 - Social and Economic Condition of the family including the Cultural values of the family and the Surrounding Society.
 - Lack of awareness about the harmful effects Lack of easy access to Schooling.
 - Political Patronage: Due to Social acceptance politicians find it difficult to oppose the practice of child marriage as it may mean losing votes and Support.
- **Child marriage is also widely reported to be used to traffic girls from poor and tribal families for either the Sex trade or as cheap labour.**
- It is more prevalent in rural areas.
- **Rates of Child marriage are highest in the Central and Western parts of India and lower in the eastern and southern parts of India.**
- **Result of Child Marriage;**
 - It Restricts access to education and better opportunities in the future.
 - It limits the freedom of decision and promotes socio-economic and gender inequality.
 - It is associated with multiple health risks, limited Knowledge and access to, and use of, Contraception and reproductive health services and information.



Concern

- Child marriage violates children's rights, and also results in more infant and maternal deaths. Children born to adolescent mothers have a greater possibility of seeing stunted growth as they have low weight at birth. According to NFHS-5, the prevalence of child stunting is 35.5% in 2019-21.
- **About a quarter of 20-24-year-old women are married before the age of 18 years, despite that being the minimum age of marriage since 1978.**
 - The limited success of the current law raises the question of whether an increase in the minimum age would have any significant impact on reducing the incidence of child marriage
- **According to NFHS-5 (2019-21), the prevalence of underage marriages remains high, with 23% of women between 20 and 24 years of age married before the age of 18. At the same time, the detection of such marriages remains low, with only 785 cases registered under the law in 2020.**
 - This raises the question of whether the increase in the minimum age would have any significant impact on reducing child marriages.
- **Increasing the legal age for marriage for women will increase the number of marriages performed underage and render young adults without legal protection.**

Steps by Government

- Indian Parliament enacted several laws including the Prohibition of Child Marriage Act, 2006 and the Protection of Children from Sexual Offences Act, 2012, to protect the human rights of Children.
- Beti Bachao Beti Padhao to address the declining Child Sex Ratio.
- **PM Matru Vandana Yojana (PMMVY) Providing Cash incentives** for improved health and nutrition to pregnant and nursing mothers.
- **Scheme for Adolescent Girls aims at girls in the age group 11-18, to empower and improve their social status through nutrition, life skills, home skills and vocational training**
- Pradhan Mantri Mahila Shakti Kendra scheme promotes community participation through the involvement of Student Volunteers for the empowerment of rural women
- **National Crèche Scheme to provide daycare facilities to children of the age group of 6 months to 6 years of working women who are employed.**
- Rashtriya Mahila Kosh (RMK) to provide micro-credit to poor women for various livelihood support and income-generating activities at concessional terms
- Swadhar Greh provides relief and rehabilitation to destitute women and women in distress.
- **Ujjawala is a Comprehensive Scheme for the prevention of trafficking and rescue**, rehabilitation, reintegration and repatriation of victims of trafficking for commercial sexual exploitation.
- Working Women Hostels for ensuring safe accommodation for women working away from their place of residence.
- **One-Stop Centre (OSC) and Women Helpline (WH)** are being implemented to facilitate access to an integrated range of services including medical aid, police assistance, legal aid/ case management, psychosocial counselling and temporary support services to women affected by violence.
- Emergency Response Support System set up under Nirbhaya Fund.
- Mahila Police Volunteers, to report the incidences of violence against women.
- **The dowry Prohibition Act, of 1961, Penalizes Giving & taking.**
- SABLA Scheme, Providing life Skills and Supplementary nutrition to out-of-School girls.
- The national database on Sexual offenders includes the name, addresses, photographs and fingerprint details of those Convicted in Sexual assault Cases.
- **National Policy for Women, 2016**
 - **Addresses women's issues throughout life-Cycle, issues from education, health, economic participation, decision making, violence, Creation of an enabling environment etc.**
- In 2020, the Union government has set up a task force under Ms Jaya Jaitly, it suggested increasing the age of marriage for females to 21.
- The Prohibition of Child Marriage (Amendment) Bill, 2021 seeks to increase the minimum age of marriage for females to 21 years.

Way Forward

- **The issue of increasing the age of marriage for women must be supported with other measures** that help delay underage marriages such as access to education and improving women's safety.
- **The practice of child marriages is largely due to the overall social customs, tradition, illiteracy, poverty, low status of women in society, and lack of awareness.** These issues cannot be tackled by legislative interventions alone.
- There is a need for improved access to education, skill training and employment opportunities, safety for women and

strengthening maternal health services to reduce maternal and infant mortality rates.

- **Need to adopt a comprehensive approach to curb the factors closely related to child marriage**, including poverty eradication, better education and public infrastructure facilities for children and raising social awareness on health, nutrition, regressive social norms and inequalities.

MENSTRUAL LEAVE POLICY

GS-II SOCIAL JUSTICE

Context

- The Supreme Court of India while hearing a petition on menstrual leave has asked the petitioner to approach the Ministry of Women and Child Development to frame a policy.

Details about the Petition

- The **Petitioner requested the Supreme Court to issue a direction to the government to frame rules for granting menstrual pain leave for students and working women under Section 14 of the Maternity Benefit Act, 1961.**
 - Section 14 deals with the appointment of inspectors.
 - It says that appropriate governments may appoint such officers and may define the local limits of jurisdiction within which they shall exercise their functions under this law.
- The Petitioner highlighted that countries like the United Kingdom, China, Wales, Japan, Taiwan, Indonesia, South Korea, Spain and Zambia are already providing menstrual pain leave in one form or the other.
- The Petitioner stated that the various provisions of the 1961 Act acknowledge and respect the motherhood and maternity of working women.
- Despite several provisions under different laws and policies to take care of women in difficult stages of her maternity, the very first stage of maternity, the menstrual period, has been knowingly or unknowingly ignored by society, the legislature and other stakeholders in society except for a few organizations and State governments.
 - **Bihar and Kerala are the only States that allow menstrual pain leave.**

Union Government Stand

- The Union Minister for Women and Child Development stated that the **Central Civil Services (Leave) Rules, 1972, applicable to Central government employees, do not have provisions for menstrual leave, and currently, there is no proposal being examined to include such leave in the rules.**
- The Union Minister highlighted various types of leave available to women government employees under service rules, such as earned leave, half-pay leave, extraordinary leave, child care leave, commuted leave, maternity leave, leave on medical certificate and leave not due.

Key Observations made by the Court

- A three judge Bench led by the Chief Justice of India (CJI) stated that **there are different “dimensions” to menstrual pain leave, which is a biological process, but it may also act as a “disincentive” for employers from hiring women in their organisations.**
- The Court highlighted that if it is made mandatory for employers to grant menstrual pain leave, it may act as a disincentive for employers to engage women in their establishments”.
- The Court mentioned that menstruation is a biological process and women should not be discriminated against in educational institutions and workplaces.
- **The court said that there are different dimensions to the issue, and we will leave it to the government to study the matter in detail and frame policy.**

Significance of Menstrual Leave Policy

- As an increasing number of states and countries around the world move to recognize and protect the rights of women to menstrual leave, it is important to understand the implications of such policies.
 - **These policies allow employees to take a few days off during their cycle when they need it**, and employers are making sure that these policies are well known throughout the workplace.
 - This is an important step in recognizing that everyone's health needs should be taken into consideration in the workplace and providing them with the resources to take care of themselves.
 - It is also an important part of creating an inclusive atmosphere where everyone feels comfortable bringing up their health needs and being open about their menstrual cycles.
- Menstrual leave is not just a matter of personal comfort; when women are provided with the space and time to address their unique needs during their cycle, they are more likely to remain in their jobs, freeing up resources for employers in terms of time and money.

- **Menstrual leave policies can create more equitable workplaces and foster a culture of respect and understanding among members of the organization.** Employers must recognize the importance of such policies and work to ensure that they are implemented fairly and equitably.
- Menstrual leave policies can offer companies the opportunity to ensure that their staff is given the time and support they need, while also allowing for greater flexibility and equality in the workplace.
 - By recognizing the unique challenges faced by women during menstruation and providing an appropriate policy, employers can create a more inclusive and supportive work atmosphere for their whole team.

Conclusion

- A menstrual leave policy (MLP) is a policy that allows employees to take time off from work to take care of their physical and mental health during their menstrual cycle.
 - This type of policy recognizes that there are biological conditions associated with menstruation and acknowledges that the employee needs extra time to care for themselves during this period.
 - This policy is an effort to bring the workplace to a more inclusive and understanding environment.
- **Menstrual leave is an important part of creating a safe and equitable workplace for all genders,** and it must be recognized as an integral part of the policies.

On 16th February 2023, Spain become the first European country to introduce paid menstrual or period leaves.

MANUAL SCAVENGING

GS-II SOCIAL JUSTICE

Context

- The Supreme Court has directed the government to present its steps taken to end manual scavenging within six weeks.

Details

- The Supreme Court stated that even though the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act of 1993 and the Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act of 2013 strictly forbids the practice, manual scavenging and deaths of people trapped in flooded sewer lines continue to occur.
- In its ruling in *Safai Karamchari Andolan And Others vs. Union of India*, the supreme court itself had reinforced the prohibition and ordered the rehabilitation of those, both traditionally and otherwise, employed as manual scavengers. Their "rehabilitation based on the principles of justice and transformation," according to the verdict, was mandated.
 - The court had emphasised that "individuals liberated from manual scavenging should not have to face hurdles to receive what is their rightful right under the law."

Manual Scavenging

- **Manual scavenging is a term used mainly for "manually cleaning, carrying, disposing of, or otherwise handling, human excreta in an insanitary latrine or an open drain or sewer or a septic tank or a pit".**
- Manual scavengers usually use hand tools such as buckets, brooms and shovels. The workers have to move the excreta, using brooms and tin plates, into baskets, which they carry to disposal locations sometimes several kilometres away.
- **The occupation of sanitation work is linked with the caste in India. All kinds of cleaning are considered lowly and are assigned to people from the so-called lowest caste of the social hierarchy.**
 - In the caste-based society, it is mainly the so-called lower caste or Dalits who work as sanitation workers.
 - **According to data by the Union Social Justice and Empowerment Ministry, the government has caste-related data of 43,797 identified manual scavengers, and over 42,500 of them belong to the Scheduled Castes, 421 to the Scheduled Tribes, and 431 to Other Backward Classes.**
- **The construction of dry toilets and the employment of manual scavengers to clean such dry toilets were prohibited in India in 1993.** The law was extended and clarified to include a ban on the use of human labour for the direct cleaning of sewers, ditches, pits and septic tanks in 2013.
- **India banned the practice of Manual scavenging under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (PEMSR).**
 - The Act bans the use of any individual for manually cleaning, carrying, disposing of or otherwise handling in any manner, human excreta till its disposal.
 - In 2013, the definition of manual scavengers was also broadened to include people employed to clean septic tanks, ditches, or railway tracks.
 - The Act recognizes manual scavenging as a "dehumanising practice," and cites a need to "correct the historical injustice and indignity suffered by the manual scavengers."

- **Socio-Economic and Caste Census (SECC)** released in 2015, states that there were around **18 million manual scavenging households in rural areas.**
- Statistics show that **80% of India's sewage cleaners die before they turn 60**, after contracting various infectious diseases.
- **Reasons:**
 - **Manual scavenging persists mainly because of the continued presence of insanitary latrines.**
 - **It is strongly connected to the caste system.**
 - Lack of support by society to eliminate this most inhuman profession.
 - Lack of education and humanity is missing in many parts of India.
 - **Data show the manual scavengers' reluctance to take up self-employment, even if they try to switch jobs; they face social discrimination due to their caste.**

Concern

- Even though manual scavenging is banned in India, the practice is still prevalent in many parts of the country.
- **Only in 30% of cases of Compensation awarded after death, and hardly anyone received the Rehabilitation or Alternative jobs to which they are entitled by law.**
- **Employers and local authorities are not providing Protective measures.**
- **When the Government builds toilets through its Swachh Bharat Abhiyan, it is not taking into account the question of who will have to clean the septic tank.**
- **Rehabilitation has been Slow because they are mostly illiterate and have no Skill to do any work other than Sanitation related activities.**
- Despite the laws, manual scavenging was reported in many states. In 2021, the National Human Rights Commission observed that eradication of manual scavenging as claimed by state and local governments is far from over.

Steps taken by the Government

- **Sanitation is a State subject as per the 7th Schedule.**
- In 2013 Delhi announced that they were banning manual scavenging, making them the first state in India to do so.
 - District magistrates are responsible for ensuring that no manual scavengers are working in their district.
- **"The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993", drafted by the Ministry of Urban Development was passed by Parliament in 1993.**
 - The act punishes the employment of scavengers or the construction of dry (non-flush) latrines with imprisonment for up to one year and/or a fine of Rs 2,000.
- Under the SwachhtaUdyami Yojana (SUY) concessional loans are provided to sanitation workers and their dependents and the urban local bodies for procurement of sanitation-related equipment, machines and vehicles costing up to Rs. 50.00 lakhs.
- **In 2007 the Self Employment Scheme for Rehabilitation of Manual Scavengers was passed to help in the transition to other occupations.**
 - The Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS) has been revised from 2020-21 to provide a capital subsidy of up to Rs. 5.00 lakh to sanitation workers and their dependents for sanitation-related projects.
- **The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act 2013.**
- Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020.
 - The Bill calls for a complete mechanisation of cleaning sewers and septic tanks.
- Safaimitra Suraksha Challenge was launched by the Ministry of Housing and Urban Affairs to make sewer cleaning mechanised.
- Under the Recognition of Prior Learning (RPL) programme, free short-duration upskilling training is provided to sanitation workers. The candidates are trained in mechanised cleaning and safety precautions for the safe and healthy cleaning of sewers and septic tanks.
- 'Swachhta Abhiyan App' has been developed to identify and Geotag the data of insanitary latrines and manual scavengers so that the insanitary latrines can be replaced with sanitary latrines and rehabilitate all the manual scavengers to provide dignity of life to them.
- **In 2014, the Supreme Court order made it mandatory for the government to identify all those who died in sewage work since 1993 and provide Rs. 10 lakhs with each as compensation to their families.**
- The government is implementing a Central Sector Self Employment Scheme for the Rehabilitation of Manual Scavengers (SRMS). The following are the provisions for assisting the identified manual scavengers in their rehabilitation:-
 - **Time Cash Assistance of Rs. 40,000/- to one identified manual scavenger in the family.**
 - Skill Development Training of manual scavengers and their dependents for up to two years with a stipend @ Rs. 3,000/- per month during the training period.
 - Capital Subsidy up to Rs. 5.00 lakh for those who availed loans for Self Employment Projects including sanitation-related projects.

- o Health insurance under Ayushman Bharat, Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) to the families of all the identified manual scavengers.

Way forward

- **India’s Supreme Court has ruled that the practice of manual scavenging violates international human rights law**, including protections found in the Universal Declaration of Human Rights (UDHR), the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). India is also a party to other international conventions that reinforce obligations to end manual scavenging.
- **Article 21 of the Constitution** guarantees the ‘**Right to Life**’ and also with **dignity**.
- Steps need to be taken to promote 100% mechanisation, especially cleaning of sewers, septic tanks, desilting of drains, garbage lifting, sludge handling, solid and medical waste disposal etc, and for the benefit of sanitation workers (including waste pickers) and their dependants to provide sustainable livelihood.
- Need to ensure proper implementation of the Self Employment Scheme for Rehabilitation of Manual Scavengers, and promote Alternative opportunities or Jobs.
- **Ensure that rehabilitation entitlements under the 2013 Act**—including financial assistance, scholarships, housing, alternative livelihood support, and other important legal and programmatic assistance—are available to manual scavenging communities.



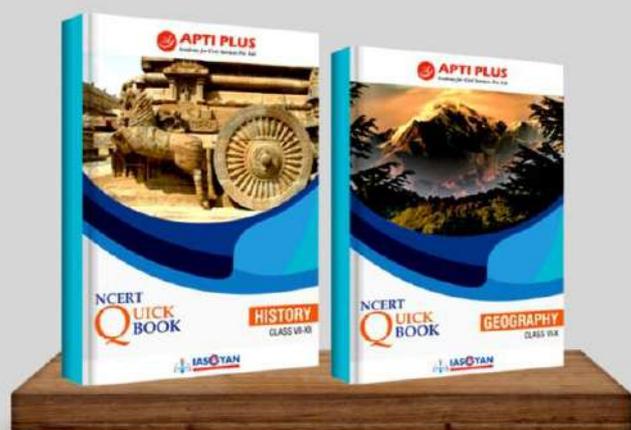
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TRILATERAL COOPERATION INITIATIVE**GS-II INTERNATIONAL RELATIONS****Context**

- India, France and the UAE on Saturday announced an ambitious road map for cooperation in defence, energy and technology under a trilateral framework.

Details

- The plan was finalised during a phone conversation among External Affairs Minister S Jaishankar, and his France and UAE counterparts, Catherine Colonna and Sheikh Abdullah bin Zayed Al Nahyan, respectively
- The three foreign ministers met on September 19 last year for the first time in a trilateral format on the margins of the UN General Assembly in New York.
- In the meeting, they agreed to establish a formal trilateral cooperation initiative, with the aim of expanding cooperation in various fields of mutual interest.

About the initiative

- The trilateral initiative will serve as a forum to promote the design and execution of cooperation projects in the fields of energy, with a focus on solar and nuclear energy, as well as in the fight against climate change and the protection of biodiversity, particularly in the Indian Ocean region.
- For this purpose, the three countries will **explore the possibility of working with the Indian Ocean Rim Association (IORA) to pursue concrete, actionable projects on clean energy, the environment, and biodiversity.**
- In support of the endeavours, a range of trilateral events will be organised in the framework of the Indian Presidency of the G20 and the UAE's hosting of COP-28 in 2023, respectively.
- They decided to boost cooperation in food security and circular economy and vowed to focus on key issues such as tackling single-use plastic pollution and desertification.
- The trilateral initiative will serve as a platform to expand cooperation between development agencies of the three countries on sustainable projects, besides ensuring greater alignment of their respective economic, technological, and social policies with the objectives of the Paris climate agreement.**
- The three countries also agreed to expand their cooperation through initiatives such as the Mangrove Alliance for Climate led by the UAE and the Indo-Pacific Parks Partnership led by India and France.
- The three sides also underlined their keen desire to cooperate in the field of **circular economy** under the aegis of India's Mission LIFE.
- It said the **three countries will seek to strengthen exchanges of views on emerging threats from infectious diseases, as well as on measures to fight against future pandemics.** In this regard, cooperation in multilateral organisations such as the WHO, Gavi-the Vaccine Alliance, the Global Fund, and Unitaid will be encouraged.
- Further, the three countries will attempt to **identify tangible cooperation on implementing the 'One Health' approach, and support the development of local capacities in biomedical innovation and production within developing countries.**

GREEN DEAL INDUSTRIAL PLAN**GS-II INTERNATIONAL RELATIONS****Context**

- In a bid to support and expand its green industry, the European Union revealed the "Green Deal Industrial Plan" that aims to cut red tape and provide massive subsidies.** The move has come just a few months after the United States announced its Inflation Reduction Act (IRA), which contains billions of dollars of tax cuts for clean energy and climate change programs with incentives for US-based manufacturing.

Details**What is the 'Green Deal Industrial Plan'?**

- The proposal involves building a **simpler regulatory framework, providing faster access to funds, enhancing skills and improving the EU's trade network.**
- Simpler regulatory framework:** The plan seeks to formulate a "Net-Zero Industry Act", which will not only simplify rules but also speed up the issuance of permits for green projects, such as renewable energy generation arrays, carbon capture and renewable hydrogen production facilities.
 - It also includes a "**Critical Raw Materials Act**", which will provide access to materials like rare earths that are crucial for developing net-zero technology.
- Providing faster access to funds:** According to the proposal, state aid rules will be loosened in order to help EU's 27 governments with investing in the clean energy projects. There is also a provision for setting up a "European Sovereignty

Fund” in the future to “give a structural answer to the investment needs”.

- **Enhancing skills:** The plan aims to establish “Net-Zero Industry Academies” that will provide up-skilling and re-skilling programmes in strategic industries. According to the European Commission’s website, 30 to 40 per cent of the existing jobs might get affected due to green transition. Therefore, the “Green Deal Industrial Plan” focuses on developing the skills needed for well-paid quality jobs.
- **Improving the trade network:** The plan underlines the importance of open trade and seeks to further “develop the EU’s network of Free Trade Agreements and other forms of cooperation with partners to support the green transition.”

Counter to the USA’s Inflation Reduction Act (IRA)

- In August 2022, President Joe Biden’s administration unveiled its climate change legislation, which will direct \$390 billion towards clean energy projects.
- The IRA provides huge tax breaks and incentives to both customers and manufacturers.
- However, soon after the legislature was revealed, leaders of the European Union expressed concerns regarding its possibly “discriminatory” provisions.
- The EU members have claimed that IRA’s tax credits and subsidies to green product makers would put European companies at a disadvantage and might lure them to the United States.
- Hence, it didn’t come as a surprise when the bloc announced to come up with their own plan of providing subsidies to sustainable companies.

SPY BALLOON

GS-II INTERNATIONAL RELATIONS

Context

- The United States shot down a Chinese surveillance balloon that had floated over American airspace for several days, triggering the latest diplomatic crisis amid already worsening relations between the world’s two biggest powers.

Details

- Beijing reacted angrily to the shooting down of what the U.S. called a “surveillance balloon” but Chinese authorities maintained that it was a civilian airship used for meteorological purposes that had drifted off course.
- Chinese military said that it now “reserve[s] the right” to take the same measures if a similar situation arose.
- The appearance of the balloon in the skies over the western U.S. State of Montana sparked an unexpected diplomatic row at a time both sides were looking to stabilise increasingly tense relations.

Implications

- U.S. Secretary of State Antony Blinken called off a visit to China. Had the visit happened, it would have been the first by a top U.S. diplomat since 2018.
- Beijing has dismissed Washington’s accusations of surveillance and international airspace violation as an attempt to “attack and smear China.”
- Chinese side has verified it and communicated it to the US side that it is a civilian airship used for research, mainly meteorological, purposes. Affected by the Westerlies and with limited self-steering capability, the airship deviated far from its planned course. This is entirely an unexpected situation caused by force majeure and the facts are very clear

Escalating tensions between the US, China

- The relationship between the US and China have been tense in recent times, with issues ranging from Taiwan and the South China Sea, to human rights in China’s western Xinjiang region and the clampdown on democracy activists in Hong Kong.
- Taiwan specifically has been at the centre of US- China animosity, ever since former House Speaker Nancy Pelosi visited the island nation claimed by China as its own.
- Taiwan scrambled fighter jets, put its navy on alert and activated missile systems in response to nearby operations by 34 Chinese military aircraft and nine warships.
- Blinken’s visit this weekend was meant to thaw relationships and find common ground. Only time will tell whether it will achieve its goals or indeed take place.

The spy balloon

- Around a decade-and-a-half after the first ever hot air balloon took flight with humans, balloons were already being used for military purposes.
- **During the French Revolutionary Wars in the late 18th century, balloons were used to provide a bird’s eye view of the battlefield, with there being documented evidence of their use in the Battle of Fleurus in 1794.**
- Since then, balloons have been in use in all kinds of conflict, from the American Civil War to WW-I.

- For well over a century, before aircraft technology really took off during the Great War, balloons were the primary mode of big-picture reconnaissance, providing perspective on enemy positions and movements simply impossible to obtain from the ground.
- During World War II, as technologies evolved and balloons could be pushed to higher altitudes, their use evolved as well. For instance, the Japanese military tried to loft incendiary bombs into US territory using balloons designed to float in jet stream air currents.
- After the war, the US military started exploring the use of high-altitude spy balloons, which led to a large-scale series of missions called Project Genet. The project flew photographic balloons over Soviet bloc territory in the 1950s – a time before the sheer ubiquitousness of surveillance satellites we see today.

How relevant are high-altitude balloons today?

- While satellites and improved aeroplane and drone technologies have reduced the salience of high-altitude balloons in the military, they still occupy an important niche.
- Unlike satellites which can cost millions of dollars to create, and require sophisticated technology to launch, high-altitude balloons are cheap and easy to launch and control.
- While balloons cannot directly be steered, they can be roughly guided to a target area by changing altitudes to catch different wind currents
- Moreover, unlike satellites which are at much higher altitudes and moving at incredible speeds, spy balloons have the advantage of being able to hover around at lower heights, thus providing better quality images as well as more time to gather intelligence in a particular area.

INDIA'S DISASTER RELIEF DIPLOMACY

GS-II INTERNATIONAL RELATIONS

Context

- In a bid to provide relief to the quake-hit Turkey, India is sending an Army medical team, National Disaster Relief Force (NDRF) personnel, and medical supplies under Operation Dost. The West Asian nation was struck by a series of massive earthquakes killing over 5,000 people and injuring thousands.

Details

- In the last 15 years, India has carried out several disaster relief operations and emerged as a leading actor during such emergencies, especially in its neighbourhood.

What are the previous instances of India sending aid to natural disaster-hit countries?

- **The United States of America:** An Indian Air Force IL-76 aircraft delivered 25 tonnes of relief supplies for the Hurricane Katrina victims at the Little Rock Air Force Base, Arkansas on September 13, 2005.
- **Maldives:** After the 2004 Tsunami, the Indian government announced a composite package worth five crore rupees. Under "Operation Castor", 50 sorties were undertaken and four aircraft and two Naval ships were engaged in relief operations.
- **Sri Lanka:** India sent its forces to carry out rescue operations, called "Operation Rainbow", in Sri Lanka hours after the Tsunami struck the country on December 26, 2004.
- **Myanmar:** When cyclone Nargis hit Myanmar in 2008, India was among the first countries to send aid to them.
- **Japan:** The 2011 Tsunami wreaked havoc in Japan. Apart from providing relief materials, India also sent 46 members of the National Disaster Response Force (NDRF) to search and rescue in the town of Onagawa.
- **Nepal:** In the aftermath of the 2015 earthquake, the NDRF deployed 16 of its urban search and rescue (USAR) teams.

Analysis

- Recent decades have seen a slow but steady rise in the role that Global South States, including India, have begun to play in responding to emergencies either by providing funds or sending supplies to affected countries.
- This assistance has included support in response to natural disasters, during long-term complex emergencies and support provided in post-conflict, post-disaster and pandemic situations.
- While engagement in humanitarian response is a relatively new facet of Indian foreign policy, Indian government support to other countries (much, but not all, of which is concentrated in neighbouring States) is not new.
- Indian overseas development assistance has indeed been an important part of Indian foreign policy since the country's Independence and is closely associated with foreign policy priorities particularly under a South-South Cooperation (SSC) framework.
- The past two decades have seen substantial increases in Indian bilateral aid; with this expansion has come increased support for international humanitarian response.

Determinants of Indian humanitarian aid

- India's humanitarian support has been extended to countries in need for a variety of reasons.
- **The government acknowledges the importance of the UN's four fundamental humanitarian principles of humanity, neutrality, impartiality and independence.**
- India is also a **signatory to all four Geneva Conventions** and participated in the 2016 World Humanitarian Summit.
- The SSC's foreign policy principle also informs and prompts India's humanitarian actions, with India often seeking to respond in accordance with the expressed needs of recipient country governments.
- The current government has also frequently invoked certain values enshrined in Hinduism and Buddhism in recent years as part of its narrative on why it provides humanitarian aid.
- This practice of using terms from religions founded in or around present-day India in its aid diplomacy contributes to the current government's style of "engaging with Hinduism in diplomatic representation".
- This government has also been fervent in naming its humanitarian missions. For example:
 - Samudra Maitri was an operation that helped Indonesians during the October 2018 earthquake and tsunami;
 - Operation Insaniyat encompassed India's support to Rohingya populations during the September 2017 refugee influx in Bangladesh;
 - Operation Sahayata included support extended to Mozambique in 2019 after Cyclone Idai,
 - Operation Vanilla was undertaken in Madagascar in 2020 after the floods and Operation Devi Shakti included the evacuation of Indians and Afghan nationals in 2021 after the Taliban takeover.
- GoI notes that this form of diplomacy has been "institutionalised for implementation" by the MEA. This, again, helps India in highlighting its importance in the region in ensuring food security in times of crises.
- **Claims of purely principled humanitarian responses, while not without some merit, should also be considered in the context of India's geopolitical interests.**
- India often prioritises its immediate neighbourhood - in part reflecting its capacity to respond quickly there, but also reflecting its regional role as "big brother" to some neighbouring States as well as its antagonistic relations with Pakistan (particularly with respect to providing assistance to Afghanistan prior to the Taliban takeover), while competition with China remains an on-going consideration in India's ODA programme in general, including its humanitarian responses.

URBAN20 (U20)

GS-II INTERNATIONAL RELATIONS

Context

- The inception meeting of the sixth U20 cycle is the City Sherpa meeting, which was inaugurated in Ahmedabad. **Ahmedabad is the chair city for U20.**

Details

About:

- Urban 20 (U20) is an **Engagement Group under the G20, which brings together city sherpas, mayors and representatives from cities in G20 countries, to collectively deliberate key urban challenges and inform the G20 negotiations.**
- **Following are the key takeaways of the U20 City Sherpa Meeting:**
 - The U20 Inception meeting was attended by more than 200 participants from across the world.
 - The City Sherpa Meeting was attended by representatives and Sherpas from 42 cities, which is the **largest recorded participation from U20 participating and observer cities since the inception of the U20 Engagement Group.**
 - The City Sherpa of Ahmedabad presented six priority areas proposed by the Chair city and also discussed the zero-draft communique. **He acknowledged the work done under previous U20 cycles and stressed on the need to move from 'intention to action' during the 6th cycle.**
 - The priority areas are (i) Encouraging environmentally responsible behaviors, (ii) Ensuring water security, (iii) Accelerating climate finance, (iv) Championing 'local' identity, (v) Reinventing frameworks for urban governance and planning, and (vi) Catalysing digital urban futures.

Need for U20:

- **More than half the world lives in urban areas presently, and cities will be home to about two thirds of the world population by 2050.**
- **As primary engines of growth across the globe, the influence cities can exert on the global development agenda is obvious.**
- **However, with millions of people living in dense urban areas, cities are also most vulnerable to impacts of climate change, disasters, environmental degradation, resources depletion, chaotic growth and socio-economic inequality.**
- **It is therefore the right time to utilize the potential of urbanisation as a catalyst to drive the 'right' kind of growth that is sustainable, inclusive and equitable.**

Background:

- U20 is a group of cities from the G20 countries and was first convened in Buenos Aires in 2018.

- Previous U20 cycles have brought forth the unique perspective of cities to the G20 and foregrounded vital urban issues through their purpose-driven Communiqués drafted collectively by the participating cities.
- The past Communiqués have explicitly underscored the urgency with which the cities have to act to ensure sustainable environments, healthy communities and social cohesion. The most recent Jakarta Communiqué called for stronger post-pandemic recovery that is sustainable, resilient and just. The present U20 cycle will build upon the legacy created by the preceding presidencies.

INDIA-NEPAL COOPERATION

GS-II INTERNATIONAL RELATIONS

Context

- India and Nepal agreed to further bolster their economic and development cooperation as Foreign Secretary met his Nepalese counterpart and had a fruitful exchange on strengthening the comprehensive bilateral relations.

Details

- **The visit is in keeping with the tradition of regular high-level exchanges between the two countries and the priority India attaches to its relations with Nepal under its 'Neighbourhood First' policy**
- India's 'Neighbourhood First' policy is an integral component of Indian foreign policy.
- The policy seeks to build cordial and synergetic relations with India's South Asian neighbours in various areas such as economy, science and technology, research and education, among others.
- Nepal is important for India in the context of its overall strategic interests in the region, and the leaders of the two countries have often noted the age-old "Roti Beti" relationship.
- The country shares a border of more than 1,850 km with five Indian states - Sikkim, West Bengal, Bihar, Uttar Pradesh and Uttarakhand.
- Land-locked Nepal relies heavily on India for the transportation of goods and services.

Background of Relations:

- As close neighbors, India and Nepal share **unique ties of friendship and cooperation characterized by an open border and deep-rooted people-to-people contacts of kinship and culture.**
- There has been a long tradition of free movement of people across the border. Nepal shares a **border of over 1850 km with five Indian states - Sikkim, West Bengal, Bihar, Uttar Pradesh and Uttarakhand.**
- The **India-Nepal Treaty of Peace and Friendship of 1950** forms the bedrock of the special relations that exist between India and Nepal. Nepalese citizens avail facilities and opportunities on par with Indian citizens in accordance with the provisions of the Treaty.
- Nearly **8 million Nepalese citizens live and work in India.**
- Nepal is a unique country whose **citizens can enrol into the Indian civil services as also the Army, which bestows an honorary General's title to the Nepal Army Chief**, a gesture that is reciprocated in equal terms.
- There are regular exchanges of high-level visits and interactions between India and Nepal.
- India and Nepal have several bilateral institutional dialogue mechanisms, including the India Nepal Joint Commission co-chaired by External Affairs Minister of India and Foreign Minister of Nepal.

Defence Cooperation

- India has been assisting the Nepal Army (NA) in its modernisation by supplying equipment and providing training.
- Assistance during disasters, joint military exercises, adventure activities and bilateral visits are other aspects of India's defence cooperation with Nepal.
- A number of defence personnel from Nepal Army attend training courses in various Indian Army training institutions.
- The **'Indo-Nepal Battalion-level Joint Military Exercise SURYA KIRAN'** is conducted alternately in India and in Nepal.
- The **Gorkha regiments** of the Indian Army are raised partly by recruitment from hill districts of Nepal.

2015 Earthquake In Nepal

- Government of India swiftly dispatched National Disaster Response Force (NDRF) teams and special aircrafts with rescue and relief materials to Nepal.
- The total Indian relief assistance to Nepal amounted to over US\$ 67 million.
- The Government of India announced a **post-earthquake reconstruction package of US\$ 1 billion** (which comprises US\$ 250 million grant and US\$ 750 million concessional Line of Credit)

Connectivity And Development Partnership

- Government of India's development assistance to Nepal is a broad-based programme focusing on creation of infrastructure at the grass-roots level, under which various projects have been implemented in the areas of infrastructure, health, water resources, education and rural & community development.
- In recent years, India has been assisting Nepal in development of border infrastructure in the Terai area; development of cross-border rail links at Jogbani-Biratnagar, Jaynagar-Bardibas; and establishment of Integrated Check Posts at Birgunj, Biratnagar,

Bhairahawa, and Nepalgunj.

- The **total economic assistance earmarked under 'Aid to Nepal' budget in FY 2019-20 was INR 1200 crore.**
- Apart from grant assistance, **Government of India has extended Lines of Credit of USD 1.65 billion for undertaking development of infrastructure.**
- **'India-Nepal New Partnership in Agriculture'** was launched in 2018.

Water Resources Cooperation

- A **three-tier bilateral mechanism established in 2008**, to discuss issues relating to cooperation in water resources, flood management, inundation and hydropower between the two countries, has been working well.

Energy Cooperation

- India and Nepal have a **Power Exchange Agreement since 1971** for meeting the power requirements in the border areas of the two countries, taking advantage of each other's transmission infrastructure.
- India is currently supplying a total of about 600 MW of power to Nepal.
- An Agreement on **'Electric Power Trade, Cross-border Transmission Interconnection and Grid Connectivity'** between India and Nepal was signed in 2014.
- South Asia's **first cross-border petroleum products pipeline connecting Motihari in India to Amlekhgunj in Nepal** was inaugurated in

Economic Cooperation

- **India is the largest trading partner of Nepal.**
- Total bilateral trade in 2018-19 reached INR 57,858 cr.
- In 2018-19, while Nepal's exports to India stood at INR 3558 cr, India's exports to Nepal were INR 54,300 cr.
- Indian firms are among the largest investors in Nepal, accounting for more than 30% of the total approved foreign direct investments.

Education And Culture

- GoI provides around 3000 scholarships/seats annually to Nepalese nationals for various courses at the Ph.D/Masters, Bachelors and plus-two levels in India and in Nepal.
- GoI initiatives to promote people-to-people contacts in the fields of art & culture, academics and media include cultural programmes, symposia and events organized in partnership with different local bodies of Nepal, as well as conferences and seminars in Hindi.

Indian Community

- **Around 6,00,000 Indians are living/domiciled in Nepal.**
- These include businessmen and traders who have been living in Nepal for a long time, professionals (doctors, engineers, IT personnel) and labourers (including seasonal/migratory in the construction sector).

What are the challenges in India-Nepal relations?

- **Nepali nationalism and Anti-India sentiments:** Anti-India Sentiment in Nepal is largely politically motivated as it is wrongly perceived as India's backing to Monarchy.
- **Madhesi's section of People** lives throughout the southern part of the Terai region and has much closer ties with India. Nepal government accused India of supporting Madhesi's and stated India is interfering in the internal matters of Nepal.
- **China's closeness with Nepal** and the Influence of China in India-Nepal relations is a cause of concern. Nepal has drifted away from India's influence, and China has gradually filled the space with investments, aid and loans. China considers Nepal a key partner in its Belt and Road Initiative.
- About 1850 km boundary line between India-Nepal faces two major boundary disputes.
 - **Kalapani dispute:** Kalapani is the disputed territory in the Uttarakhand state of India. The British government has set the origin of River Kali as the western border of Nepal. But the origin of the river Kali is disputed between India-Nepal. While India uses the newer British survey, Nepal wants the area to be demarcated based on the older British survey.
 - **Susta Dispute:** Susta is another disputed territory located in the Terai regions of India.
- **The border is notoriously porous.** Being provided special status to Nepal, India's internal security faced many challenges such as
 - The Pakistani militants using Nepalese territory as a hideout and base for infiltration into India.
 - The Nepalese Maoists have extended support and cooperation to the Indian Maoists.
 - Pumping fake Indian currency notes, human trafficking especially young girls and women, cattle smuggling, etc.

India's importance to Nepal

- India is the **nearest foreign employer to Nepali Citizens**, which provides **various avenues of work and ease in assimilation into a foreign culture.**
- Nepal's reluctance to Mandarin has overturned several **Nepali students into Indian universities.**
- India is the **only potential neighbour who could harness Nepal's hydropower.**

- Moreover, **Indian tourists are the major movers of Nepal's tourism sector.**
- As close neighbors, India and Nepal share **unique ties of friendship and cooperation characterized by an open border and deep-rooted people-to-people contacts of kinship and culture.**

EX DHARMA GUARDIAN

GS-II INTERNATIONAL RELATIONS

Context

- The 4th edition of joint military exercise, "EX DHARMA GUARDIAN", between India and Japan began at Camp Imazu in Shiga province of Japan.

Details

- The annual training event with Japan is crucial and significant in terms of security challenges faced by both nations in the backdrop of the current global situation.
- The scope of this exercise covers platoon-level joint training on operations in jungle and semi-urban or urban terrain.
- This joint exercise will enable the two armies to share best practices in tactics, techniques and procedures of conducting tactical operations under a UN Mandate
- It will also help develop inter-operability, bonhomie, camaraderie and friendship between the two armies.
- The training will focus primarily on a high degree of physical fitness and sharing of drills at the tactical level.

About Exercise Dharma Guardian

- It is a **joint military training.**
- It provides a **unique opportunity of achieving synergy between Armed Forces of both the Nations** which is focused towards strengthening the timeless bonds of India - Japan friendship.
- It provides a **platform for professional and cultural learning** as well as social interactions which in-turn broadened their horizon towards knowledge and cooperation aiming towards co-existence as one in the Indo-Pacific Region.
- Conduct of this exercise covers cross training & combat conditioning in field conditions, sports and cultural exchanges.
- It enhances **the level of defence cooperation** between the Indian Army and Japanese Ground Self Defence Forces and act as a **catalyst for many such joint programs in future** to further consolidate on the gains achieved.
- To promote military cooperation between India and Japan, the **first edition of the Dharma Guardian** was held at Counter Insurgency Warfare School of the Indian Army at Vairengte in November 2018.

Highlights of Indo-Japan relationship

- The friendship between India and Japan has a long history rooted in spiritual affinity and strong cultural and civilizational ties.
- India's earliest documented direct contact with Japan was with the Todaiji Temple in Nara, where the consecration or eye-opening of the towering statue of Lord Buddha was performed by an Indian monk, Bodhisena, in 752 AD.
- In contemporary times, among prominent Indians associated with Japan were Swami Vivekananda, Gurudev Rabindranath Tagore, JRD Tata, Netaji Subhash Chandra Bose and Judge Radha Binod Pal.
- The Japan India Association was set up in 1903, and is today the oldest international friendship body in Japan.
- Today, India is the largest democracy in Asia and Japan the most prosperous.

Political Relations:

- In the first decade after diplomatic ties were established in 1952, several high level exchanges took place.
- A transformational development in the economic history of India was Suzuki Motor Corporation's path breaking investment in India.
- A test of the reliability of Japan as a friend was witnessed in 1991, when Japan was among the few countries that unconditionally bailed India out of the balance of payment crisis.
- In 2000, the Japan-India Global Partnership in the 21st century was launched.
- In 2006, the relationship was upgraded to a Global and Strategic Partnership with the provision of annual Prime Ministerial Summits.
- A Comprehensive Economic Partnership Agreement between Japan and India was concluded in 2011.

Economic and Commercial Cooperation:

- Japan is regarded as a key partner in India's economic transformation.
- Japan's interest in India is increasing due to a variety of reasons including India's large and growing market and its resources, especially the human resources.
- The India-Japan Comprehensive Economic Partnership Agreement (CEPA) that came into force in August 2011 is the most comprehensive of all such agreements concluded by India and covers not only trade in goods but also Services, Movement of Natural Persons, Investments, Intellectual Property Rights, Custom Procedures and other trade related issues.

- Japan has been extending bilateral loan and grant assistance to India since 1958, and is the largest bilateral donor for India.
- Japanese ODA supports India's efforts for accelerated economic development particularly in priority areas like power, transportation, environmental projects and projects related to basic human needs. The Ahmedabad-Mumbai High Speed Rail, the Western Dedicated Freight Corridor (DFC), the Delhi-Mumbai Industrial Corridor with twelve new industrial townships, the Chennai-Bengaluru Industrial Corridor (CBIC) are all mega projects which will transform India in the next decade. Delhi Metro Project has also been realized with Japanese assistance. In 2017-18, ODA disbursed was JPY 246.32 billion.
- In FY 2017-2018 India-Japan bilateral trade reached US\$ 15.71 billion. Exports from Japan to India during this period were US\$ 10.97 billion and imports were US\$ 4.74 billion. The trade totaled to US\$ 14.90 billion during April 2018 -February 2019. Exports from Japan to India during this period were US\$ 10.05 billion and imports were US\$ 4.85 billion.
- India has been ranked as the one of the most attractive investment destination in the survey (2018) of Japanese manufacturing companies, conducted by the Japan Bank for International Cooperation (JBIC).

Cooperation in Skill Development:

- Under the MoC signed in 2016 to train 30,000 shop floor leaders, Japanese companies have established ten Japan-India Institute of Manufacturing (JIM) in India and 3 Japanese Endowed Courses (JEC) in Indian Engineering Colleges.

Cooperation in Railway Sector:

- Mumbai-Ahmedabad High Speed Railway is a very important area of cooperation between India and Japan in Railway Sector.
- A new High-Speed Rail Training Institute is being built at the National Academy of Indian Railways (NAIR) campus in Vadodara.

Science & Technology and Cultural Cooperation:

- India-Japan S&T cooperation was formalized through an Inter-Governmental Agreement signed in 1985.
- Bilateral S&T cooperation began in 1993 with the establishment of the India-Japan Science Council.
- In 2006, DST initiated a value-based partnership on the principles of 'reciprocity and co-funding with the Japan Society for the Promotion of Science and Japan Science and Technology Agency.
- Recent initiatives include establishment of three India-Japan Joint Laboratories in the area of Information and Communication Technology ("Internet of Thing, Artificial Intelligence and Big Data Analytics").
- A cultural agreement was signed between India and Japan on 29 October 1956, which came into effect on 24 May 1957.
- A year-long Festival of India in Japan 2014-15 was held from October 2014 to September 2015.

Indian Community:

- The arrival of Indians in Japan for business and commercial interests began in the 1870s at the two major open ports of Yokohama and Kobe.
- In recent years, there has been a change in the composition of the Indian community with the arrival of a large number of professionals, including IT professionals and engineers working for Indian and Japanese firms as well as professionals in management, finance, education, and S&T research.
- There are growing links between Indian states and Japanese prefectures. As of now 7 Indian states and 3 sister cities/regions have partnered with Japanese prefectures and cities through MoUs to cooperate under diverse sectors.

Importance of India - Japan Relations

- **Wide range of interests:** regional cooperation, maritime security, global climate, and UN reforms.
- **Share several common ideals:** democracy, the rule of law, and human rights
- **India is seeking massive investments in its infrastructure sector and Japan is a major investor.**
- **Japan's technological and economic prowess** could accelerate India's development by transforming its infrastructure and manufacturing sectors.
- **India is a big market for Japanese companies.**
- Japan's interest in India is increasing due **India's large and growing human resources.**
- Share **convergent interests under Indo-Pacific and Quad.**
- **India's Act East Policy and Japan's "Free and Open Indo-Pacific Strategy"** converge in NER
- Both countries are keen to extend their cooperation to the larger **Indo-Pacific region – including the African continent.**
- The **rise of China has been an important factor, while India's growing closeness with the US** has also played a role, as the US and Japan already have a close alliance.

Challenges

- Varying stands on issues like **Ukraine conflict**
- The **trade ties have remained underdeveloped.**
- The two sides have also been **unable to collaborate in the defence sector** in spite of huge potential.
- Both had **diverging interest with respect to economic issues like on E-commerce rules, Regional Comprehensive Economic Partnership**
- India has challenge of **maintaining balance between Quad and BRICS**

Way Forward

- **Economic front needs to be strengthened** wherein demographic dividend of the India and other Asian countries can be deployed to benefit Asia as whole.
- **A roadmap with actionable items**, such as by stepping up coordination in counter-terrorism, cyber security, and disaster relief.
- **Japanese green technologies can help India tackle pollution.**
- **Smooth implementation of the high speed rail project** linking Ahmedabad and Mumbai.
- **Defence:** Both countries should engage on possibilities of India acquiring Japanese technology and on cooperative research.
- **A technologically deficient India has much to gain from a relationship with a country like Japan.**
- Efforts should be done to **keep the Indo-Pacific multipolar.**

INDIA-MYANMAR BORDER ISSUES

GS-II INTERNATIONAL RELATIONS

Context

- Minister for Tourism, Culture and Development of North Eastern Region, Shri G Kishan Reddy held a virtual meeting with the Minister for Border Affairs of Myanmar. **In the context of recent developments inside Myanmar and their repercussions along India-Myanmar border region, the two sides discussed the need to ensure peace, stability and economic development along the border.**

Details

- The two sides also discussed Government of India's grant-in-aid connectivity projects in Myanmar aimed at infrastructure development in the country and economic well-being of the people of Myanmar.
- It was emphasized that an early restoration of peace and security and implementation of development projects in Myanmar will benefit the people residing along both sides of the border.
- India also sought continued cooperation of the Myanmar authorities for early repatriation of trapped Indian nationals in the Myawaddy region.
- Other issues discussed included creation of conducive conditions for the return of Myanmar nationals currently taking shelter in India, combating drug trafficking and other transnational crimes, strengthening people to people exchanges in the bordering areas, Free Movement Regime, and ways to augment border trade.

Background on border issues

Operation by Tatmadaw:

- In 2019 the Tatmadaw (Myanmar Army) reportedly conducted counter insurgency operations against the Indian insurgent groups based at the Naga self-administered zone in Sagaing region of Myanmar.
- It is also reported that the Tatmadaw asked all non-Myanmar insurgents to leave the country and warned the NSCN (K) against giving shelter to any Indian insurgent groups in their headquarters at Ta Ga.

The normality of crossing the border:

- **That the Indian insurgents can cross the international border and hide in the neighbouring country is not new.**
- Since the inception of insurgency in the Northeast in the 1950s, the Naga, Mizo, Meitei, and Assamese insurgents have been crossing over into Myanmar to set up bases, especially in the Chin state and Sagaing Region, where they rest, recoup, train, plan and launch future offensives, and take shelter when pursued by the Indian security forces.

Gun running and drug trafficking:

- Besides cross border movement of insurgents, rampant gun running and drug trafficking are other significant security challenges emanating across the India-Myanmar border.
- **The Indian insurgent groups have been procuring arms from the black markets of Southeast Asia as well as from Myanmar-based rebel groups.**

Narcotics and the 'Golden Triangle':

- Proximity to Myanmar in the 'Golden Triangle' makes the India-Myanmar border vulnerable to trafficking of heroin and amphetamine-type stimulants (ATS) produced in Myanmar.

The susceptibility of the India-Myanmar border to these threats and challenges stems from a number of factors:

The 1967 boundary agreement:

- Even though the international boundary between the two countries had been formally delimited and demarcated (except the northern tri-junction where India-Myanmar and China meet, pending the final resolution of the India-China boundary dispute) following the boundary agreement on March 10, 1967, **the boundary has not crystallised on the ground as lines separating two sovereign countries.**
- This is because like most of the boundaries that India shares with its neighbours, the **India-Myanmar boundary is also**

superimposed on the socio-cultural landscape of the borderland, dividing several tribes and forcing them to reside as citizens of different countries.

- These tribes, however, refuse to accept the artificial line and continue to maintain strong cross-border ethnic linkages.
- Such linkages are often exploited by the insurgents to find shelter across the border among their own kinsmen who are sympathetic towards their 'cause'.

The Free Movement Regime:

- India-Myanmar border has a unique arrangement in place called the Free Movement Regime (FMR).
- **The FMR permits the tribes residing along the border to travel 16-km across the boundary without visa restrictions.**
- While the FMR has helped the tribes continue maintain their age old ties, it has also become a cause of concern for the security establishment as its provisions are exploited by the Indian insurgents to cross over to Myanmar unrestricted and establish safe havens.
- Another provision in the FMR, which allows tribal people to carry headload has also been misused to smuggle in drugs, weapons and other contraband.

The terrain of the India-Myanmar border:

- High mountains, deep river channels together with lush forest characterise the borderland.
- Such a terrain does not lend itself easily to the construction of means of transportation and communication, and as a result, the border area remains sparsely populated with depressed economic development.
- Absence of roads, communication links and other border guarding infrastructure also adversely affect policing as they hamper the easy and rapid movement of the border guarding forces along the border.

Attention deficit:

- The Assam Rifles, which is the designated border guarding force for the India-Myanmar border, **deploy only 15 battalions out of 46 battalions for border guarding purposes and the rest are engaged in counter insurgency operations.**
- These 15 battalions are also not deployed at the border or spread along the entire border but clustered as company-operated bases (COBs) stationed deep inside, thereby preventing the force from dominating the border domination and restricting their ability to prevent illegal cross-border movements.

Background of relations:

"Myanmar is India's gateway to Southeast Asia, India is Myanmar's gateway to South Asia."

Importance:

- India shares a long land border of over 1643 kms with Myanmar as well as a maritime boundary in the Bay of Bengal.
- Four northeastern states, viz., Arunachal Pradesh, Nagaland, Manipur and Mizoram, have a boundary with Myanmar.
- India shares religious, linguistic and ethnic ties with Myanmar.
- It is the only ASEAN country adjoining India and, therefore, is a gateway to South East Asia.
- Myanmar is at the heart of Indian government's Act East policy with the India-Myanmar-Thailand Asian Trilateral Highway, Kaladan multimodal project and BIMSTEC.

Institutional Mechanisms:

- India and Myanmar have several institutional mechanisms to ensure regular consultations between the two governments.

Development Cooperation:

- India's development assistance portfolio in Myanmar is now over US \$1.75 billion.
- The projects in which India is involved in Myanmar includes the Kaladan Multimodal Transit Transport Project; the Trilateral Highway Project; assistance in setting up institutions for higher learning and research; capacity assistance in public health; the Rakhine State Development Programme; restoration and conservation of Ananda Temple in Bagan etc.
- India under the MoU on Rakhine State Development Program has committed to giving US \$25 million of assistance to Myanmar over a period of 5 years.
- India handed over 20,000 bags of relief material to Myanmar's Rakhine state on 22 January 2020.

Defence Cooperation:

- High-level visits, enhanced training, capacity building and support in provision of specific equipment and technologies have led to a more wholesome relationship and better understanding of mutual security concerns.

Commercial Cooperation:

- Bilateral trade has witnessed a 7.53% growth in 2018-19 and current trade figures stand at US \$ 1.7 Billion.
- India is the fifth largest trading partner of Myanmar.
- Myanmar is potentially an important partner in the energy sector as future offshore gas finds can be piped to India.
- In terms of investment, India stands at 11th position.

Enhancing Connectivity:

- Both countries are working to enhance connectivity between Mandalay and North Eastern Indian States through air and road.
- Negotiation on a Motor Vehicle Agreement is on-going.

Culture:

- India and Myanmar share close cultural ties and a sense of deep kinship, given India's Buddhist heritage.
- Building on this shared heritage, India is undertaking some key initiatives in the restoration of the Ananda Temple in Bagan and the repair and conservation of a large number of damaged pagodas.
- India has also completed work on restoring and renovating two historic temples in Bodh Gaya built by Myanmar rulers King Mindon and King Baygyidaw.
- There are varying estimates of 1.5-2.0 million people of Indian origin living and working in various parts of Myanmar.

Way forward

- **Security Cooperation:** For **economic relations to improve**, India and Myanmar must boost their security cooperation at the border. The more secure the border is, the greater the economic activity will be.
 - **For example:** Part of the reason why the KMMTT has faced delays is that the route of the project traverses a warzone in Rakhine state, where a battle rages on between the Myanmar Army and the Arakan Army rebels on the one hand, and on the other, the Arakan Rohingya Salvation Army. Insurgents from India's Nagaland have also disrupted the completion of the KMMTT project.
- **Handling Rohingya issue with care:** Myanmar's geostrategic importance to India has meant that Delhi did not take a hardline approach on Naypyidaw vis-à-vis the Rohingya issue, even keeping its distance when Myanmar was hauled into the International Court of Justice over accusations of Rohingya genocide. India, which has a Hindu majority, will need to **perform a balancing act between Muslim-majority Bangladesh and Buddhist-majority Myanmar as far as the Rohingya issue is concerned**. The quicker the Rohingya issue is resolved, the easier it will be for India to manage its relations with Myanmar and Bangladesh, focusing instead more on bilateral and subregional economic cooperation.
- **India's Buddhist diplomacy** would bolster its tourist industry and could build up India's diplomatic reservoir of goodwill and trust with Buddhist-majority countries such as Myanmar.

UN SOCIAL DEVELOPMENT COMMISSION

GS-II INTERNATIONAL RELATIONS

Context

- Permanent Representative of India to the United Nations, Ambassador Ruchira Kamboj accepted the chairpersonship at the UN Headquarters in New York .

Details

- **This is the first time since 1975 that India has become Chair of the Commission for Social Development.**

About

- **The Commission for Social Development is a functional commission of the Economic and Social Council.**
- The Commission serves as the primary inter-governmental body to deliberate upon and strengthen international cooperation on social development issues, according to the official release.
- The 62nd session's theme is "Fostering Social Development and Social Justice through Social Policies to accelerate Progress on the Implementation of the 2030 Agenda for Sustainable Development and to achieve the overarching goal of poverty eradication".
- The theme emphasises the important connection between social development and social justice as fundamentals to achieving Sustainable Development Goals.
- **The Commission for Social Development's main responsibility is to review, on a periodic basis, issues related to the follow-up and implementation of the Copenhagen Declaration on Social Development and the Programme of Action of the World Summit for Social Development and the outcome of the twenty-fourth special session of the General Assembly.**

Purpose

- Since the World Summit for Social Development in Copenhagen in 1995, the Commission for Social Development (CSocD) has been the key United Nations body in charge of the follow up and implementation of the Copenhagen Declaration and Programme of Action.
- Originally known as the Social Commission but renamed in 1966, CSocD was established by ECOSOC res. 10 (II) (1946).
- Its purpose was to advise ECOSOC on social policies of a general character and, in particular, on all matters in the social field not covered by the specialised inter-governmental agencies.
- Since 2006, the Commission has taken up key social development themes as part of its follow up to the outcome of the Copenhagen Summit.

Meetings

- CSocD meets annually in New York, usually in February.

Membership

- Originally 18, membership has been increased several times, most recently in 1996, and now stands at 46.
- Members are elected by ECOSOC based on equitable geographical distribution for four-year terms.
- Until 2002, terms began on 1 January and ended on 31 December.
- Under ECOSOC decision 2002/210, terms now begin immediately after the Commission's regular session and end at the conclusion of a regular session.

Bureau

- The Bureau comprises a chair and four vice-chairs.
- Bureau members are elected by the Commission at the first meeting of a regular session, held immediately after the end of a regular session for the sole purpose of electing a new bureau

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SNAKEBITE DEATHS IN INDIA

GS-II HEALTH

Context

- Snakes continue to take the life of human beings mostly in cases of human-wildlife conflicts in Kerala.

Snakebite Deaths in India: Important Stats [As of 2022]

Number of Deaths

- A study published in Nature estimated that a vast majority of snakebite deaths globally – **up to 64,100 of the 78,600 deaths – occur in India.**

Share in Global Deaths

- Before the current study, it was known that India is responsible for up to half of the global deaths due to snakebites. **But the current study shows snakebite deaths in India are much higher at almost 80% of the global deaths.**

States with the highest burden

- Within India, Uttar Pradesh has the highest number of deaths, estimated to be up to 16,100, followed by Madhya Pradesh (up to 5,790 deaths), and Rajasthan (up to 5,230 deaths).

Age-standardized Death Rate

- Age-standardised death rate (which accounts for different age structures in different countries, thus allowing comparison between countries) in India, at **4.0 per 1,00,000**, is also among the highest globally, and many times **over than the global figure of 0.8 deaths per 1,00,000.**
- Chhattisgarh, Uttar Pradesh, and Rajasthan** have even higher age-standardised death rates, at 6.5, 6.0, and 5.8 per 1,00,000, respectively.
- Only Somalia has a higher age-standardised death rate than India at 4.5 per 1,00,000.

Concern: No National Strategy

- Despite such a high number of deaths each year, there is **no National Strategy to address the burden of snakebite in India.**
- Recently, there is some recognition of snakebite as a public health problem with the **Indian Council of Medical Research launching a national survey to estimate the burden.** While this will help know the burden better, the **absence of a specific national strategy to address snakebite** implies there is **no programme by the government to either prevent snakebite or in preventing deaths or disability in those who are bitten by venomous snakebite.**

Need of the Hour

- With such a high number of deaths due to snakebites, there is a **need for a strategy focusing on snakebite prevention and strengthening of the health system.** Preventing snakebites needs more than simple awareness programmes. This is so because **snakebite at its core is due to Snake-Human-Environment conflict tied to many Socio-Cultural-Religious aspects.**
- As such, **understanding the conflict and code signing community-based programmes for the prevention of snakebites which are tested through community randomised cluster trials are required.** To bring down deaths, the **strengthening of primary healthcare in India is also required.**

Focus on healthcare

- Traditionally, there has been a lot of focus on snake **antivenom availability.** An analysis of **system capacity for snakebite care** revealed that there is a need for comprehensive strengthening of primary healthcare systems focusing on both access and quality of care across all health systems blocks, instead of a sole focus on snake antivenom availability.
- Improving primary health care is important for snakebite because it is an acute medical emergency** – the care needs to be closest to people bitten by snakes.
- With snakebite deaths globally being predominantly in India, the **global target to halve snakebite deaths by 2030, cannot be attained without action in India.**
- Having a **National Strategy** to address snakebites would mean that **investments are towards the need of the country in health system strengthening and community-based programmes.** This should be the approach **instead of costly drugs and diagnostics** whose intellectual property is held outside India or leading to vertical programmes instead of integrated strengthening.
- Because snakebite affects the rural poor, a national strategy for snakebite **brings in an equity focus which will bring cross benefits for other neglected tropical diseases, which happen in the same communities.**

Context

- In 2022, Kerala registered a **300 per cent surge in cases related to narcotics, liquor and banned tobacco products** compared to 2016 when 5,924 cases were registered. The jump in cases came after a series of drug hauls by police and the Excise department.

Findings of the Kerala Excise Department and the Police

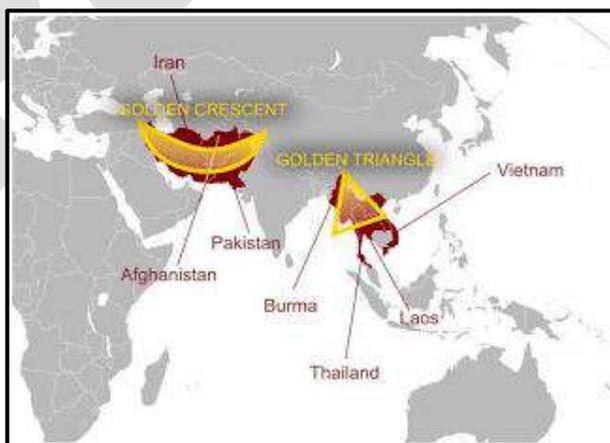
- Police registered **26,629 cases under the Narcotic Drugs and Psychotropic Substances (NDPS) Act in 2022.**
- The **cases that have been surging since 2016** witnessed a dip during the pandemic years of 2020, 2021 and 2022. However, they increased drastically in 2022. Excise data shows the number of people arrested for cases under NDPS grew 87.47 per cent between 2016 and 2022.
- The number of cases registered during this time **went up 104 per cent.**
- 7,775.425 gm of MDMA drug was seized by the Kerala Excise Department in 2022, making it the highest seizure in the last 6 years.

Factors responsible for the surge in Drug Abuse

- The steady rise in drug-related cases in Kerala is a factor of both **“strict enforcement and raids” and easier access to the contraband.**
- Accessibility of synthetic drugs such as MDMA and LSD has increased.** Youngsters are now aware about the availability of synthetic drugs. There is also **peer pressure to explore these drugs.**

Drug abuse in India

- According to a survey by the Ministry of Social Justice and Empowerment, India has more than 70 million drug addicts.
- It is a **serious health problem** which not only destroys the person involved but his entire family, society and the nation.
 - It promotes **anti-social behaviour** such as stealing, crime and violence.
- It affects the **economic growth of a country by generating unaccounted money** that is also used for terror funding and anti-national activities.
 - Therefore, it is also a **serious threat to national security.**
- India is located between the **two largest Opium producing regions of the world;**
 - Golden triangle on the eastern side:** Thailand, Myanmar, Vietnam and Laos.
 - Golden crescent on the North-Western side:** Pakistan, Afghanistan and Iran.



As per the report released by the All India Institute Of Medical Science (AIIMS)

- More than 5 crore Indians have reported using cannabis and opioids.
- Nearly 8.5 lakh people inject drugs.
- More than half of the total registered cases are from Punjab, Assam, Delhi, Haryana, Manipur, Mizoram, Sikkim and Uttar Pradesh.

Risk factors	Protective factors
<p>Family related:</p> <ul style="list-style-type: none"> Poor parental monitoring Family disturbance (conflicts) Poor parent-adolescents relationship Mixed marriage Excess pocket money <p>Peer and individual:</p> <ul style="list-style-type: none"> Peer in trouble or using drugs Boredom False impression 'looks attractive'; especially with the use of tobacco Lack of awareness of risks associated with substance use <p>Community and school related:</p> <ul style="list-style-type: none"> Availability of substances Lack of educational campaigns 	<p>Family related:</p> <ul style="list-style-type: none"> Strengthen the relationship between adolescents and their parents Increase parental monitoring of adolescents Provide calculated pocket money based on the adolescent's needs Raise awareness by parents on substance use and harm associated with them <p>Peer and individual related:</p> <ul style="list-style-type: none"> Being involved with healthy peers Being aware of the health hazards associated with substance use <p>Community and school related:</p> <ul style="list-style-type: none"> Place CCTV in the schools Carry out regular checks on the student's belongings (e.g. bags and books) Involve psychologist in the school Activate the role of social workers in preventing substance use Separate the primary levels into two school settings based on the age band to avoid mixing young with older ages

Steps taken by the Government

International Collaboration

- The Indian government is Coordinating with Various International Organizations **including BRICS, SAARC, ASIAN, etc.** to share information and intelligence to combat transnational drug trafficking.

Coordinating among Various Central and State Agencies

- The Union Ministry of Home Affairs has launched the SIMS (Seizure Information Management System) Portal for the digitization of pan-India drug seizure data.

National Fund for Control of Drug Abuse

- **The National Fund for Control of Drug Abuse** was constituted to meet the expenditure incurred in connection with combating illicit traffic in Narcotic Drugs; rehabilitating addicts, educating the public against drug abuse, etc.

Project Sunrise

- Project Sunrise was launched by the Ministry of Health and Family Welfare to tackle the rising HIV prevalence in the North-Eastern States in India, especially among people injecting drugs.

Drug-Free India Campaign

- 'Nasha Mukht Bharat' or Drug-Free India Campaign with a focus on community outreach programs.

Signatory of International Treaties and Conventions

- India is a **signatory of the following International Treaties and Conventions;**
 - United Nations (UN) Convention on Narcotic Drugs (1961).
 - UN Convention on Psychotropic Substances (1971).
 - UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988). UN Convention against Transnational Organized Crime (UNTOC) 2000.

Article 47 of the Directive Principles of State Policy of the Constitution of India directs the state to improve public health and endeavour to bring about the prohibition of the consumption of intoxicating drinks and drugs which are injurious to health.

Way Forward

- Steps need to be taken to **stop cross-border trafficking** and **improve the enforcement of law in India.**
- The **stigma associated with drug taking needs to be reduced.**
 - Society needs to understand that drug addicts are victims and not criminals.
 - Proper Counselling is another alternative.
- **The education curriculum should include topics on drug addiction**, its impact and also on de-addiction.
- Enhancing skills of care providers.
- Funding for evidence-based interventions.
- Developing programmes for vulnerable groups like youth, street children, women, prisons, etc.

Other

- More **responsibility on part of medical retailers and stores to sell syringes.** Selling of certain medical drugs **only on the prescription of the doctor.**
- Usage of **models like Narconon in the US, and Mexico.** (Narconon International is a **Scientology Organization** which promotes the theories regarding substance abuse treatment and addiction).
- Govt. should provide a **helpline for children** who wish to complain about peddlers/friends who are likely drug addicted, anonymously **without having to** go to the police station and **reveal their identity.**
- Build **more Rehabilitation Centres** and create support groups like alcoholic anonymous.
- Re-define **laws pertaining to chemical usage and distribution in India.**
- If any government servant is found involved in drug peddling, a direct termination provision from the job should be there, so that a fear psychosis is created among the people before thinking of drug peddling.
- **Schools and colleges should be more vigilant** and protect their students from the danger of drugs.
- **Periodical mandatory medical check-ups** for drug intake at colleges and companies.
- Narcotics Bureau must be efficient ethical and corruption free.
- Lack of physical activity is the prime reason. Regional organizations which are into **Sports or regional activities like Gatkha in Punjab, Martial arts** should be promoted. Such clubs for children/youth, will churn their energy into doing good to their bodies and keep a natural check on their addiction.

Shining Examples

- **'Clean Campus - Safe Campus'** campaign was launched to wean the students and youngsters away from the influence of drugs and substance abuse.
- **'Addicted to Life', a social-media, anti-drug campaign** aimed at creating awareness about the menace of drug and alcohol addiction launched by the Government of Kerala with the backing of the Excise Department and the Kerala State Beverages Corporation. This initiative was also a huge success.
- Addiction is a **serious public health concern.** There is a **lack of trained service providers both for prevention and treatment.** NIMHANS ECHO has initiated a free **"virtual" Knowledge-Network Based Interactive Training Program** with the objective of transferring skills, wisdom and knowledge to health professionals/counsellors.

CHANGES IN NOTTO GUIDELINES

GS-II HEALTH

Context

- The Union Ministry of Health and Family Welfare said that the clause that people beyond 65 years could not receive cadaver organ transplants had been removed.

Details

Age bar removed

- Now, **people beyond 65 years in need of an organ donation will also be eligible to get one.**
- The government has decided to do away with a clause in the **National Organ and Tissue Transplant Organisation (NOTTO)** guidelines **as the clause violates the Right to Life.**

Domicile State requirement removed

- Also, earlier an organ recipient could register for a prospective transplant in domicile State. States like Gujarat had made it mandatory for registered patients to furnish a domicile certificate to be eligible for a transplant. In 2022, the Gujarat High Court quashed the discriminatory policy of the State government.
- In line with the judgment, the **Indian government has decided to do away with the domicile policy and all States have been intimated about this decision.**
- A **patient irrespective of domicile State can register in any other State for a transplant.** The patient will be allotted a unique ID by NOTTO on registering which will get carried forward even if the patient changes multiple hospitals in different States.

To stop Registration Fees

- Apart from this, certain States like Kerala and Maharashtra have been charging fees ranging from ₹5,000 to ₹10,000 for registering organ transplant patients. The **Health Ministry has intimated States to stop charging registration fees from patients.**

One Nation One Policy

- The Health Ministry is charting a **'One Nation One Policy,' for organ donation and transplantation.** Govt. is introducing a chapter in school curriculum regarding organ donation awareness for students.

About NOTTO

- National Organ and Tissue Transplant Organization (NOTTO) is a National level organization set up under Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India located at 4th and 5th Floor of Institute of Pathology (ICMR) Building in Safdarjung Hospital New Delhi. It has following two divisions:
 - "National Human Organ and Tissue Removal and Storage Network"
 - "National Biomaterial Centre".

Function/Activities

- Lay down policy guidelines and protocols for various functions.
- Network with similar regional and state level organizations.
- All registry data from States and Regions would be compiled and published.
- Creating awareness, promotion of organ donation and transplantation activities.
- Coordination from procurement of organs and tissues to transplantation when organ is allocated outside the region.
- Dissemination of information to all concerned organizations, hospitals and individuals.
- Monitoring of transplantation activities in the Regions and States and maintaining data-bank in this regard.
- To assist in data management for organ transplant surveillance & organ transplant and Organ Donor registry.
- Consultancy support on the legal and non-legal aspects of donation and transplantation.
- Coordinate and Organize trainings for various cadre of workers.

ASIAN MALARIA VECTOR

GS-II HEALTH

Context

- The spread of the mosquito species *Anopheles stephensi* across Africa poses a significant problem to a continent already heavily burdened by malaria. Most – 90 per cent – of the world's malaria deaths are on the continent.

Background

- Researchers from Djibouti reported the presence of *An. stephensi* in the Horn of Africa in 2012.
- Until then it had not been found in Africa although it was known to be widespread in Southeast Asia and parts of the Arabian Peninsula. By 2017 it had spread through the Horn of Africa, reaching Ethiopia, Somalia and Sudan.

Anopheles stephensi

- Anopheles stephensi is a malaria vector **native to South Asia**. It transmits both Plasmodium falciparum and P. vivax.
- It rapidly adapts to changes in the environment and is found in both rural and urban areas.
- This is different from African malaria vectors, which are typically found in rural areas.

Concerns

- The spread of An. stephensi is particularly concerning because the mosquito has a number of characteristics that make it difficult to control.
- This species can thrive in urban areas and likes being near humans.
- They lay their eggs in any available water source – such as water containers, abandoned tyres and flowerpots – and their eggs can survive being dry for a long period of time.
- In addition, An. stephensi feeds on its vertebrate host both indoors and outdoors. This reduces the impact of commonly used vector control methods such as insecticide-treated nets and indoor residual spraying.
- The invasion of this urban mosquito into Africa threatens the malaria elimination aspirations of the continent, particularly as 42.5 per cent of Africa's population now live in urban areas.

Steps being taken

- National malaria control programmes have increased surveillance efforts in urban areas to enable early detection and control.
- Countries have also run awareness campaigns to encourage communities to reduce potential breeding sites.

Challenge

- Controlling this invasive mosquito is very challenging. It is difficult to find, particularly in urban areas, and is resistant to a number of insecticides.
- Although there are no specific programmes to eliminate this species from Africa, the affected countries are implementing a range of control measures.

Way Ahead

- The presence of An. stephensi in Africa is a call to action to all interested in controlling and eliminating malaria.
- It is imperative that **entomological surveillance** (the search for and biological investigation of insects, including malaria vectors) **is strengthened across the continent**.
- **New information about the species must be shared promptly** to ensure malaria control programmes use the correct methods to prevent it from spreading further into the continent.
- **And an integrated approach to vector control is urgently required**. Vector control measures, adapted to local conditions, are key to preventing the spread of An. stephensi.
- National malaria control programmes **cannot rely solely on insecticides to control this mosquito**. They must invest in novel vector control methods that target outdoor-biting mosquitoes.
- Governments must also **invest in educating communities on the appropriate methods for storing water as well as eliminating potential breeding sources**.
- South America has implemented strong policies to reduce breeding areas for Aedes mosquitoes. Similar approaches in Africa would reduce the presence of An. stephensi, as well as of Aedes mosquitoes, which carry many dreaded diseases including dengue, yellow fever, chikungunya and Zika.
- Crucially, **a healthy population without circulating parasites is key to a malaria-free future**.
- Integrating clinical care, vector control and community awareness of the disease is the best way to ensure a malaria-free future for the continent.

Read about Malaria in general: <https://www.iasgyan.in/daily-current-affairs/malaria-42>

GENERAL STUDIES - III

ECONOMIC SURVEY

GS-III ECONOMY

Context

- The government tabled the Economic Survey 2022-23.

What is the Economic Survey?

- The **Economic Survey of India** is an annual document of the Ministry of Finance, Government of India.
- The Department of Economic Affairs, Ministry of Finance presents the Survey in the Parliament every year, just before the Union Budget.
- It is prepared under the guidance of the Chief Economic Adviser of India. This document is **presented to both Houses of Parliament** during the Budget Session. The first Economic Survey of India **was presented in 1950-51** as part of the Union Budget.
- After 1964** it was separated from the Budget and presented each year during the Budget Session before the presentation of the budget.

Content of the Survey

- The document is the Ministry's view on the state of the economy of the country. This document of the Ministry, the Economic Survey of India
- Reviews the developments in the Indian economy over the past financial year,
- Summarizes the performance on major development programs, and
- Highlights the policy initiatives of the government and the prospects of the economy in the short to medium term.

[Note: The comments or policy solutions contained in the Survey are **not-binding on the Government**.]

GDP Growth

- The Survey said India's growth estimate for FY23 is higher than for almost all major economies.
- Despite strong global headwinds and tighter domestic monetary policy, India is **expected to grow between 6.5 and 7.0 per cent**, and that too without the advantage of a base effect. It is a reflection of India's underlying economic resilience; of its ability to recoup, renew and re-energise the growth drivers of the economy.



IMPORTANT CONCEPTS

- Headwinds** are identified as factors that may slow the growth of the economy. Example- Russia-Ukraine War, Sanctions on Russia etc.
- Tight Monetary Policy** refers to the actions that a central bank takes to limit inflation and an overheating economy. It involves measures like upsurging the interest rates, selling government securities and increasing the banks' reserve requirements to slow down overheated economic growth caused due to accelerating spending. It is also called **contractionary or dear monetary policy**.
- Base Effect**: The base effect is the distortion in a "monthly inflation figure that results from abnormally high or low levels of inflation in the year-ago month. An example of the base effect: The Price Index is 100, 150, and 200 in each of three consecutive periods, called 1, 2, and 3, respectively. The increase of 50 from period 1 to period 2 gives a percentage increase of 50%, but the increase from period 2 to period 3, despite being the same as the previous increase in absolute terms, gives a percentage increase of only 33.33%. This is due to the relatively large difference in the bases on which the percentages are calculated (100 vs 150).

Inflation

- The RBI has **projected headline inflation at 6.8% in FY23, outside its comfort zone of 2% to 6%**. High inflation is seen as one big factor holding back demand among consumers.

- However, the Survey noted that inflation is not high enough to deter private consumption and also not so low as to weaken the inducement to invest.”

Unemployment

- The Survey said **“employment levels have risen in the current financial year”**, and that **“job creation appears to have moved into a higher orbit with the initial surge in exports, a “pent-up” demand, and a swift rollout of the capex.**
- It pointed to the **Periodic Labour Force Survey (PLFS)**, which showed that **urban unemployment rate for people aged 15 years and above declined from 9.8% in the quarter ending September 2021 to 7.2% one year later.**
- The Survey also underlined that the fall in unemployment rate is accompanied by an improvement in the labour force participation rate.

Outlook for 2023-24

- The Survey projected a baseline GDP growth of **6.5% in real terms in FY24.**
- However, it detailed some downside risks. For instance, **low demand for Indian exports** [due to poor global growth], **may widen India’s trade deficit and make the rupee depreciate.** Similarly, sustained monetary tightening (higher interest rates) may drag down economic activity in FY24.

What does it mean for India’s economy?

- The central thrust of this year’s Survey is that **India’s economy has recovered from the Covid disruption and, at long last, is poised to see sustained robust growth in the rest of the decade.**
- The **phase between 2014 and 2022** – has witnessed **“wide-ranging structural and governance reforms that strengthened the economy’s fundamentals by enhancing its overall efficiency”.**

NOTE: These reforms had not yielded the desired results because banks were getting rid of their non-performing assets (NPAs) and business firms were deleveraging. Shocks such as the Covid pandemic and the Ukraine war made matters worse.

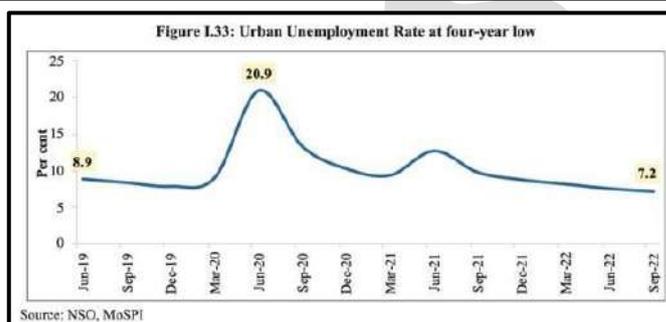
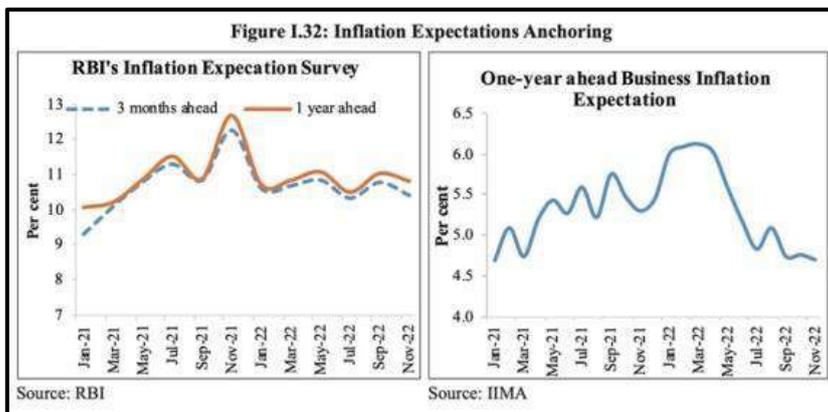
Reference to 2003

- The Survey argued that the **situation in 2023 is similar to how the economy was poised in 2003.**
- It said the **period between 2014 and 2022 is analogous to 1998-2002**, when despite transformative reforms by the government, the Indian economy lagged growth returns. This was **due to temporary shocks such as the US sanctions after India’s nuclear test**, two successive droughts, the collapse of the tech boom, etc. But once these shocks faded, the **structural reforms paid growth dividends from 2003.** The Survey claims **the same story is set to repeat from 2023.**
- Thirdly, in India, **unemployment rates underestimate the alarming stress in the labour market**, because labour force participation rate (or the proportion of people demanding jobs) is itself quite low. Moreover, over the past two decades, **India’s growth has become increasingly capital-intensive (using relatively less labour).** This trend is **likely to worsen as automation eats into routine jobs.**
- **Widespread joblessness translates to lower incomes and lower consumer demand.** That, in turn, dissuades private sector investments and eventually acts as a drag on economic growth.

Closing Remarks

- India is the **world’s most populous country** with a growing youth bulge. It has the **world’s largest pool of poor people** and the largest pool of malnourished children.
- Given the **low levels of per capita income, it requires much faster growth than many developed countries.** A growth rate of 4% in India can feel like a recession and even though a 6% growth should be achievable, it may not create enough jobs to satisfy a growing population.

Read this detailed Article: <https://www.iasgyan.in/rstv/perspectiveeconomic-survey-2022-23>



Context

- The Union Minister of Finance and Corporate Affairs Smt. Nirmala Sitharaman presented the Union Budget 2023-24 in Parliament.

Highlights of the Union Budget 2023-24

PART A

- **Per capita income** has more than doubled to ₹1.97 lakh in around nine years.
- Indian economy has increased in size from being 10th to 5th largest in the world in the past nine years.
- **Employees' Provident Fund Organisation** membership has more than doubled to 27 crore.
- 7,400 crore **Digital Payments** of ₹126 lakh crore has taken place through UPI in 2022.
- 11.7 crore household toilets constructed under **Swachh Bharat Mission**.
- 9.6 crore LPG connections provided **under Ujjwala Scheme**.
- 220 crore covid vaccination of 102 crore persons.
- 47.8 crore PM **Jan Dhan bank accounts**.
- Insurance cover for 44.6 crore persons under PM Suraksha Bima and **PM Jeevan Jyoti Yojana**.
- Cash transfer of ₹2.2 lakh crore to over 11.4 crore farmers under PM Kisan Samman Nidhi.
- **Seven priorities of the budget 'Saptarishi'** are inclusive development, reaching the last mile, infrastructure and investment, unleashing the potential, green growth, youth power and financial sector.
- **Atmanirbhar Clean Plant Program** with an outlay of ₹2200 crore to be launched to boost availability of disease-free, quality planting material for high value horticultural crops.
- 157 new nursing colleges to be established in co-location with the existing 157 medical colleges established since 2014.
- Centre to recruit 38,800 teachers and support staff for the 740 Eklayva Model Residential Schools, serving 3.5 lakh tribal students over the next three years.
- Outlay for **PM Awas Yojana** is being enhanced by 66% to over Rs. 79,000 crore.
- Capital outlay of Rs. 2.40 lakh crore has been provided for the Railways, which is the highest ever outlay and about nine times the outlay made in 2013-14.
- **Urban Infrastructure Development Fund (UIDF)** will be established through use of priority Sector Lending shortfall, which will be managed by the national Housing Bank, and will be used by public agencies to create urban infrastructure in Tier 2 and Tier 3 cities.
- **Entity DigiLocker** to be setup for use by MSMEs, large business and charitable trusts to store and share documents online securely.
- 100 labs to be setup for 5G services based application development to realize a new range of opportunities, business models, and employment potential.
- 500 new 'waste to wealth' plants under **GOBARdhan** (Galvanizing Organic Bio-Agro Resources Dhan) scheme to be established for promoting circular economy at total investment of Rs 10,000 crore. 5 per cent compressed biogas mandate to be introduced for all organizations marketing natural and bio gas.
- Centre to facilitate one crore farmers to adopt natural farming over the next three years. For this, 10,000 **Bio-Input Resource Centres** to be set-up, creating a national-level distributed micro-fertilizer and pesticide manufacturing network.
- **Pradhan Mantri Kaushal Vikas Yojana 4.0**, to be launched to skill lakhs of youth within the next three years covering new age courses for Industry 4.0 like coding, AI, robotics, mechatronics, IOT, 3D printing, drones, and soft skills.
- 30 **Skill India International Centres** to be set up across different States to skill youth for international opportunities.
- Revamped credit guarantee scheme for MSMEs to take effect from 1st April 2023 through infusion of Rs 9,000 crore in the corpus. This scheme would enable additional collateral-free guaranteed credit of Rs 2 lakh crore and also reduce the cost of the credit by about 1 per cent.
- **Central Processing Centre** to be setup for faster response to companies through centralized handling of various forms filed with field offices under the Companies Act.
- The maximum deposit limit for Senior Citizen Savings Scheme to be enhanced from Rs 15 lakh to Rs 30 lakh.
- Targeted Fiscal Deficit to be below 4.5% by 2025-26.
- **Agriculture Accelerator Fund** to be set-up to encourage agri-startups by young entrepreneurs in rural areas.
- To make India a global hub for 'Shree Anna', the Indian Institute of Millet Research, Hyderabad will be supported as the Centre of Excellence for sharing best practices, research and technologies at the international level.
- ₹20 lakh crore agricultural credit targeted at animal husbandry, dairy and fisheries
- A new **sub-scheme of PM MatsyaSampada Yojana** with targeted investment of ₹6,000 crore to be launched to further enable activities of fishermen, fish vendors, and micro & small enterprises, improve value chain efficiencies, and expand the market.

- **Digital public infrastructure for agriculture** to be built as an open source, open standard and inter operable public good to enable inclusive farmer centric solutions and support for growth of agri-tech industry and start-ups.
- Computerisation of 63,000 Primary Agricultural Credit Societies (PACS) with an investment of ₹2,516 crore initiated.
- Massive decentralised storage capacity to be set up to help farmers store their produce and realize remunerative prices through sale at appropriate times.
- **Sickle Cell Anaemia elimination mission** to be launched.
- Joint public and Private Medical research to be encouraged via select ICMR labs for encouraging collaborative research and innovation.
- **Aspirational Blocks Programme covering 500 blocks** launched for saturation of essential government services across multiple domains such as health, nutrition, education, agriculture, water resources, financial inclusion, skill development, and basic infrastructure.
- Rs. 15,000 crore for implementation of **Pradhan Mantri PVTG Development Mission** over the next three years under the Development Action Plan for the Scheduled Tribes.
- Investment of Rs. 75,000 crore, including Rs. 15,000 crore from private sources, for one hundred critical transport infrastructure projects, for last and first mile connectivity for ports, coal, steel, fertilizer, and food grains sectors.
- **New Infrastructure Finance Secretariat** established to enhance opportunities for private investment in infrastructure.
- **District Institutes of Education and Training** to be developed as vibrant institutes of excellence for Teachers' Training.
- A National **Digital Library for Children and Adolescents** to be set-up for facilitating availability of quality books across geographies, languages, genres and levels, and device agnostic accessibility.
- Rs. 5,300 crore to be given as central assistance to Upper Bhadra Project to provide sustainable micro irrigation and filling up of surface tanks for drinking water.
- **'Bharat Shared Repository of Inscriptions'** to be set up in a digital epigraphy museum, with digitization of one lakh ancient inscriptions in the first stage.
 - 'Effective Capital Expenditure' of Centre to be Rs. 13.7 lakh crore.
- Continuation of 50-year interest free loan to state governments for one more year to spur investment in infrastructure and to incentivize them for complementary policy actions.
- Encouragement to states and cities to undertake urban planning reforms and actions to transform our cities into 'sustainable cities of tomorrow'.
- Transition from manhole to machine-hole mode by enabling all cities and towns to undertake 100 percent mechanical desludging of septic tanks and sewers.
- **iGOTKarmayogi**, an integrated online training platform, launched to provide continuous learning opportunities for lakhs of government employees to upgrade their skills and facilitate people-centric approach.
- More than 39,000 compliances reduced and more than 3,400 legal provisions decriminalized to enhance Ease Of Doing Business.
- Jan Vishwas Bill to amend 42 Central Acts have been introduced to further trust-based governance.
- Three centres of excellence for Artificial Intelligence to be set-up in top educational institutions to realise the vision of **"Make AI in India and Make AI work for India"**.
- **National Data Governance Policy** to be brought out to unleash innovation and research by start-ups and academia.
- One stop solution for reconciliation and updation of identity and address of individuals to be established using DigiLocker service and Aadhaar as foundational identity.
- PAN will be used as the common identifier for all digital systems of specified government agencies to bring in Ease of Doing Business.
 - 95 per cent of the forfeited amount relating to bid or performance security, will be returned to MSME's by government and government undertakings in cases the MSME's failed to execute contracts during Covid period.
- Result Based Financing to better allocate scarce resources for competing development needs.
- **Phase-3 of the E-Courts project** to be launched with an outlay of Rs. 7,000 crore for efficient administration of justice.
- **R & D grant for Lab Grown Diamonds (LGD) sector** to encourage indigenous production of LGD seeds and machines and to reduce import dependency.
- Annual production of 5 MMT under **Green Hydrogen Mission** to be targeted by 2030 to facilitate transition of the economy to low carbon intensity and to reduce dependence on fossil fuel imports.
 - ₹35000 crore outlay for energy security, energy transition and net zero objectives.
 - Battery energy storage systems to be promoted to steer the economy on the sustainable development path.
 - 20,700 crore outlay provided for renewable energy grid integration and evacuation from Ladakh.
- **"PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth" (PM-PRANAM)** to be launched to incentivize States and Union Territories to promote alternative fertilizers and balanced use of chemical fertilizers.
- **'Mangrove Initiative for Shoreline Habitats & Tangible Incomes', MISHTI**, to be taken up for mangrove plantation along the coastline and on salt pan lands, through convergence between MGNREGS, CAMPA Fund and other sources.

- **Green Credit Programme** to be notified under the Environment (Protection) Act to incentivize and mobilize additional resources for environmentally sustainable and responsive actions.
- **Amrit Dharohar scheme** to be implemented over the next three years to encourage optimal use of wetlands, enhance bio-diversity, carbon stock, eco-tourism opportunities and income generation for local communities.
- A **unified Skill India Digital platform** to be launched for enabling demand-based formal skilling, linking with employers including MSMEs, and facilitating access to entrepreneurship schemes.
- **Direct Benefit Transfer under a pan-India National Apprenticeship Promotion Scheme** to be rolled out to provide stipend support to 47 lakh youth in three years.
- At least 50 tourist destinations to be selected through challenge mode; to be developed as a complete package for domestic and foreign tourists.
- Sector specific skilling and entrepreneurship development to be dovetailed to achieve the objectives of the 'Dekho Apna Desh' initiative.
- Tourism infrastructure and amenities to be facilitated in border villages through the **Vibrant Villages Programme**.
- States to be encouraged to set up a **Unity Mall** for promotion and sale of their own and also all others states' **ODOPs (One District, One Product)**, GI products and handicrafts.
- **National Financial Information Registry** to be set up to serve as the central repository of financial and ancillary information for facilitating efficient flow of credit, promoting financial inclusion, and fostering financial stability. A new legislative framework to be designed in consultation with RBI to govern this credit public infrastructure.
- Financial sector regulators to carry out a comprehensive review of existing regulations in consultation with public and regulated entities. Time limits to decide the applications under various regulations would also be laid down.
- **To enhance business activities in GIFT IFSC, the following measures to be taken.**
 - Delegating powers under the SEZ Act to IFSCA to avoid dual regulation.
 - Setting up a single window IT system for registration and approval from IFSCA, SEZ authorities, GSTN, RBI, SEBI and IRDAI.
 - Permitting acquisition financing by IFSC Banking Units of foreign bank.
 - Establishing a subsidiary of EXIM Bank for trade re-financing.
 - Amending IFSCA Act for statutory provisions for arbitration, ancillary services, and avoiding dual regulation under SEZ Act
 - Recognizing offshore derivative instruments as valid contracts.
 - Amendments proposed to the Banking Regulation Act, the Banking Companies Act and the Reserve of India Act to improve bank governance and enhance investors' protection.
 - Countries looking for digital continuity solutions would be facilitated for setting up of their Data Embassies in GIFT IFSC.
- SEBI to be empowered to develop, regulate, maintain and enforce norms and standards for education in the **National Institute of Securities Markets and to recognize award of degrees, diplomas and certificates.**
- Integrated IT portal to be established to enable investors to easily reclaim the unclaimed shares and unpaid dividends from the Investor Education and Protection Fund Authority.
- To commemorate Azadi Ka Amrit Mahotsav, a one-time new small savings scheme, **Mahila Samman Savings Certificate** to be launched. It will offer deposit facility upto Rs 2 lakh in the name of women or girls for tenure of 2 years (up to March 2025) at fixed interest rate of 7.5 per cent with partial withdrawal option.
- Fiscal Deficit of 3.5% of GSDP allowed for States of which 0.5% is tied to Power sector reforms.

Revised Estimates 2022-23

- The total receipts other than borrowings is Rs 24.3 lakh crore, of which the net tax receipts are Rs 20.9 lakh crore.
- The total expenditure is Rs 41.9 lakh crore, of which the capital expenditure is about Rs 7.3 lakh crore.
- The fiscal deficit is 6.4 per cent of GDP, adhering to the Budget Estimate.

Budget Estimates 2023-24

- The total receipts other than borrowings is estimated at Rs 27.2 lakh crore and the total expenditure is estimated at Rs 45 lakh crore.
- The net tax receipts are estimated at Rs 23.3 lakh crore.
- The fiscal deficit is estimated to be 5.9 per cent of GDP.
- To finance the fiscal deficit in 2023-24, the net market borrowings from dated securities are estimated at Rs

New tax rates	
Total Income (Rs)	Rate (per cent)
Up to 3,00,000	Nil
From 3,00,001 to 6,00,000	5
From 6,00,001 to 9,00,000	10
From 9,00,001 to 12,00,000	15
From 12,00,001 to 15,00,000	20
Above 15,00,000	30

11.8 lakh crore.

- The gross market borrowings are estimated at Rs 15.4 lakh crore.

PART – B

Direct Taxes

- Direct Tax proposals aim to maintain **continuity** and **stability** of taxation, further **simplify and rationalise** various provisions to **reduce the compliance burden**, promote the **entrepreneurial spirit** and provide tax relief to citizens.
- Constant endeavour of the Income Tax Department to improve Tax Payers Services by making **compliance easy and smooth**.
- To further improve tax payer services, proposal to roll out a next-generation **Common IT Return Form** for tax payer convenience, along with plans to strengthen the grievance redressal mechanism.
- **Rebate limit** of Personal Income Tax to be **increased to Rs. 7 lakh** from the current Rs. 5 lakh in the new tax regime. Thus, persons in the new tax regime, with income up to Rs. 7 lakh to not pay any tax.
- Tax structure in new personal income tax regime, introduced in 2020 with six income slabs, to change by reducing the **number of slabs to five** and **increasing the tax exemption limit to Rs. 3 lakh**. Change to provide major relief to all tax payers in the new regime.
- Proposal to **extend the benefit of standard deduction** of Rs. 50,000 to salaried individual, and deduction from family pension up to Rs. 15,000, in the new tax regime.
- **Highest surcharge rate to reduce** from 37 per cent to 25 per cent in the new tax regime. This to further result in reduction of the maximum personal income tax rate to 39 per cent.
- The limit for tax exemption on **leave encashment** on retirement of non-government salaried employees to increase to **Rs. 25 lakh**.
- The new income tax regime to be made the **default tax regime**. However, citizens will continue to have the option to avail the benefit of the old tax regime.
- **Enhanced limits for micro enterprises and certain professionals** for availing the benefit of presumptive taxation proposed. Increased limit to apply only in case the amount or aggregate of the amounts received during the year, in cash, does not exceed five per cent of the total gross receipts/turnover.
- Deduction for expenditure incurred on payments made to MSMEs to be allowed only when payment is actually made in order to support MSMEs in timely receipt of payments.
- **New co-operatives** that commence manufacturing activities till 31.3.2024 to get the **benefit of a lower tax rate** of 15 per cent, as presently available to new manufacturing companies.
- Opportunity provided to sugar co-operatives to claim payments made to sugarcane farmers for the period prior to assessment year 2016-17 as expenditure. This expected to provide them a relief of almost Rs. 10,000 crore.
- Provision of a **higher limit of Rs. 2 lakh per member** for cash deposits to and loans in cash by Primary Agricultural Co-operative Societies (PACS) and Primary Co-operative Agriculture and Rural Development Banks (PCARDBs).
- A **higher limit of Rs. 3 crores for TDS** on cash withdrawal to be provided to co-operative societies.
- **Date of incorporation** for income tax benefits to start-ups to be **extended** from 31.03.23 to 31.3.24.
- Proposal to provide the benefit of carry forward of losses on change of shareholding of start-ups from seven years of incorporation to ten years.
- Deduction from capital gains on investment in residential house under sections 54 and 54F to be capped at Rs. 10 crore for better targeting of tax concessions and exemptions.
- Proposal to **limit income tax exemption** from proceeds of **insurance policies with very high value**. Where aggregate of premium for life insurance policies (other than ULIP) issued on or after 1st April, 2023 is above Rs. 5 lakh, income from only those policies with aggregate premium up to Rs. 5 lakh shall be exempt.
- Income of authorities, boards and commissions set up by statutes of the Union or State for the purpose of housing, development of cities, towns and villages, and regulating, or regulating and developing an activity or matter, proposed to be exempted from income tax.
- **Minimum threshold** of Rs. 10,000/- for **TDS to be removed** and taxability relating to online gaming to be clarified. Proposal to provide for TDS and taxability on net winnings at the time of withdrawal or at the end of the financial year.
- Conversion of gold into the electronic gold receipt and vice versa not to be treated as a capital gain.
- TDS rate to be reduced from 30 percent to 20 percent on the taxable portion of EPF withdrawal in non-PAN cases.
- Income from Market Linked Debentures to be taxed.
- Deployment of about 100 Joint Commissioners for disposal of small appeals in order to reduce the pendency of appeals at Commissioner level.
- Increased selectivity in taking up appeal cases for scrutiny of returns already received this year.
- Period of **tax benefits** to funds relocating to **IFSC, GIFT City** extended till 31.03.2025.
- Certain acts of omission of liquidators under section 276A of the Income Tax Act to be **decriminalized** with effect from 1st April, 2023.

- Carry forward of losses on strategic disinvestment including that of IDBI Bank to be allowed.
- **Agniveer Fund** to be provided **EEE status**. The payment received from the **Agniveer Corpus Fund** by the Agniveers enrolled in Agnipath Scheme, 2022 proposed to be exempt from taxes. Deduction in the computation of total income is proposed to be allowed to the Agniveer on the contribution made by him or the Central Government to his Seva Nidhi account.

Indirect Taxes

- Number of basic customs duty rates on goods, other than textiles and agriculture, reduced to 13 from 21.
- **Minor changes in the basic custom duties, cesses and surcharges** on some items including toys, bicycles, automobiles and naphtha.
- Excise duty exempted on **GST-paid compressed bio gas** contained in blended compressed natural gas.
- Customs Duty on specified capital goods/machinery for manufacture of **lithium-ion cell for use in battery of electrically operated vehicle (EVs)** extended to 31.03.2024
- Customs duty exempted on vehicles, specified automobile parts/components, sub-systems and tyres when imported by notified testing agencies, for the purpose of testing and/ or certification, subject to conditions.
- Customs duty on **camera lens and its inputs/parts** for use in manufacture of camera module of cellular mobile phone **reduced to zero** and concessional duty on lithium-ion cells for batteries extended for another year.
- Basic customs duty reduced on **parts of open cells of TV panels** to 2.5 per cent.
- Basic customs duty on **electric kitchen chimney** increased to 15 per cent from 7.5 per cent.
- Basic customs duty on **heat coil for manufacture of electric kitchen chimneys** reduced to 15 per cent from 20 per cent.
- **Denatured ethyl alcohol** used in chemical industry exempted from basic customs duty.
- Basic customs duty reduced on **acid grade fluorspar** (containing by weight more than 97 per cent of calcium fluoride) to 2.5 per cent from 5 per cent.
- Basic customs duty on **crude glycerin** for use in **manufacture of epichlorohydrin** reduced to 2.5 per cent from 7.5 per cent.
- Duty reduced on key inputs for domestic manufacture of **shrimp feed**.
- Basic customs duty reduced on seeds used in the manufacture of **lab grown diamonds**.
- Duties on articles made from **dore and bars of gold and platinum** increased.
- Import duty on **silver dore, bars and articles** increased.
- Basic Customs Duty exemption on raw materials for manufacture of CRGO Steel, ferrous scrap and nickel cathode continued.
- Concessional BCD of 2.5 per cent on copper scrap is continued.
- Basic customs duty rate on **compounded rubber** increased to 25 per cent from 10 per cent or 30 per kg whichever is lower.
- National Calamity Contingent Duty (NCCD) on **specified cigarettes** revised upwards by about 16 per cent.

Legislative Changes in Customs Laws

- Customs Act, 1962 to be amended to specify a time limit of nine months from date of filing application for passing final order by Settlement Commission.
- Customs Tariff Act to be amended to clarify the intent and scope of provisions relating to Anti-Dumping Duty (ADD), Countervailing Duty (CVD), and Safeguard Measures.

CGST Act to be amended

- To raise the **minimum threshold of tax amount** for launching prosecution under GST from one crore to two crore;
- To reduce the **compounding amount** from the present range of 50 to 150 per cent of tax amount to the range of 25 to 100 per cent;
- **Decriminalise certain offences;**
- To **restrict filing of returns/statements** to a maximum period of three years from the due date of filing of the relevant return/statement; and
- To enable unregistered suppliers and composition taxpayers to make the intra-state supply of goods through E-Commerce Operators (ECOs).

WORLD ECONOMIC OUTLOOK (WEO) REPORT

GS-III ECONOMY

Context

- In its January update of the World Economic Outlook (WEO) Report, the IMF has marginally improved the forecast for global growth in 2023 — a relief, given the fears of a global recession in 2023.

What Is the World Economic Outlook (WEO)?

- The World Economic Outlook (WEO) is a **comprehensive report published twice a year by the International Monetary Fund (IMF)**.

- It **includes the IMF's estimates and forecasts for global output growth and inflation.**
- It also includes estimates of real gross domestic product (GDP) growth, consumer prices, current account balances and unemployment in the fund's 190 member countries, grouped by region and development status.
- The **data is drawn from IMF representatives' consultations** with member countries, and is included in the WEO database.

Key takeaways from the latest update:

Global growth will bottom out in 2023

Earlier predictions:

- In the October 2022 WEO, the IMF forecast that the global growth rate **will decelerate from 3.4% in 2022 to 2.7% in 2023.**
- In fact, **at that time the IMF painted a grim picture:** More than a third of the global economy will contract this year or next, while the three largest economies – the United States, the European Union, and China – will continue to stall. In short, the worst is yet to come, and for many people 2023 will feel like a recession.

Recent estimates

- Compared with the October forecast, the estimate for 2022 and the forecast for 2023 are both higher by about 0.2 percentage point, reflecting positive surprises and greater-than-expected resilience in numerous economies.
- China, Russia, the US, Germany, and Italy are some of the key economies that have seen the most significant upward revisions in their 2023 GDP forecasts. The United Kingdom saw a substantial (almost 1 percentage point) downgrade in its 2023 GDP.

Global inflation has peaked but relief will be slow

Inflation-Disinflation

- Inflation, which destabilised the global economy, is expected to have peaked in 2022 but the disinflation (the fall in inflation rate) will be slow and take all of 2023 and 2024.

Headline Inflation

- About **84 percent of countries are expected to have lower headline (consumer price index) inflation in 2023 than in 2022.**

Global Inflation

- Global inflation is **set to fall from 8.8 percent in 2022** (annual average) to 6.6 percent in 2023 and 4.3 percent in 2024--above pre-pandemic (2017-19) levels of about 3.5 percent.

Price Rise

- Price rise is slowing for two main reasons.
 1. One, **monetary tightening all across the world** – higher interest rates drag down overall demand for goods and services and that, in turn, slows down inflation.
 2. Two, in the wake of a faltering demand, **prices of different commodities – both fuel and non-fuel – have come down from their recent highs.**
- In 2023, **advanced economies are expected to have an inflation of 4.6%** while emerging economies will continue to face an inflation of 8.1%.

India will stay the world's fastest growing major economy in 2023 and 2024

- There's been **no change in India's growth outlook since October 2022.**
- Growth in India **is set to decline from 6.8 percent in 2022 to 6.1 percent in 2023** before **picking up to 6.8 percent in 2024**, with resilient domestic demand despite external headwinds.
- This means **India will remain the world's fastest growing major economy both in 2023 as well as 2024.**

INTERNATIONAL MONETARY FUND (IMF)

- The International Monetary Fund (IMF) is a **major financial agency of the United Nations**, and an **international financial institution**, headquartered in Washington, D.C., consisting of 190 countries. Its stated mission is "working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world."
- **Formed in 1944**, at the **Bretton Woods Conference**, it came into formal existence in 1945 with 29 member countries and the goal of reconstructing the international monetary system. It now plays a central role in the **management of balance of payments difficulties** and international financial crises. Countries contribute funds to a pool through a quota system from which countries experiencing balance of payments problems can borrow money. The IMF is **regarded as the global lender of last resort.**

Context

- Prime Minister Narendra Modi has lauded the utilisation of Indian Exporters.

Understanding CECA and CEPA

- CECA stand for Comprehensive Economic Cooperation Agreement while CEPA is an acronym for Comprehensive Economic Partnership Agreement.
- Both CECA and CEPA are **forms of economic agreements between India and other countries** such as Malaysia, Singapore, and Thailand (for CECA) and Japan, Sri Lanka, and South Korea (for CEPA).
- Since both are economic agreements, the two agreements are **subject to the benefit of both countries, especially on the economic and trading side.**
- CECA and CEPA are usually **conducted by economic negotiations between two countries.**
- Once the negotiators reach an amicable agreement over terms and conditions, the agreement is signed by each country's representative (in this case, the Minister of Commerce) and passed to each country's parliament or government for approval.
- After the approval, the agreement becomes effective by the enforcement of both parties and governments in their own territories.

Terms and conditions

- Terms and conditions vary from country to country in every agreement.
- The agreement **can cover tariffs of exported goods, protection for overseas workers** that are part of a country's service industry, or foreign direct investments between two countries.
- **CECA is mainly concerned with tariff reductions and the elimination of all items** that are considered to be listed tariff rate quota items.
- On the other hand, CEPA has the same components of CECA with **an additional focus and options in the terms of trade investments and services.** CEPA is much broader and more complicated compared to CECA.
- In a comparable economic standing, **CECA is considered as the first step or a stepping stone to accomplish CEPA.**
- If negotiations can still be conducted between countries, and both parties are open to discussion and have a good economic relationship with each other, CECA can evolve into CEPA.
- This makes CEPA a result of on-going efforts and negotiations of two countries that started from CECA.

Significance

- These two pacts also help in **paving the way for more economic solutions and improvements in terms of export items, investments, and service quality.**
- Joint expansion of economic interests and opportunities for both countries can also be feasible if it is a part of the terms and conditions with any of the two agreements.
- Overall, **it improves economic relationships between the two governments and their people.**

Parameters of Comparison	CECA	CEPA
Full-Form	CECA is the abbreviation of Comprehensive Economic Cooperation Agreement.	CEPA is the abbreviation of Comprehensive Economic <u>Partnership</u> Agreement
Concept	CECA as the name suggests encourages the idea of cooperation between two countries. It is a looser approach.	CEPA promotes partnership between two countries. It is a more intimate relationship.
Meaning	Agreement to reduce or eliminate tariffs on trade goods.	Agreement to reduce or eliminate the tariff on trade goods and also services.
Signed on	It was signed by India in October 2010 with Malaysia.	It was signed by India in August 2009 with <u>Korea</u> .
Includes	Does not include investments made by partner countries.	Includes investments made by partner countries.

Context

- As per a motion made in the Finance Bill, 2023, **Indian start-ups that offer their shares to foreign investors, may have to pay 'angel tax'**. Earlier, it was only supposed to be paid for investments raised by resident Indian investors.
- To bring this into effect, Finance Bill, 2023, has **proposed to amend Section 56(2) VII B of the Income Tax.**

Background

Angel Investors

- An angel investor is an **individual who provides capital for a start-up**, in exchange for convertible debt or ownership equity.
- Angel Investors are **Wealthy Individuals or High Net worth Individuals** having huge wealth. These investors generally provide seeding capital or initial capital to a start-up entity to **earn healthy profit or capital appreciation of investment once start-ups come into operations and exist from the start-ups.**

Tax benefits available to an Eligible Start-Up

- Exemption from levy of angel tax under **section 56(2)(viib)**;
- Deductions under section 80-IAC of the income tax Act.

What is Angel Tax? Decoded

Definition

- Angel tax is levied on start-ups **when they receive investments in excess of their 'fair market value'**. The perceived profit is considered as income from other sources – it's taxed at 30% and termed as angel tax.

Note that angel tax (as of now) is not applicable in the case of investments made by venture capital firms or foreign investors. It's limited to investments made only by Indian investors.

Description

- Referred to colloquially as Angel Tax, this rule is described in **Section 56(2)(viib) of the Income Tax Act, 1961.**
- This **clause was inserted into the act in 2012 to prevent-laundering** of black money, and roundtripping via investments with a large premium into unlisted companies. Essentially **it's a tax on capital receipts, unique to India in the global context.**
- The tax covers investment in any private business entity, but **only in 2016 was it applied to startups.**

A step to prevent Money Laundering

In India, unlike in the US, the angel investor does not get any tax rebate for investment in small businesses. So, people can invest their black money in start-ups and make it legal. Angel tax was introduced to prevent money laundering that might happen in the name of investment.

- As more and more new-age tech startups started raising Venture Capital Funding, they came under the IT department scrutiny. These funding deals often saw **investors paying a premium above the face value or the fair market value of securities**, and therefore were taxed as income for the startup.
- The Angel Tax is **being levied on startups at 30.9% on net investments in excess of the fair market value.** And many startups were retrospectively assessed for this tax, years after their fundraising.

FAIR MARKET VALUE

It's difficult to determine the fair market value of a start-up. Section 56 of the Income Tax Act 1961 explains how to calculate this value. It may be determined by considering intangible assets like good will, know-how, patents, licences, copyrights, and movable assets.

However, this definition brews the discontent among start-ups and the income tax department. Income tax is strictly run by the rule book in India. So, it's not possible to correctly estimate the projected growth of start-ups while calculating the fair value.

Implications

- Between 2016 and 2019, startups urged the government to add exceptions that would allow them to be exempt from the Angel Tax.

Government's step

- In March 2019, an exemption was provided to startups under certain conditions, which are specified here and reproduced below:
- Note:** This exemption does not need validation by the Inter-Ministerial Board of Certification, which was set up by the Department of Promotion of Industry & Internal Trade.

- However, the key condition for exemption is that the aggregate amount of paid-up share capital and share premium of the startup after the issue or proposed issue of shares **does not exceed INR 25 Cr.**
- This meant resident angel investors who typically invest a small amount of seed money were spared the Angel Tax.
- Besides this, there was a further exemption for SEBI-registered alternative investment funds (AIFs) and capital raised from overseas investors, since the primary target was roundtripping of funds from and to India.

Exemption for the purpose of clause (viib) of sub-section (2) of section 56 of the Act

4. A Startup shall be eligible for notification under clause (ii) of the proviso to clause (viib) of sub-section (2) of section 56 of the Act and consequent exemption from the provisions of that clause, if it fulfils the following conditions:

- it has been recognised by DPIIT under para 2(iii)(a) or as per any earlier notification on the subject
- aggregate amount of paid up share capital and share premium of the startup after issue or proposed issue of share, if any, does not exceed, twenty five crore rupees:

Provided that in computing the aggregate amount of paid up share capital, the amount of paid up share capital and share premium of twenty five crore rupees in respect of shares issued to any of the following persons shall not be included—

- a non-resident; or
- a venture capital company or a venture capital fund;

So, Have These Exemptions Changed In 2023?

- Not all of them, **startups are still exempt from angel tax when the total aggregate amount for the deal is under INR 25 Cr**, and domestic non-Alternate Investment Funds investing in Indian startups still need to pay a tax on their deals.
- What's being amended in the Finance Bill, 2023 **is the exemption for overseas investors**. This means **when a start-up raises funding from a foreign investor, that too will now be counted as income and be taxable.**

The rationale behind the move

- By removing the exception for overseas funds, the new proposed Angel Tax is further looking to track such transactions, where Indian individuals are Limited Partners (LPs) in blind pool foreign funds.
- The Indian government does not always have visibility into the LPs that make up foreign funds.

Plausible Implications

- This will have far-reaching implications for the Indian startup ecosystem as a majority of the funds are raised from overseas investors, whose investments will now be subject to Angel Tax. This **move may push many startups to redomicile overseas**.
- Rather than launching India-based AIFs, **global investors might pressure Indian entrepreneurs and startups to move overseas and invest in those entities**.
- Despite the government's bluster about improving the ease of doing business in India, entrepreneurs and investors are concerned that **applying strict taxes on capital receipts without adequate exceptions will lead to startups moving overseas**.
- This might put an impact on the FDI inflows and hamper the Ease of Doing Business.

Moving ahead

- Given the massive downside for FDI under the current clauses, there's hope among the investor class for more clarifications.
- It's possible that the Finance Ministry further clarifies the exceptions under this new, avatar of 'Angel Tax'.

Definition of Start-Up in India

An entity shall be considered as a startup if it satisfies all the following conditions:

- **If it is incorporated/registered as any of the followings:**
- Private Limited Company (as defined in Companies Act, 2013).
- Partnership Firm (registered under Partnership Act, 1932).
- Limited Liability Partnership (registered under Limited Liability Partnership Act, 2008).
- One Person Company (as defined in Companies Act, 2013).

Provided that such entity is not formed by splitting up or reconstruction of a business already in existence.

- It has **not completed ten years since incorporation/registration** as above.
- Its **turnover for any of the financial years has not exceeded INR 100 Crore**.
- It satisfies any of the following conditions:
 - **It is working towards:** Innovation/ Development/Improvement of new products/processes/services.
 - **It is a scalable business model** with a high potential of: Employment generation or Wealth creation.

A DPIIT recognized startup is eligible for exemption from the provisions of section 56(2)(viib) of the Income Tax Act.

Startups are exempted from income tax for 3 years provided they get a certification from Inter-Ministerial Board (IMB).

Controlling Body to Startups in India

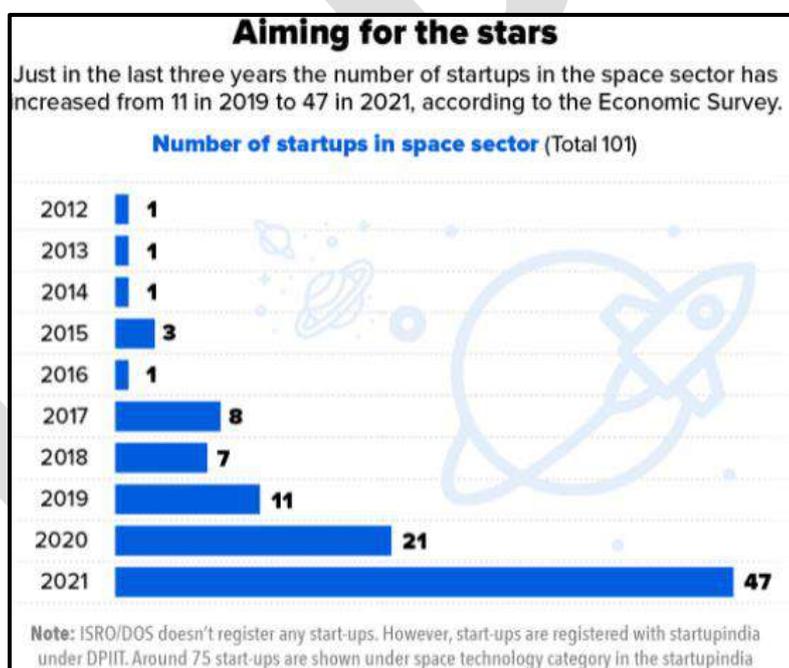
- Department For Promotion of Industry And Internal Trade (DPIIT) working under the Ministry of Commerce and Industry is the controlling body to startups in India.
- **DPIIT RECOGNITION TO STARTUPS** :- Under the Startup India initiative, eligible companies can get recognised as Startups by DPIIT, in order to access a host of tax benefits, easier compliance, IPR fast-tracking & more.

Status of Start Ups in India: Economic Survey 2022 Report

- India has over **61,400 startups recognised by the Department for Promotion of Industry and Internal Trade (DPIIT)**, with at least 14,000 recognized during fiscal 2022, according to the Economic Survey 2021-22.
- Startups in India have grown remarkably over the last six years. The number of new recognized startups has increased to over **14,000 in 2021-22 from only 733 in 2016-17**.
- **India has become the third-largest startup ecosystem in the world after the US and China.**
- A record **44 Indian startups achieved unicorn status in 2021**, taking the overall tally of startup unicorns in India to 83, with **most in the services sector**.
- In recent years, Delhi has replaced Bengaluru as the startup capital of India.
- **Maharashtra** has the highest number of recognised startups.

Government Schemes to Support Startups in India

- **SAMRIDH(Startup Accelerators of MeitY for pRoduct Innovation, Development, and growth) Scheme** to provide funding support to startups along with helping them bring skill sets together which will help them grow successful.
- **Startup India Seed Fund** - The Startup India Seed Fund Scheme (SISFS) aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization.
- **Startup India Initiative** gives tax benefits to startups under this scheme.
- **A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship (ASPIRE) initiative** to offer proper knowledge to the entrepreneurs to start with their business and emerge as employers.
- **Pradhan Mantri Mudra Yojana (PMMY)** provide startup loans of up to INR 10 lakhs to small enterprises, business, which are non-corporate, and non-farm small/micro-enterprises.
- **eBiz** - the first electronic government-to-business(G2B) portal, to transform and develop a conducive business environment in the country.
- **“Support for International Patent Protection in E&IT (SIP-EIT)”**. This scheme provides financial support to MSMEs and Technology Startups for international patent filing.
- **Multiplier Grants Scheme (MGS)**: This scheme aims to encourage collaborative Research & Development (R&D) between industry and academics/institutions for the development of products and packages. Under the scheme, if the industry supports the R&D of products that can be commercialized at the institutional level, the government shall provide financial support which will be up to twice the amount provided by industry.
- **Venture Capital Assistance (VCA) scheme** by Small Farmer’s Agri-Business Consortium (SFAC) for the welfare of farmer-entrepreneurs. It intends to provide assistance in the form of term loans to farmers so that the latter can meet the capital requirements for their project’s implementation.
- **NewGen IEDC initiative** launched by the National Science and Technology Entrepreneurship Development Board under the Department of Science and Technology. The initiative aims to inculcate the spirit of innovation and entrepreneurship among the Indian youth through guidance, mentorship, and support.
- **Start-ups Intellectual Property Protection (SIPP) scheme** was launched to encourage innovation and creativity in startups. Under this scheme, 80% rebate for patent filing fees and 50% for trademark filing is provided to startups.



Final thoughts

- The Indian start-up ecosystem is rapidly evolving driven by extremely young, diverse and inclusive entrepreneurial landscape. More than 800 start-ups are being set up in the country every year.
- The exponential rise in the number of start-ups will also lead to more employment opportunities. Some of the main factors which have contributed towards this robust growth are:
 1. A rapid growth in the software product industry in the last few years over the country (and across the globe).
 2. Availability of capital, and
 3. Acquisitions.
- The Indian startup ecosystem is today, as a result of this healthy growth and changing mindset, all set to take on the challenges in the Asian market and become a major force to reckon with at the international level.
- Scaling up, Design, and Growth Hacking are the key priority for startups today.
- On the innovation front, it is imperative to increase collaboration and partnerships for product companies with platform players, IT Services, Global MNCs, and CIOs.

DISINVESTMENT

GS-III ECONOMY

Context

- In the Union Budget for 2023-24, the government has set a disinvestment target of ₹51,000 crore.

The Target

- This target is **nearly 21% down from the budget estimate for the current year and just ₹1,000 crores more than the revised estimate.**
- It is also the **lowest target in seven years.** Moreover, the Centre **has not met the disinvestment target for 2022-23.**

Disinvestment

- Disinvestment means **sale or liquidation of assets by the government**, usually Central and state public sector enterprises, projects, or other fixed assets.

Why Disinvestment is done?

- To **reduce the financial burden** on the Government finances
- For **opening up markets for private firms**, which eventually leads to better capital markets and efficient allocation of resources
- For supporting the **liquidity measures** in the market by aiding to consumption and demand as the need arises
- To **raise money to facilitate long-term Government goals** of growth and development in the country
- To **channel resources to more productive avenues** and projects by reducing the capital expenditures on existing non-performing /loss-making firms.
- To **improve the Return on Investment (ROI)** of underperforming firms.

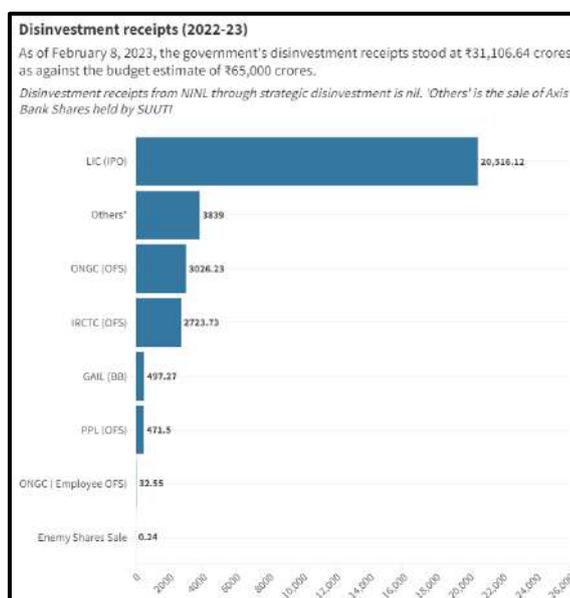
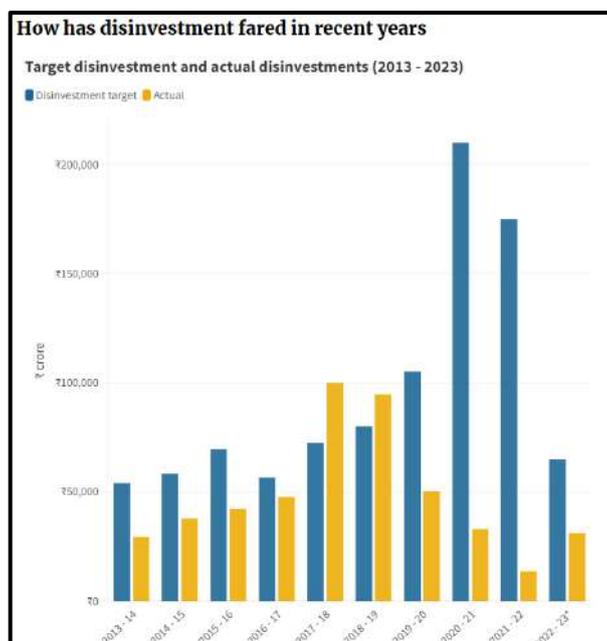
Types of Disinvestments

- **Minority Disinvestment:** The Government retains ownership & managerial control over the company by maintaining the majority stake (equal /> 51 percent). The Govt. generally **auctions the minority stake to potential institutional investors.**
- **Majority Disinvestment:** The Government gives up the majority stake of a government-held company and is left with a minority stake in the company.
- **Strategic Disinvestment:** The government sells off a PSU to a private entity. The intention is to **transfer the ownership of a non-performing organization to more efficient private players** in the market and reduce on the financial burden on the government balance sheet. Here, the **government gives up the ownership of the entity.**
- **Complete Disinvestment/Privatization:** 100 percent sale of Government stake in a PSU leads to the privatization of the company, wherein complete ownership and control are passed onto the buyer.

Importance of Disinvestment

The importance of disinvestment lies in the utilization of funds for:

- Financing the increasing fiscal deficit.
- Financing large-scale infrastructure development.
- To invest in the economy to encourage spending.
- For retiring Government debt- Almost 40-45% of the Centre's revenue receipts go towards repaying public debt/interest.
- For social programs like health and education.



Challenges to Disinvestment

- Observers point out that disinvestment **should ideally be driven by the long-term vision of the government** on the extent to which it wants to privatize the economy and the sectors where it needs to retain a presence – and **not by the need to raise revenues**.
- However, of late, the **government’s reliance on disinvestment proceeds to bridge the gap in the Budget has been increasing**.
- Govt. introduced a **new strategic disinvestment policy in 2021** to maintain ‘bare minimum’ presence in strategic sectors like atomic energy, defence etc., and exit non-strategic sector enterprises.

Way Ahead

- Disinvestment planning **calls for a consistent and long-term rationale**.
- For India to transition from a developing to a developed nation, **the key is to have world-class infrastructure**. In order to build this infrastructure in terms of roads, ports, urban infrastructure, and healthcare infrastructure the Government needs to play a key role and fund its growth. One of the best ways to do so is by strategic disinvestment and privatization.
- The **large disinvestment and privatization exercised by the Government** would result in more foreign capital coming into India, thereby adding depth to the overall capital markets and help **India shine on the world stage**.

GLOBAL QUALITY INFRASTRUCTURE INDEX (GQII)

GS-III ECONOMY

Context

- India’s national accreditation system under **the Quality Council of India (QCI) has been ranked 5th in the world in the recent Global Quality Infrastructure Index (GQII) 2021**.

GQII

- The GQII program is **an initiative of the independent consulting firms Mesopartner and Analyticar to research and disseminate data on Quality Infrastructure**.
- Here, Quality Infrastructure means **the international system of metrology, standardization, accreditation, and quality-related services (testing, calibration, inspection, verification, training, and awareness building)**.
- All these create confidence in international trade and contribute to the protection of consumers and the environment.
- The GQII is a database and ranking that **allows interested persons to compare the quality infrastructure of different countries worldwide**.
- The GQII **ranks the 184 economies in the world on the basis of quality infrastructure (QI)**.
- The GQII rankings are **published and presented post-facto for each year** based on the data collected till the end of that year.

2021 GQI Rankings

India

- India has been **ranked fifth among 184 countries in terms of the quality of its accreditation system**, according to the recently released Global Quality Infrastructure Index (GQII) 2021. India's overall QI system ranking **continues to be tenth**.
- Standardization system (under BIS) is ranked at 9th and the metrology system (under NPL-CSIR) at 21st position in the world.

- According to the index, **India was ranked 21st in terms of metrology and ninth in standardization.**

[Note: While QCI is the national body for accreditation, the Bureau of Indian Standards (BIS) is the main body for the formulation of standards, and the Council of Scientific and Industrial Research - National Physical Laboratory (CSIR-NPL) for the metrology system.]

World

- Germany topped the accreditation systems chart. It was followed by the US, China and Italy.
- The report said geographically, the top 25 are mainly located in Europe, North America, and Asia-Pacific, with some exceptions, such as India (10th), Brazil (13th), Australia (14th), and Turkey (16th).

Significance of India's rise in the Accreditation System

- The rise in India's accreditation ranking is **attributed to the steady growth of Conformity Assessment Bodies (CABs) under national accreditation system.** These are testing & medical labs, product certification bodies, and management systems certification bodies.
- India is on the **path of self-reliance** and we are no longer governed by other countries to innovate and improve.
- The significance of our National Accreditation System in improving quality of products and services cannot be over-emphasised and this recognition will help us create a more independent ecosystem for regulators and government to use for conformity of any standard.

MUTUAL FUND

GS-III ECONOMY

Context

- **Securities and Exchange Board of India (SEBI)** recently proposed to review the role and accountability of trustees of mutual funds with an aim to protect unitholders' interests.

Mutual Funds

Introduction and History

- **India's first mutual fund was established in 1963, namely, Unit Trust of India (UTI),** at the initiative of the Government of India and Reserve Bank of India 'with a view to encouraging saving and investment.

What are Mutual Funds?

- A mutual fund is an **investment vehicle that pools funds from investors and invests in equities, bonds, government securities, gold, and other assets.**
- Companies that qualify to set up mutual funds, create **Asset Management Companies (AMCs) or Fund Houses,** which pool in the money from investors, market mutual funds, manage investments and enable investor transactions.
- **Mutual funds are managed by sound financial professionals known as fund managers,** who have the expertise in analyzing and managing investments. The funds collected from investors in mutual funds are invested by the fund managers in different financial assets **such as stocks, bonds, and other assets.**
- For the fund's management, the **AMC charges a fee to the investor known as the expense ratio.** It is **not a fixed fee** and varies from one mutual fund to another. SEBI **has defined the maximum limit of the expense ratio** that can be charged on the basis of the total assets of the fund.

Types of Mutual Funds

- **Open-ended funds** are mutual funds that allow you to invest and redeem investments at any time, i.e. they are perpetual in nature. They are liquid in nature and don't come with a specific investment period.
- **Close-ended schemes** have a fixed maturity date. You can only invest at the time of the new fund offer and redemption can only be done on maturity. You cannot purchase the units of a close-ended mutual fund whenever you please.

What is the role of Trustees?

- Mutual funds in India have a three-tiered structure - **mutual fund, the trustees and the AMC.**
- Board of trustees or trustee company holds the property of the mutual fund in trust for the benefit of the unit holders. They appoint an AMC to float schemes for the mutual fund and manage the funds mobilised under various schemes.
- They are also expected to **exercise supervisory oversight over AMC** and its activities so as to ensure that AMC acts in the interest of the unitholders.

Issues identified by SEBI

- According to SEBI, though mutual fund regulations provide for some restrictions to address few conflicts of interest, there are some areas where the Trustees need to pay attention.

Some of the potential conflicts include:

- Investment by mutual fund (MF) schemes **in public issues of its sponsor, its associates and/or group companies;**
- Investment by MF schemes **for fund raising activates by such companies** where its sponsor, associates or group companies are appointed as merchant banker;

- Sponsor influencing voting by MF schemes in companies in which it has interest and MF availing services of its sponsor, associates and group companies at terms which are not at arm's length.

What has the SEBI recently proposed?

System-Level Checks

- SEBI has recommended that the **trustees will be responsible for taking steps so that there are system-level checks in place to prevent fraudulent transactions.**

Take help of audit, legal firms and merchant bankers

- To ensure that they focus on their core responsibilities, SEBI has proposed that the trustees should take help of audit, legal firms and merchant bankers for carrying out due diligence on their behalf.

Amend regulations

- SEBI has also recommended **amending certain regulations for AMC** and also include additional clauses to enhance the role, responsibility, and accountability of the board of AMC.

Unit Holder Protection Committee

- The markets regulator also proposed the constitution of a **'Unit Holder Protection Committee' (UHPC) by board of AMC.**
- This will help in an independent review mechanism for the decisions of AMC from the perspective of the unit holders' interest, across all products and services.

Convert into a Trustee Company

- In order to strengthen governance and for financial independence, SEBI also suggested that all the existing trustees with board of trustees structure should convert into a trustee company in the next one year.

How will it benefit unit holders/Investors?

- SEBI said with increasing scale and reach of the mutual fund industry, trustees' role in respect of unitholders' protection assumes even greater significance. Once finalised, the **trustees will ensure that the AMCs act in a manner which is not skewed in favour of AMC's stakeholders.**
- The key areas of their focus will be **fairness of fees and expenses charged by the AMC** and misconduct including market abuse / misuse of information by the AMC or AMC employees or distributors. The trustees will ensure that there is **no mis-selling of mutual fund schemes to increase asset under management (AUM) and valuation of the AMC.**

What is the size of the mutual fund industry?

- Over the past decade, there has been a **fivefold increase in the size of the mutual fund industry.** from the industry's AUM of Rs 7.93 lakh crore in November 30, 2012, the AUM crossed the milestone of Rs 10 lakh crore in May 2014 and in the span of about three years it had crossed Rs 20 lakh crore in August 2017.
- The size of industry AUM crossed Rs 30 lakh crore in November 2020 and as of December 31, 2022 it stood at Rs 39.89 lakh crore----- **around 5 fold increase in a span of 10 years.**

MCLR

GS-III ECONOMY

Context

- Following the 25 basis points (bps) hike in repo rate by the Reserve Bank of India, multiple lenders have raised their marginal cost of fund-based lending rates (MCLR) by up to 15 basis points, which will result in higher equated monthly instalment (EMI) for borrowers.

What is MCLR?

- MCLR (Marginal Cost of Funds Based Lending Rate) refers to the **minimum interest rate below which financial institutions can't lend, except in certain cases.** Marginal cost of funds-based lending rate defines the process used to determine the minimum home loan rate of interest.
- The MCLR method was **introduced** in the Indian financial system by the Reserve Bank of India **in the year 2016.**
- The MCLR system has **replaced the base rate system that was introduced in the year 2010.**

MCLR vs. Erstwhile Base Rate

- **Earlier, when banks and financial institutions did lend on base rates,** its prime customers used to get undue advantages.
- For example, if the base rate of lending was 7%, certain financial institutions would lend to their prime customers at 7% or below. On the other hand, for ordinary customers, this rate of interest could have been 10-12%.
- **Since the base rate was a financial institution's internal policy, this caused a huge monetary loss.** Also, even after repo rate cuts by RBI, a lot of time was taken by financial institutions to lower their lending rates and pass the benefits to customers.
- Thus, RBI switched to the **external benchmark linked lending rate (EBLR) system where lending rate is linked to**

benchmark rates like repo or Treasury Bill rates. Now renewal of credit limits and sanctioning of loans is now done as per MCLR norms.

Objectives of MCLR

- The current Marginal Cost of Lending Rate (MCLR) aims to:
 1. Facilitate the implementation of the lending policy rates defined by the Indian Reserve Bank, and ensure that all Indian financial institutions comply fully.
 2. Bring much-needed transparency to financial institutions while determining their interest rates.
 3. Pass the benefits of reduced interest rates to customers.
 4. Ensure the availability of loans to customers that are fair to both customers as well as the lender.
- Under MCLR, it's **mandatory for banks to declare their overnight, 1-month, 3-month, 6-month, 1-year, and 2-year interest rates every month**. Now as a borrower, one can know the MCLR rates of banks from their websites.

Components of MCLR/How is MCLR Rate Calculated?

- Following are the Components that make up the marginal costs. Banks and financial institutions calculate MCLR rate against the following:
 - Marginal cost of funds which comprises of marginal cost of borrowings and return on net worth.
 - Negative carry on account of cash repo rate which is the cost banks incur to keep reserves with RBI.
 - Operating costs incurred by the banks.
 - Tenor premium which is the higher interest that can be charged for long-term loans.

Basis of charging MCLR

Marginal costs are charged based on the following factors as per the RBI guidelines:

- Interest rate offered on deposits including savings, term, and current and foreign currency deposits.
- Return on net worth.
- Borrowings meaning the repo rate, short term interest rate, and the long term interest rate.

The Marginal Cost of Funds will be based on these components. 92% of the MCLR is determined by the marginal cost of funds, deposit rate, and repo rate. The return on net worth will comprise 8%.

What kind of loans are linked to the MCLR?

1. Home loans
 2. Loans against property
 3. Corporate term loan
- The MCLR is relevant only to banks. So any loan with a floating interest rate sanctioned from a bank will be linked to the MCLR. Some banks have also linked their auto loans and educational loans.

Exemptions under MCLR

- MCLR is applicable to almost all loans **except fixed rate home loans, car loans and personal loans**.
- **Loans that fall under Government Schemes** where the banks are directed to charge a certain rate of interest are also exempt from MCLR.
- **MCLR is applicable only to banks**. So, loans that are taken from finance companies and houses will not fall under this system. The Non-Banking Financial companies include LIC Housing Finance, Dewan Housing (DHFL), HDFC, Indiabulls etc.

Note: A GST rate of 18% is applicable on banking services and products. This includes credit card payments, fund transfer, ATM transactions, processing fees on loans etc.

Difference between MCLR and Base Rate

Base Rate System	MCLR
The rates of interest for loans were determined by base rates.	Borrowers enjoy <u>Repo Rate</u> benefits through the Reserve Bank of India's MCLR system.
The calculation for the base rate depends on certain factors like the rate of bank deposits, earnings, bank's operating costs, etc.	MCLR relies on certain factors like Cash Reserve Ratio (CRR), the marginal cost of funds, a premium on loan tenor, operating costs, etc.
REPO rates set by the Reserve Bank of India (RBI) were not mandatory. Banks did not always comply.	For the MCLR system, the REPO rate changes are compulsory.
Banks could choose to change the base rate quarterly at their discretion.	The MCLR rates vary for varied loan tenors.
There was an absence of transparency and accountability on the financial institutions' part.	There is increased transparency and accountability.

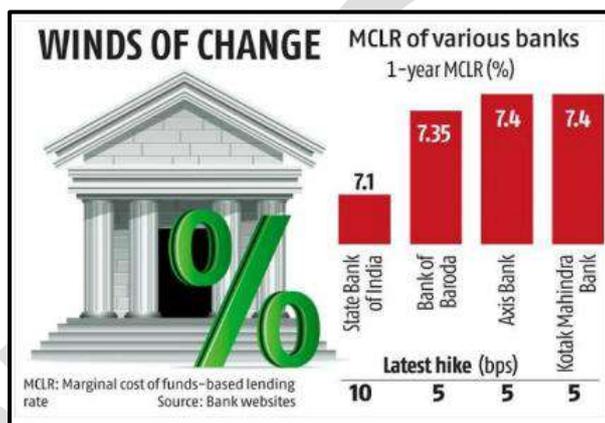
MCLR is a better way to regulate bank lending rates because

- It facilitates the effective transmission and application of policy rates set by the Indian Reserve Bank.
- Financial regulation in India is harmonized thereby providing equity in the lending rates.
- It ensures that the benefits of the Indian Reserve Bank's interest rate cuts are available to borrowers.
- It leads to a reduction in the Equated Monthly Installments (EMIs) on any loan.

Base Rate	MCLR
Base Rate includes	MCLR includes
Average cost of funds	Marginal cost of funds
Minimum rate of return	Tenor Premium
Operating Ex-penses	Operating Ex-penses
Cost of CRR	Cost of CRR

How a hike in REPO rate affects MCLR rate?

- In the advent of a hike in the repo rate, it will also impact lenders' MCLR rate. Lenders will push up their MCLR rate that will translate to a spike in interest rates and EMIs. However, **this hike will be applicable only to floating interest rates and not fixed interest rates.**
- MCLR will lead to **an increase in loan EMI.** If the RBI increases the REPO interest rates the MCLR rates will rise, forcing financial institutions, banks included, to increase their lending rates.
- This may cause **increased rates of interest on loans and the EMIs that accompany the loans.**



STAGNATION OF MSMEs

GS-III ECONOMY

Context

- 72% of MSMEs stagnant since past 5 years: survey by industry body Consortium of Indian Associations.

Findings of the Survey

- 45 per cent of the respondents were of the view that there was no "ease of doing" that exists in starting or running or closing or in their living style.
- Only 21 per cent of the respondents stated that the government has supported MSMEs adequately during the Covid-19 pandemic.
- 87 per cent of the respondents felt the Union Budget was disappointing or a big let-down or had no comments.
- The MSME respondents, however, hailed measures announced in the Union Budget including payment compulsion in 45 days and refund of 95 per cent of performance guarantee for items supplied during the pandemic.
- Around 42 per cent respondents cited profit margin concerns as one of the main challenges for entrepreneurs.
- 70 per cent are worried about delayed payment receipts and 40 per cent on raw material price and availability.
- 52 per cent respondents found adherence to statutory compliances as tough.
- 62 per cent are worried about demand and order book position and 38 per cent have fear of manpower sourcing and employability skills in the youth.

MSME

- MSME stands for Micro, Small, and Medium Enterprises. It was introduced by the Government of **India in agreement with the MSMED (Micro, Small, and Medium Enterprises Development) Act of 2006.**
- As per this act, MSMEs are the **enterprises involved in the processing, production, and preservation of goods and commodities.**
- In 1961, with the merger of the Ministry of Small Scale Industries and the Ministry of Agro and Rural Industries; the Ministry of Micro, Small, and Medium Enterprises (M/o MSME) was formed.

Types of MSME

- According to the provisions of the MSMED (Micro, Small & Medium Enterprises Development) Act of 2006, MSMEs are classified into two classes i.e. **Manufacturing Enterprises and Service Enterprises. (Now merged under one entity)**

- The enterprises are categorized based on annual turnover and investment in equipment.

Importance

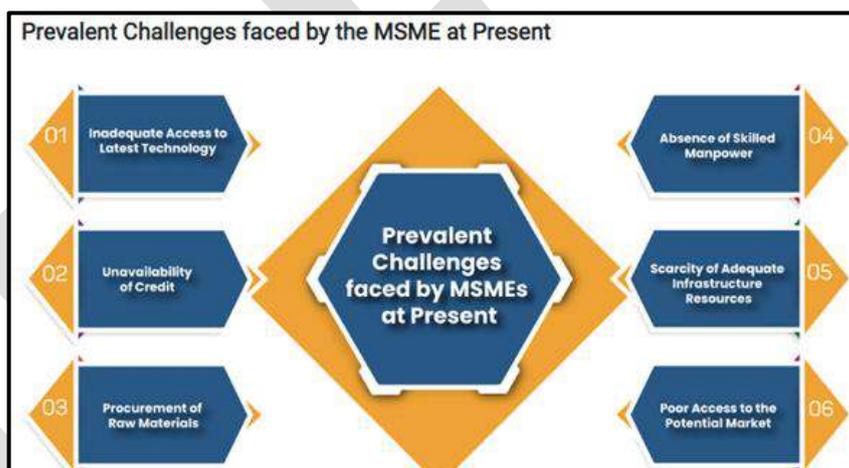
- MSME sector is the **backbone of the country's economy**, contributing **30 percent of India's GDP and 40 percent of exports.**
- They are also accountable for **one-third of India's manufacturing output.**
- It contributes about **11% of GDP from manufacturing and 24.63% of GDP from service activities.**
- According to 2018-19 Annual Report of Department of MSMEs, **there are 6.34 crore MSMEs in the country.** Around 51 per cent of these are situated in rural India. 99.5 per cent of all MSMEs fall in the micro category.
- These MSMEs **employ more than 11 crore people.** MSMEs are recognized for having the **highest rate of economic growth.**
- They account for **approximately 45% of India's total exports.**
- MSMEs have propelled India to new heights due to their low investment requirements, flexibility in operations, and ability to develop suitable native technology.
- MSMEs **promote inclusive growth by creating job opportunities,** especially for people from lower socioeconomic backgrounds in rural areas.

As per International Council for Small Business, formal and informal MSMEs male up to 90% of total firms, 70% of employment and 50% of world GDP.

Revised MSME Classification			
Composite Criteria : Investment And Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing & Services	Investment < Rs. 1 cr. and Turnover < Rs.5 cr.	Investment < Rs. 10 cr. and Turnover < Rs.50 cr.	Investment < Rs. 20 cr. and Turnover < Rs. 250 cr.

Challenges faced by MSMEs

- Out of some 58 million MSMEs in India, more than **40 percent lack access to formal sources of finance.**
- Procurement of raw materials is done within local territory** due to their financial limitations.
- MSMEs are either located in industrial estates or are operational in urban areas or have come up in an **unorganized manner** in rural areas of the country.
- MSMEs have struggled to have access to the market due to a number of reasons like **inadequate capital, inadequate use of marketing tools, etc.**
- Although India is having a big pool of human resources, the industry still faces a **deficit in manpower with the skills set required for manufacturing, marketing, etc.**
- Lack of managerial skills, knowledge, and **technology-intensive education** to run a competent MSME.



Impact due to COVID

- The MSME sector was among the **most pandemic afflicted sectors.**
- Thousands of MSMEs either shut down** or became sick after the government announced a nationwide strict lockdown in March 2020 in the wake of the Covid pandemic.
- To revive activity, the RBI and the government introduced several measures.

Measures taken to revive the sector

- Emergency Credit Line Guarantee Scheme (ECLGS).
- Scheme of **one-time restructuring of loans to MSMEs** without an asset classification downgrade.
- Permitted bank lending to NBFCs (other than MFIs) for on-lending to agriculture, MSMEs and housing to be **classified as priority sector lending (PSL).**
- Scheduled Commercial Banks were allowed to deduct credit disbursed to new MSME borrowers from their net demand and time liabilities (NDTL) for calculation of the cash reserve ratio.
- RBI permitted lending institutions to review the working capital sanctioned limits, based on a reassessment of the working capital cycle, margins, and so on, as a one-time measure.
- Union Budget 2021-2022 brought relief to the capital-starved MSMEs, with the **government infusion of Rs 15,700 crore for the sector.**

Could the measures revive the sector?

- Owing to the strong government support and the resilience shown by MSMEs, the sector has been able to take-off, scripting a revival story.
- However, amidst the **economy being in technical recession**, the sector still needs a much stronger policy thrust to maximize its potential.
- The sector finds itself grappling with long-standing challenges of **unavailability of working capital, complex regulatory and licensing mechanism, stringent loan disbursement policies, numerous compliances requirements, nascent digital adoption, and a complicated taxation system.**

Findings

- MSME bad loans had declined from Rs 1,47,260 crore (8.8 per cent of advances) in September 2019, **only to pick up again in 2021.**
- According to the RBI, bad loans of MSMEs **now account for 9.6 per cent of gross advances of Rs 17.33 lakh crore as against 8.2 per cent in September 2020.**
- Replying to an RTI, the National Credit Guarantee Trustee Company Ltd (NCGTC) – a company set up by the Union Ministry of Finance to manage and provide guarantees to these loans – has said that loans to 16.22 lakh accounts, or 16.4 per cent of the total 98.86 lakh accounts, disbursed under ECLG Relief package since May 2020 turned into Non-Performing Assets (NPA).
- The **restructuring schemes and packages didn't benefit thousands of units** which were already in default- Banks.
- This is because to be eligible under the ECLGS scheme, borrower accounts were to be less than or equal to 60 days.
- The single-biggest hurdle facing the MSMEs: **lack of financing.**
- Further, most of the **MSME funding comes from informal sources.** A key reason why banks dither from extending loans to MSMEs is the high ratio of bad loans. The other big issue plaguing the sector is the **delays in payments to MSMEs.**

Most MSMEs are unable to avail the measures of loan disbursement owing to the **amount of paperwork, documentation, non-existing credit history, and non-availability of adequate collateral, especially for a first-time borrower.** The **cost of compliance, covering all licenses, and complex taxation** take a huge toll on the enterprises. The challenges of running a **business amidst pandemic and slump in demand** add further complications to the stressed sector.

Way Ahead

- The five key aspects facilitates the MSME sector: **Access to credit, Access to market, Technology upgradation, Ease of doing business, Social security for employees.**
- In terms of access to capital, pending or delayed payments to MSMEs should be accelerated.
- **Close monitoring of payments to MSMEs through TReDS** should be done at a central level.

The government is already encouraging MSMEs to on-board TReDS platform, as it offers them an option to discount invoices and raise short-term credit from banks to support their delayed payment issue temporarily.

- **MSMEs should be nudged to go digital** and raise all invoices in TReDS to ease liquidity pressure on their working capital.
- **Need of the hour:** making credit and capital easily accessible to MSMEs. The **lending ecosystem therefore needs to be eased and strengthened** by leveraging digital technologies for a seamless lending process and for assessing credit risk of potential borrowers.
- **Other Policy Changes required:**
 1. Incentivising digital adoption within the sector
 2. Promoting digital literacy
 3. Addressing skilling challenges
 4. Reducing GST
 5. Easing various licensing and compliance regulations
 6. Making interventions that would guide the sector to wider markets, through e-commerce.

Final Thought

- The MSME sector is next to agriculture in terms of providing employment.
- In the making of Atmanirbhar Bharat, its role is instrumental.
- Unleashing a new wave of bolder and well-directed reforms would thrust the industry to soar higher.
- It is imperative that the government bolsters its reforms and introduces some game changing measures for the sector.

Context

- To expedite the monetisation plans for government-owned land assets across the country, the **National Land Monetisation Corporation (NLMC)** has decided to rope in international property consultancy firms to help strategise and implement transactions from start to finish.

NLMC

- NLMC is a **wholly owned central government entity**.
- The special purpose vehicle **was set up by the Department of Public Enterprise and the Ministry of Finance**.
- NLMC is a lean organization with minimal full-time staff, hired directly from the market on contract basis.
- Flexibility is provided to the Board of NLMC to hire, pay and retain experienced professionals from the private sector.
- NLMC's board will include senior central government officers and eminent experts, with the chairman and non-government directors appointed via a merit-based selection process.

Surplus Non Core Assets:

- At present, CPSEs hold considerable surplus, unused and under-used non-core assets in the nature of land and buildings.
- For CPSEs undergoing strategic disinvestment or closure, monetisation of these surplus land and non-core assets is important to unlock their value.

Functions of NLMC:

- The NLMC undertakes monetisation of "surplus land" and "building assets" of Central public sector enterprises (CPSEs) as well as government agencies through a direct sale.
- NLMC helps carry out monetisation of assets belonging to public sector firms that have closed or are lined up for a strategic sale.
- Apart from this, NLMC advises other government entities to identify their non-core surplus assets and 'generate maximum value' by monetising them in a professional and efficient manner.
- NLMC undertakes surplus land asset monetisation as an agency function.

As mentioned earlier National Land Monetisation Corporation (NLMC) is in pursuance of the ambitious National Monetisation Pipeline.

National Monetisation Pipeline

- "National Monetisation Pipeline" developed by NITI Aayog was launched under Union Budget 2021-22 based on the mandate for 'Asset Monetisation'.
- NMP estimates aggregate monetisation potential of Rs 6 lakh crores through core assets of the central government, over a four-year period, **from FY 2022 to FY 2025**.
- The top 3 sectors (by estimated value) are Roads (27%) followed by railways (25%) and power (15%).
- NMP has been planned to be co-terminus with the remaining four-year period of the National Infrastructure Pipeline.**

Asset monetisation: The concept

- Asset monetisation, also commonly referred to as asset or capital recycling, is globally a widely used business practice.
- This consists of limited period transfer of performing assets to unlock "idle" capital and reinvesting it in other assets or projects that deliver improved or additional benefits.
- Governments and public sector organisations, which own and operate such assets can adopt this concept.
- This will help in meeting the ever-increasing needs of the population for improved quality of public infrastructure and service.
- Asset monetization can be undertaken through a range of instruments/ tools broadly categorised into two approaches:
- Direct Contractual Approach such as PPP Concessions, and
- Structured Financing models such as Infrastructure Investment Trust (InvIT), Real Estate Investment Trust (REIT).

Why is it important?

- Government finances are stretched, especially post the massive economic jolt dealt by Covid.
- Public welfare measures require funding. With the fiscal deficit already stretched to its limits, the government needs to come up with alternative ways to generate revenue.
- NMP helps realize value from idle assets, without the Centre transferring ownership of public sector assets to private parties for good.
- Primary ownership of assets under NMP will continue to be with the government. Funds from NMP will be used for infrastructure creation under the National Infrastructure Pipeline.
- Private entities will use the asset for a said tenure, at the end of which they will be handed back to the public authority.

Context

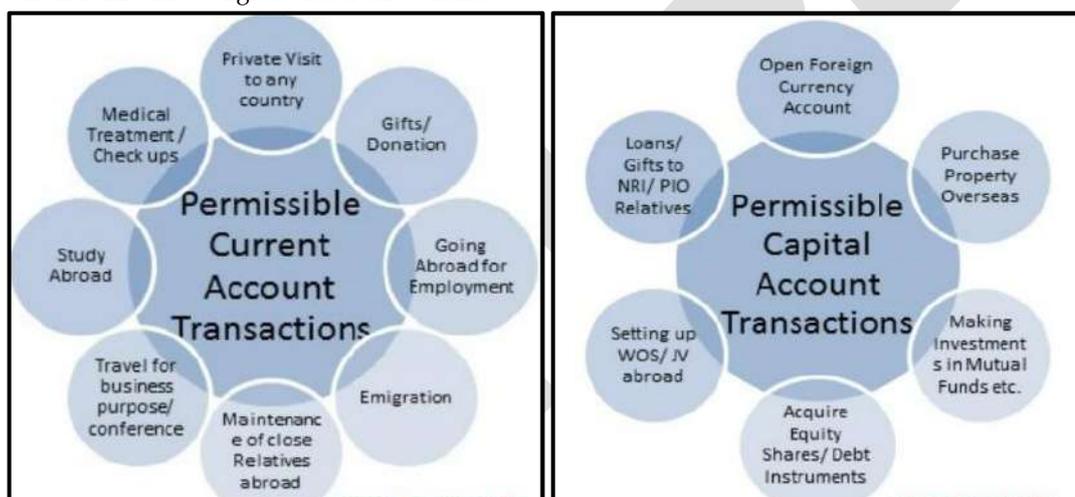
- Funds sent abroad by students under the Reserve Bank of India's Liberalised Remittance Scheme (LRS) declined by over 42 per cent to \$2.57 billion during the nine months ended December 2022 of the current fiscal (2022-23) as against \$ 4.4 billion in the same period of 2021.

About

- Liberalised Remittance Scheme (LRS) is a **measure to facilitate Resident Individuals (including minors) to remit funds outside India up to USD 250,000** or its equivalent in any freely convertible foreign currency per financial year (April-March) for any permissible capital or current account transaction or a combination of both.
- The scheme was introduced by Reserve Bank of India on 4th February, 2004.

Features

- The Scheme is **not applicable to Corporates, Partnership firms, HUF, Trusts etc.**
- Where the remittance is made by the minor, LRS declaration form must be countersigned by Minor's natural guardian.
- Remittances under the scheme **can be consolidated in case of family members, provided each family member complies with its terms and conditions.** But **clubbing is not permitted with other family members in case of Capital Account Transactions** if they are not the co-owners or co-partners of that acquired capital asset.
- There can be multiple remittances under LRS but the cumulative amount of all the transactions should be within the limit prescribed under LRS i.e. USD 250,000.
- Individuals can open and maintain foreign currency accounts with a bank outside India for putting through all transactions from remittances eligible under this scheme.



Prerequisites for Capital Account Transactions

- Applicants who wish to make remittances for Capital Account Transactions are required to maintain bank account with the bank for a minimum period of one year prior to the remittance.

Prohibited Transactions

- Remittance facility under the scheme is prohibited for the following transactions:
 - Capital Account Transactions** - Remittances directly or indirectly to countries identified by the Financial Action Task Force (FATF) as "non cooperative countries or territories" from time to time.
 - Current Account Transactions** - Remittance for any purpose specifically prohibited under Schedule I (for purchase of lottery tickets/ sweep stakes, banned/ proscribed magazines etc) or any item restricted under schedule II of Foreign Exchange Management (Current Account Transactions) Rules, 2000 are not allowed
 - Others:**
 - Remittance from India for margins or margin calls to overseas exchanges / overseas counterparty.
 - Remittances for purchase of FCCBs issued by Indian companies in the overseas secondary market.
 - Remittance for trading in foreign exchange abroad.
 - Remittances directly or indirectly to those individuals and entities identified as posing significant risk of committing acts of terrorism as advised separately by the Reserve Bank to the banks.

Context

- A push by Group of 20 (G20) president India to regulate cryptocurrencies gained support from both the International Monetary Fund and the United States.
- India has said it wants a collective global effort to deal with problems posed by cryptocurrencies such as bitcoin.

Reasons why Crypto currencies need to be regulated

Prevent market manipulation and protect investors

- Market manipulation and price volatility are common in cryptocurrencies. Take, for example, Bitcoin, the world's oldest and most popular cryptocurrency, which rose to all-time highs since the beginning of 2021, before plummeting and losing a huge amount of its value. So, the lack of authorised information on these digital assets and the technological complexities associated with them makes it imperative to put regulations in place for safeguarding investors.

Allow select cryptocurrencies

- Thousands of cryptocurrencies exist around the world. Most investors, however, are only familiar with a few of those, such as Bitcoin, Ether, Ripple, and Dogecoin among others. They hardly have any knowledge about the thousands of other virtual assets.
- So, to protect customers, a regulatory authority clearing cryptocurrency is required, which can disclose all information about the performance of the digital assets, their risks, and potential.

Understanding risks associated with technology

- Technology is advancing at a breakneck pace. This carries a significant danger, as such changes have the potential to render technology, including blockchain, outdated in the future. Given the rapid rate of technological change, information infrastructure and professional financial advisors skilled in cryptocurrency are required. That way, investors can understand the technological risks of cryptocurrencies and make informed decisions.

Online fraud and cyber security risks

- Investing in cryptocurrencies comes with another risk — online fraud. Hacking is a major threat worldwide, and cyber-attacks have become common. One cyber-attack could result in losses for investors who have put their savings in cryptocurrencies. Through regulations, the authorities can implement measures to help cryptocurrency investors protect their assets. Also, investors can address concerns or reclaim their investments in case they lose them.

Money laundering

- Any unregulated system has the ability to fund criminal acts. As a result, a client due diligence process akin to that of a bank is required. This can help in keeping track of investors' real identities and verifying their locations when they are buying or selling cryptocurrencies. Any infringement of such norms should be met with severe sanctions.

Current state of play in regulation

- According to the World Economic Forum's Global Future Council on Cryptocurrencies, there has been **no internationally coordinated regulation of cryptocurrencies** — though international bodies have been working on assessing risks and appropriate policy responses to the rise of cryptos.
- While some jurisdictions, such as India, have amended existing laws, others, like Liechtenstein, have proposed bespoke models. Another approach, seemingly favoured by the European Union and UAE, proposes setting up entirely new regulators to deal with the industry in a comprehensive manner.

International Examples

U.S.A

- Draft 'Cryptocurrency Act of 2020' defines cryptocurrencies into categories namely, crypto-commodities, crypto-securities and crypto-currencies. This is done in order to assign the appropriate federal crypto regulator as a sole government agency with authority to regulate:
 - Crypto-commodities (Agency-CTFC)
 - Crypto-securities (Agency-SEC)
 - Crypto-currencies (Agency-FinCEN)
- Each of the above federal crypto regulators is required to make available to the public a current list of all federal licenses, certifications, or registrations required to create or trade in all digital assets. The Act also mandates to establish rules similar to financial institutions on the ability to trace cryptocurrency transactions.

Way Ahead

- A blanket ban on cryptocurrencies isn't desirable as they exist all over the world.

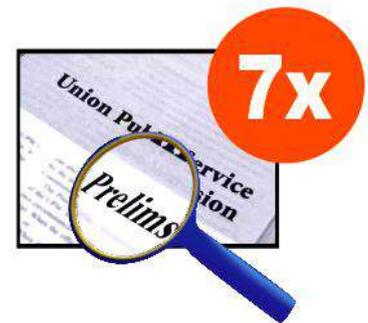
- Regulating cryptocurrencies **could be a healthy development for the industry**, at least where everyday investors are concerned. Greater regulatory guidance, if well targeted, could help reduce speculation among crypto assets.
- In India, the Government **can bring the crypto exchanges and other providers under the Prevention of Money Laundering Act**, under the reporting entities in which case they will be treated same as banks, stock exchanges, intermediaries etc.
- As they will **follow all KYC measures** and for this an amendment is not required and it can be done by a government notification which is the lowest hanging fruit
- For a truly global coordinated approach, countries and international organizations must work together, leveraging best practices and learnings from each other.
- Apart from risk assessments and establishing common standards, there is also a pressing need to leverage the technology itself to develop fit for purpose and inclusive solutions, through public-private collaboration.



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Context

- The Union Budget has announced Rs 2,516 crore for computerisation of 63,000 Primary Agricultural Credit Societies (PACS) over the next five years.

What are Primary Agricultural Credit Societies (PACS)?

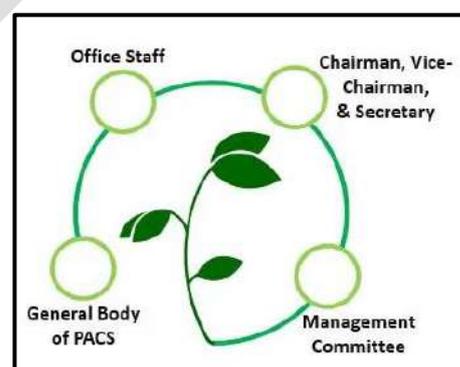
- PACS are the **ground-level cooperative credit institutions that provide short-term, and medium-term agricultural loans to the farmers for** the various agricultural and farming activities. It **works at the grassroots gram Panchayat and village level.**
- The **first Primary agricultural Credit Society (PACS)** was formed in the year **1904**. Since then, these societies have been playing a significant role in providing short-term and medium-term credit to the farmers.

Working:

- PACS are **village-level cooperative credit societies that** serve as the last link in a three-tier cooperative credit structure **headed by the State Cooperative Banks (SCB)** at the state level.
- Credit from the SCBs is transferred to the district central cooperative banks, or **DCCBs, that operate at the district level.** The DCCBs work with PACS, which deals directly with farmers.
- Since these are cooperative bodies, **individual farmers are members of the PACS**, and office-bearers are elected from within them. A **village can have multiple PACS.**
- PACS are **involved in short-term lending** – or what is known as crop loans. At the start of the cropping cycle, farmers avail credit to finance their requirement of seeds, fertilizers, etc.
- Banks **extend this credit at 7 percent interest**, of which **3 percent is subsidized by the Centre, and 2 percent by the state government. Effectively**, farmers avail the crop loans at 2 percent interest only.

Organizational Structure

- General Body of PACS:** Exercise the control over board as well as management.
- Management Committee:** Elected by the general body to perform the work as prescribed by the society's rules, acts, and by-laws.
- Chairman, Vice-Chairman, and Secretary:** Work for the benefit of the members by performing their roles and duties as assigned to them.
- Office Staff:** Responsible for performing day-to-day work.



Functions of PACS in a nutshell

- To provide **short and medium-term purpose loans to** its members.
- Borrowing an** adequate amount of funds from central financial agencies.
- Maintaining the **supply of the hire light machinery for** the agricultural purpose.
- Promotes **savings habits among** its members.
- To make the arrangement of **supplying of the agricultural inputs**. Example -seeds, fertilizers, insecticides, kerosene etc.
- It helps its members by providing **marketing facilities that** could enhance the sale of their agricultural products in the market at the proper prices.

Funds of Primary Agriculture Credit Societies (PACS)

- A Primary Agriculture Credit Societies (PACS) can raise funds for carrying out its activities by following means:
 - By way of share capital to be raised from members and indirect govt.
 - Share capital contribution through the apex co-operative bank and the district central co-operative bank.
 - Deposits from members
 - Loans
 - Donations
 - Entrance fee

Major Deficiencies of the PACS

Low borrowing membership in the PACS

- In the **judgement of the Banking Commission**, the following reasons have been cited as responsible for the low borrowing membership:
 - Defaults of members in loan repayment and inability of societies to raise resources,
 - Inability of the members to provide the prescribed security
 - Lack of up-to-date land records or inalienable rights to land or inability to produce sureties,

- (iv) Ineligibility of certain purposes for loans
- (v) Inadequacy of credit limits prescribed, and
- (vi) Onerous conditions prescribed such as share capital contribution at 10 or 20 per cent of loans outstanding and compulsory thrift deposits

Inadequate Resources

- The resources of the PACS are much too inadequate in relation to the short-and medium-term credit needs of the rural economy.

Over-dues

- **According to the Banking Commission, in most states, over-dues are due to:**
 - (a) Indifferent management or mismanagement of societies;
 - (b) Unsound lending policies leading to over financing, or financing unrelated to actual needs, diversion of loans for other purposes;
 - (c) Vested interests and group politics in societies and wilful defaults;
 - (d) Lack of adequate supervision over the use of loans by the borrowers and poor recovery effort;
 - (e) Lack of adequate control of banks (CCBs) over the primary societies;
 - (f) Lack of appropriate link between credit and marketing institutions;
 - (g) Failure to take prompt action against wilful defaulters; and
 - (h) Uncertain agricultural prices.

Inadequate and Restricted Credit

- First, the PACS provide credit to only a small proportion of the total rural population.
- Second, the societies do not provide full credit even for all productive agricultural activities.
- The credit given is confined mainly to crop finance (seasonal agricultural operations) and medium-term loans for identifiable purposes such as the digging of wells, installation of pump sets, etc.

Recent call on computerization of all PACs

- Cabinet has approved the computerization of all the PACS throughout the Country and bring them on a common platform at **National level and have a Common Accounting System (CAS)** for their day-to-day business.
- The aim is **increasing efficiency of PACS, bringing transparency and accountability in** their operations; facilitating PACS to diversify their business and undertake multiple activities/ services.

Importance of Computerization

- Computerization of PACS, will serve the **purpose of financial inclusion**.
- It will lead to **strengthening service delivery to farmers especially Small & Marginal Farmers (SMFs)** will also will become nodal service delivery point for various services and provision of inputs like fertilizers, seeds etc.
- The project **will help in improving the outreach of the PACS as outlets for banking activities as well as non-Banking activities** apart from improving digitalization in rural areas.
- The DCCBs can then enroll themselves as one of the important **options for taking up various government schemes**(where credit and subsidy is involved) which can be implemented through PACS.
- It will ensure **speedy disposal of loans, lower transition cost, faster audit and reduction in imbalances in payments and accounting** with State. Cooperative Banks and District Central Cooperative Banks.

The computerization of PACS has already been taken up by a few states, including Maharashtra.

Way Ahead

- PACS **need to be developed as a One Stop Shop for** meeting all the needs of its members.
- Provide much-needed **forward and backward linkages**.
- Through **Micro-ATMs**, PACS members who stay far away from the PACS also can have access to banking services.
- PACS as BCs can undertake various activities under financial inclusion and Aadhaar linkage of bank account.
- **Potential for expansion of business** through convergence with other stakeholders like Farmers Producer Organizations.
- PACS can be provided **direct exposure to best practices in** various facets of agri-business through partnerships with leading Agricultural Universities / Institutes.

Currently, the reorganization work is running along the following lines

- a) The PACS are being reorganized so that every reorganized **PACS covers a gross cropped area of 2000 hectares within a radius of 10 kms;**
- b) Non-viable units are either **amalgamated with reorganized societies or liquidated**.
- c) The setting up of new types of societies called **Farmers Service Societies (FSS) and Large-Sized Multi-Purpose Societies (LAMPS) for tribal and hill areas**.

Conclusion

- The resource-mobilization 'Capacity of the PACS will improve substantially if, through reorganization and related measures, they are converted into strong and viable units.' Then, they should be able to attract both more deposits and more loans from higher financing agencies.
- What is required is to improve the effective coverage of societies by providing credit to increasing proportion of rural households, especially of weaker sections, to widen the range of eligible purposes for which credit is given, and then to meet an approved borrower's entire credit needs. To realize this objective in practice, societies must be made organizationally as well as financially strong along the lines already suggested above.

PM KUSUM SCHEME

GS-III AGRICULTURE

Context

- The deadline for PM KUSUM Scheme by the Ministry of New and Renewable Energy to install 30,000 MW solar power capacity in rural India by 2022, has now been pushed to March 2026.

What Is the PM KUSUM Scheme?

- Pradhan Mantri Kisan Urja Suraksha Evam UtthaanMahabhiyan Yojana is a scheme to subsidize farmers to install solar irrigation pumps for cultivation. It was launched by the Government of India in 2019.
- Each farmer will receive a 60% subsidy to set up tube wells and pump sets. They will also get 30% of the total cost as a loan from the Government.

Objectives of KUSUM Scheme

- The primary objective of the PM KUSUM Scheme is to make cutting-edge technology available to our farmers and provide sources for de-dieselised irrigation to the agricultural sector. It aims to increase the income of farmers.

Features or Components of KUSUM Scheme

KUSUM Scheme comprises 3 components which have different features:

- **Component A:** Install a total of 10GV grid-connected stilt-mounted decentralised solar plants and other renewable energy-based power plants. Each plant is sized up to 500KW to 2MV.
- **Component B:** Install stand-alone solar pumps of up to 7.5HP individual capacity and worth 17.50 lakh.
- **Component C:** Provide financial support to solaris 10 lakh grid-connected agricultural pumps of 7.5HP of capacity each.

Who Is Eligible for the KUSUM Scheme?

The eligible categories for KUSUM Scheme are:

- An individual farmer.
- A group of farmers.
- FPO or Farmer producer organisation.
- Panchayat
- Co-operatives.
- Water User Associations.

What are the benefits of the KUSUM Scheme?

This scheme provides the following benefits:

Power Generation

- The Indian Government initiated the construction of solar plants that can generate an aggregate of 30,000 MW of power.

Subsidy and Loan

- The Government will subsidise 60% and provide a loan of 30% of the total cost. This leads our farmers to bear only 10% of the total cost to install solar plants and solar pumps.
- Government will provide subsidies to install state-of-the-art solar pumps. They improve irrigation as they hold 720MV of capacity.

Provision to sell extra power

- This scheme offers our farmers an opportunity of selling the extra power generated by the plants directly to our Government. This ensures the scope of increase in the income of our farmers.

Stable source of income

- A landholder in a rural area can get a stable source of income by utilizing barren and uncultivated land for solar plant implementation for 25 years.

No hindrance in cultivation

- The solar plants will be set up above a minimum height in cultivable lands. This way, our farmers will be able to continue with cultivation after installing the plants.

Eco-friendly Cultivation

- KUSUM Scheme ensures increasing use of renewable energy helps to mitigate pollution in farms and opens a gateway to eco-friendly cultivation.

Context

- During her Budget speech, Finance Minister announced the Government’s move to focus on Lab-Grown Diamonds.

What are Lab-Grown Diamonds?

- Lab-grown diamonds are diamonds that are produced using specific technology which mimics the geological processes that grow natural diamonds. The result is a man-made diamond that is chemically, physically, and optically the same as those grown beneath the Earth's surface.

Lab Grown vs Natural Diamond

Composition and look

- Lab-grown diamonds are comprised of carbon, the same material natural diamonds are comprised of. These diamonds are chemically and optically identical to natural diamonds, so they offer the same shine, sparkle, and brilliance of a naturally mined diamond.

Price

- Lab-grown diamonds are way more affordable than natural diamonds. Natural diamonds are limited in nature because it takes billions of years to create them, while with lab-grown diamonds there is no cap on supply. There are no extra expenses spent on mining and transportation.

Impact on the environment

- As with the mining of any natural resource, diamond mining has a significant impact on the environment. However, lab-created diamonds are inherently and significantly less detrimental to the environment as it takes considerably less energy to grow a diamond in a lab than it does to dig it out of the ground. Lab-grown diamonds are the more sustainable option.

Types of Lab-Grown Diamonds

- There are two types of lab-grown diamonds -- CVD and HPHT. India particularly specializes and leads in the chemical vapour decomposition (CVD) technology that is certified as the purest type of diamonds.

HPHT Lab Grown Diamonds

- The process to create an HPHT diamond (High-Pressure High Temperature) was initially developed in the 1950s for industrial purposes.
- HPHT process can also be used to treat mined diamonds to enhance their overall colour and clarity. The process was designed to mimic the pressure and temperatures found within the earth where natural diamond crystals are formed over millions of years.
- The HPHT process manages to recreate this environment but allows a diamond to form in a matter of weeks compared to the roughly 150 million years it took to form the world’s natural diamonds.

CVD diamonds

- A CVD diamond (Chemical Vapour Deposition) is a recently invented technique in which diamonds are grown from a hydrocarbon gas mixture, similar to how diamonds form in interstellar gas clouds. The CVD process was created in the 1980s and is a less costly method of creating diamonds out of the two as it requires much less energy.
- In this, a thin slice of diamond seed is placed in a sealed chamber and heated to around 800 degrees Celsius, and then the chamber is filled with other carbon-rich gases such as methane. The gases are ionized into plasma using microwaves, lasers, and other techniques.
- The ionization breaks down the gases and allows the carbon to merge with the diamond seed, growing the diamond up layer by layer.

Lab-grown Diamonds and India

- The fluorescence of lab-grown markets of India started in the mid-2000s and is growing exponentially in the 2020s.
- Like natural diamonds, India has proved its leadership role in the cutting and polishing of lab-grown diamonds. India’s exports of polished lab-grown diamonds were USD 274 million, USD 473 million, USD 637 million, and 1293 million during 2018-19, 2019-20, 2020-21, and 2020-21 respectively. Annual growth during the same periods was 72%, 35%, and 103%.
- In 2021, India’s LGD market accounted for Rs 2,200 crore, and its contribution to the global lab-grown diamond production stands at 15%.
- Number of Lab Diamond Growers has gone up tremendously in the last 2-3 years due to a recession in the natural diamond



industry.

- India's synthetic diamond exports are estimated to be anywhere **around 50-60%**.
- Nine out of 10 diamonds in the world are estimated to be polished in Surat. Currently, 25-30 percent of diamond polishing units in Surat service lab-grown diamonds, with 15 percent of units dealing only in the lab-created commodity.

Government support

- One of the incentives that the government had brought in is that it has permitted **100 percent Foreign Direct Investment (FDI) in the sector under the automatic route**. Further, according to Budget 2019-20, the GST rate has been reduced **from 18 percent to 5 percent**.

Wrapping Up

- LGD market is growing exponentially as they are **greener and environmentally sustainable**. They are also **50-60% cheaper than mined** India has the potential to become a global hub of lab-grown diamond production and processing.
- The recent industry update by Gem & Jewellery Export Promotion Council reported that **India's polished lab-grown diamond exports amounted to \$1.05 billion from April 2021 to January 2022**. It recorded **stellar growth of 113 percent and is projected to grow further**.
- Industry experts are of a consensus that LGD's business **has the capacity to touch the mark of Rs 40,000 crore in the next five years**.
- However, keeping in mind the future potential, **there is a need to maintain technological self-reliance in the production of machinery** and a leadership position in the production of lab-grown diamonds.
- Given India's expertise in diamond polishing, it is imperative that **India positions itself firmly in the lab-grown diamond sector** too since the process of polishing is similar. **The projected employment creation could be to the tune of 25 lakh by the year 2025**.

SPACE DEBRIS

GS-III SCIENCE & TECHNOLOGY

Context

- India has **111 payloads and 105 space debris** objects orbiting the earth as tracked and catalogued by USSPACECOM.
- All orbiting debris will have impact on the sustainability of outer space and future missions.

Space Debris

- Space junk is any piece of machinery or debris left by humans in space – principally in Earth orbit.
- These include dead satellites, fragments of rocket bodies and spacecraft etc.

Concerns

- Currently, an estimated 20,000 objects—including satellites and space debris—are crowding low-Earth orbit. It can be a **hazard to active satellites and spacecraft**. At orbital velocities, **even the tiniest pieces of debris can disable an operational satellite**.
- Potential **collision threat to the space station**. Earth's **orbit could even become impassable if the risk of collision grows too high**.
- It could **hinder our ability to use weather satellites, and hence to monitor weather changes**.



Kessler syndrome

- This is an idea proposed by NASA scientist Donald Kessler in 1978. It says if there is too much space junk in orbit, **it could result in a chain reaction** where more and more objects will collide and create new space junk in the process, to the point where Earth's orbit became unusable – **a Domino Effect**. 12 fragmentation events have already taken place every year for the past two decades.

Mitigation Measures

- Developing Reusable spacecrafts.
- Designing and building spacecraft that can better withstand the harsh environment of space without disintegrating.
- Releasing stored energy and fuel so that defunct spacecraft don't explode.
- Once a spacecraft's mission is over, moving it to a safer orbit. That is - A "graveyard orbit" high above the low-Earth space.

- Bringing it down using laser into Earth's atmosphere to burn up on re-entry as a neat disposal system.
- Capture debris or de-orbit old satellites.
- Charge operators “orbital-use fees” for every satellite put into orbit.
- Careful choice of orbits.
- Performing ‘collision avoidance manoeuvres’.
- Orbital lifetime reduction (accelerating the natural decay of space objects to reduce the time that they remain in orbit).
- International cooperation in the debris mitigation measures.
- Contributing to the efforts of the **Inter-Agency Space Debris Coordination Committee (IADC)** and **United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS)**.

Initiatives taken to tackle the problem

Inter-Agency Space Debris Coordination Committee

- IADC is an inter-governmental forum whose aim is to co-ordinate efforts to deal with debris in orbit around the Earth founded in 1993.

NORAD

- North American Aerospace Defense Command, is an initiative of the U.S. and Canada that shares selective debris data with many countries.

ClearSpace-1 Mission

- In this a "chaser" with its four robotic arms will grab the leftover of 2013 craft known as VESPA (Vega Secondary Payload Adapter) and drag it down to Earth's atmosphere where both will burn up. To be launched in 2025.

ELSA-d, Mission

- ELSA-d (End-of-Life Services b), will test technologies to capture an object in low-Earth orbit and move it to a lower altitude, where it will eventually burn up harmlessly in Earth's atmosphere.

Starship

- Space X Starship – the passenger carrying spacecraft once ready can collect and de-orbit space junk apart as well.

NEO-01'

- China launched a low Earth orbit robot prototype called ‘NEO-01’.
- It can scoop up space debris left behind by other spacecraft with a big net.
- NEO-01, was launched on Long March 6 rocket.
- NEO-01 will use a net to capture space debris and then burn it with its electric propulsion system.
- The NEO-01, will also peer into deep space to observe small celestial bodies.
- The 30kg robot will pave the way for future technologies capable of mining on asteroids.

Space Liability Convention of 1972

- Space Liability Convention of 1972 defines responsibility in case a space object causes harm. The treaty says that “a launching State shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the earth or to aircraft, and liable for damage due to its faults in space. The Convention also provides for procedures for the settlement of claims for damages.”
- However, there is no law against space junk crashing back to earth.

ISRO's Efforts

'Project NETRA'

- It is an early warning system in space to detect debris and other hazards to Indian satellites.

Other

Passivation of the Cryogenic Upper Stage

- ISRO's GSLV employs passivation of the Cryogenic Upper Stage at the end of its useful mission.

Re-orbiting to a higher graveyard orbit.

- ISRO's communication satellites are designed with adequate propellant margins for re-orbiting at the end of their useful life to a higher graveyard orbit. Successful example: INSAT-2C.

Collision Avoidance Manoeuvres

- ISRO) has carried out 21 collision avoidance manoeuvres of Indian Operational Space assets in 2022 to avoid collision threats from other space objects.

ISRO System for Safe and Sustainable Operations Management (IS4OM)

- In 2022, ISRO System for Safe and Sustainable Operations Management (IS4OM) has been established towards more focused efforts to continually monitor the objects posing collision threats, improve the prediction of the evolution of space debris environment, and concerted activities to mitigate the risk posed by space debris.

Spacecraft Shielding-Related Studies and Development

- To deal with the threat of very small debris objects which are too small to be tracked, spacecraft needs to be shielded against the

impact risk. Spacecraft shielding-related studies and development are under progress in ISRO to improve the protection for the upcoming missions

Closing Thoughts

- Such multilateral efforts, alongside technological innovation, can ensure that the great space cleanup is well underway.

EXTENDED REALITY (XR) START-UP

GS-III SCIENCE & TECHNOLOGY

Context

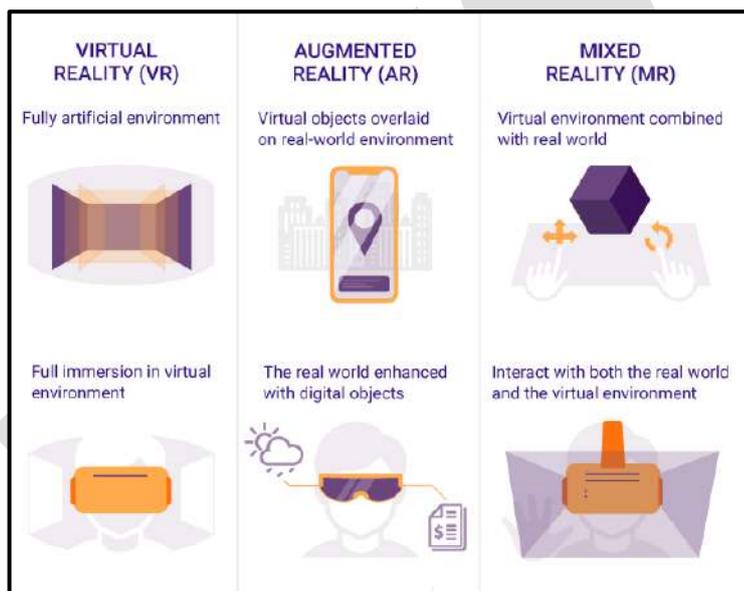
- Ministry of Electronics and Information Technology and Meta have announced the list of **120 startups and innovators for the XR Startup Programme in New Delhi**.

Extended Reality (XR)

- Extended Reality (XR) is an **umbrella term encapsulating Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR), and everything in between**. Although AR and VR offer a wide range of revolutionary experiences, the same underlying technologies are powering XR.

Virtual reality (VR)

- Virtual reality (VR)** is a simulated experience that employs pose tracking and 3D near-eye displays to give the user an **immersive feel of a virtual world**.
- Applications of virtual reality include entertainment (particularly video games), education (such as medical or military training), and business (virtual meetings).
- Put simply; virtual reality is a type of computer technology that makes you feel like you are somewhere else. Special software produces images, sounds, and other sensations to create this other place. Users, therefore, feel like they are part of this other place. However, the whole thing is a simulation. People interact in those environments using, for example, VR goggles or other mobile devices.



Augmented Reality (AR)

- Augmented reality (AR) is an **interactive experience that combines the Real World and Computer-Generated Content**.
- AR can be defined as a system that incorporates three basic features: **a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects**.
- This experience is seamlessly interwoven with the physical world such that it is perceived as an immersive aspect of the real environment.
- For example, consumers can use AR to try on different pairs of sunglasses or see how a sofa would fit within their home.
- In this way, augmented reality alters one's ongoing perception of a real-world environment whereas virtual reality completely replaces the user's real-world environment with a simulated one.

Mixed reality (MR)

- Mixed reality (MR)** is a term used to describe the **merging of a real-world environment and a computer-generated one**. Physical and virtual objects may co-exist in mixed reality environments and interact in real time.

Details of the XR Start-Up Program

- The Programme includes an Accelerator and a Grand Challenge, **aiming towards boosting the emerging Tech ecosystem in the country**.
- The programme **will discover, nurture, and accelerate Extended Reality (XR) Technology startups and innovators across the country**.
- It is supporting 40 early-stage start-ups working in XR technologies **with a grant of 20 lakh rupees each**. The innovators will also be **provided support to upscale from the Research and Development phase** to developing workable products and services.

MUONS

GS-III SCIENCE & TECHNOLOGY

In News

- Researchers are examining the fortress wall of Xi'an, an ancient city in China, by using tiny outer space particles that can penetrate hundreds of metres of stone surfaces. Known as muons, these particles have helped them find small density anomalies, which are potential safety hazards, inside the wall.

What are Muons?

- Muons are **subatomic particles raining from space**. They are created when the particles in Earth's atmosphere collide with cosmic rays – clusters of high-energy particles that move through space at just below the speed of light.
- About 10,000 muons reach every square metre of the Earth's surface a minute.

Fast Facts

- These particles resemble electrons but are **207 times as massive**. Therefore, they are sometimes called "fat electrons".
- Because muons are so heavy, they **can travel through hundreds of metres of rock or other matter before getting absorbed or decaying into electrons and neutrinos**. In comparison, electrons can penetrate through only a few centimetres.
- Muons are **highly unstable and exist for just 2.2 microseconds**.

Applications

Muon Tomography or Muography

- Muography is conceptually similar to X-ray but **capable of scanning much larger and wider structures**, owing to the penetration power of muons.
- As these high-energy particles are naturally produced and ubiquitous, all one needs to do is place a muon detector underneath, within or near the object of interest. The detector then tracks the number of muons going through the object from different directions, to form a three-dimensional image.

Muons and Archaeology

- The technique was **first used in the late 1960s**, when Nobel Laureate and US experimental physicist Luis Alvarez joined hands with Egyptologists to search for hidden chambers in the Pyramid of Khafre, Giza. Nothing was found at the time.
- However, in 2017, modern archaeologists repeated the experiment with more sophisticated and advanced muon detectors and stumbled upon a major finding. Scientists of the latest study also used a muon detector, **called CORMIS (Cosmic Ray Muon Imaging System), to examine the wall of Xi'an city**. Results were successful.

Uses of Muography beyond Archaeology

- Apart from archaeology, muography has found use in **customs security, internal imaging of volcanoes and others**.
- Around 2015, scientists used the technique to look inside the Fukushima nuclear reactors after the 2011 earthquake and tsunami in Japan. As the site was highly radioactive, they put the two muon detectors in 10 centimetres thick boxes to protect them from radiation and then carried out the scanning.
- Muography is also being used by researchers to analyse **Mount Vesuvius, a volcano in Italy**.
- With the help of this technique, researchers are trying to understand the finer details of the volcano's internal structure. The data will play a crucial role in predicting what hazards to expect in an eventual eruption.

SSLV

GS-III SCIENCE & TECHNOLOGY

Context

- The second developmental flight of Small Satellite Launch Vehicle (SSLV), SSLV-D2 is successfully launched on February 10, 2023 from Sriharikota.
- SSLV-D2 is **intended to inject EOS-07, Janus-1 and AzaadiSAT-2 satellites into 450 km circular orbit, in its 15 minutes flight**.

Launch vehicle

- A launch vehicle or carrier rocket is a rocket-propelled vehicle used to carry a payload from Earth's surface to space, usually to Earth orbit or beyond.

SSLV

- **About:** The Small Satellite Launch Vehicle (or SSLV) is a **small-lift launch vehicle** being developed by the Indian Space Research Organisation (ISRO).
- **Aim:** The SSLV was developed with the aim of launching small satellites commercially at drastically reduced price and higher launch rate as compared to Polar Satellite Launch Vehicle (PSLV).

- **Capacity and Features:** It has a payload **capacity to deliver 600 kg**. SSLV is a **three-stage, all-solid launch vehicle** that can carry a payload weighing 500 kilograms to the polar orbit, 500 kilometers above Earth's surface and a 300-kilogram payload into Sun Synchronous Polar Orbit. It has the **capability to support multiple orbital drop-offs**. The SSLV is the smallest vehicle at ISRO. It can carry satellites weighing up to 500 kg to a low earth orbit while the tried and tested PSLV can launch satellites weighing in the range of 1000 kg.

SSLV D2

- Configured with **three solid propulsion stages** and a **velocity terminal module**, the rocket **"caters to the launch of up to 500 kg satellites to low Earth orbits on a launch-on-demand basis**.
- It provides **low-cost access to space**, **offers low turn-around time and flexibility in accommodating multiple satellites**, and demands minimal launch infrastructure. Built and realised by ISRO, the **primary satellite earth observation satellite (EOS-07) weighs 156.3 kg**.
- EOS-07 – which has a mission life of **one year** – was designed so that its "payload instruments are compatible with microsatellite buses and new technologies that are required for future operational satellites.
- Technology demonstrator satellite, Janus-1, is developed by United States-based Antaris and its Indian partners XDLINKS and Ananth Technologies.
- Weighing 10.2 kg, Janus-1 is a six-unit satellite carrying five payloads. The payloads of AzaadiSAT-2 have been built by 750 girl students from across India.
- According to ISRO, the satellite aims to demonstrate LoRa and amateur radio communication capabilities, assess radiation levels in space, and exhibit an expandable satellite structure.

[**Note:** LoRa is a physical proprietary radio communication technique. It is based on spread spectrum modulation techniques derived from chirp spread spectrum technology.]

Final Thoughts

- The objective of launching SSLV was to showcase the **"in-flight performance" of its vehicle systems**.
- The SSLV was **built to meet the needs of the emerging small and microsatellite commercial market** and offer launches on demand.

SSLV D-2 ALL YOU NEED TO KNOW
India launched the second edition of the SSLV-D2 from the first launch pad of Satish Dhawan space centre at Sriharikota, Andhra Pradesh.

MISSION
Small Satellite Launch Vehicle (SSLV) is capable of launching mini, micro or nano satellites (10 to 500 kg mass) in to 500 km planar orbit.

Mission Specifications	
Parameter	Specifications
Altitude (km)	450
Inclination (°)	37.2
Launch Pad	First launch pad
Launch Azimuth (°)	135

Vehicle Configuration
SS1+SS2+SS3+VTM

Height: 34 metres
Diameter: 2 metres

EOS-07 Mission Objectives
Design and develop payload instruments compatible with micro satellite bus and new technologies that are required for future operational satellites.
Lift-off mass 156.6 kg
Mission life: 1 year
Power: Li-ion 27.2 Ah capacity battery

Janus-1
Satellite mass: 10.2 kg
JANUS-1 is a technology demonstrator, smart satellite mission, based on Antaris software platform.

AzaadiSAT-2
8U NanoSat Weighing about 8.8 kg
AzaadiSAT-2 mission aims to demonstrate LoRa and Amateur Radio communication capabilities, measure radiation levels in space.

QUAOAR

GS-III SCIENCE & TECHNOLOGY

Context

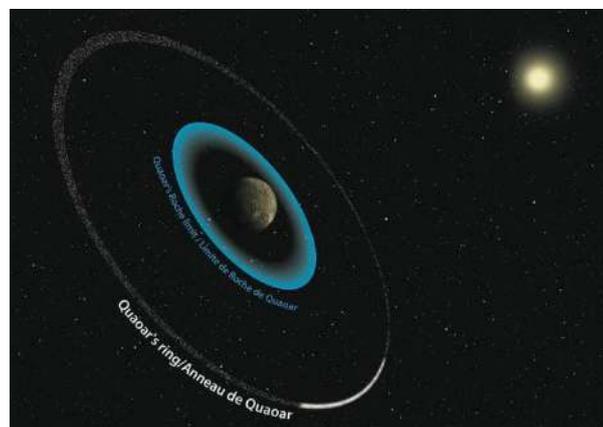
- Astronomers have spotted a ring around a **dwarf planet called Quaoar** in the outer reaches of the solar system.
- There's a ring around this dwarf planet which is unusual.

Dwarf planet

- A **dwarf planet** is a small **planetary-mass object** that is in direct orbit of the Sun, smaller than any of the eight classical **planets**.
- The prototypical dwarf planet is **Pluto**.
- At least the **nine largest candidates** are dwarf planets: Pluto, **Eris**, **Haumea**, **Makemake**, **Gonggong**, **Quaoar**, **Sedna**, **Ceres**, and **Orcus**.

Quaoar

- This dwarf planet, which is **about half the size of Pluto and orbits beyond Neptune**, is too distant and the ring too narrow to be seen directly.



Rings and Roche Limit

- Telescope, reveals the ring to be much further away from the planet Quaoar.
- The ring was outside the **theoretical maximum for where a ring can survive according to classical theory.**
- The ring is located at a distance of **more than seven planetary radii**, twice as far out as what was previously thought to be the maximum radius, **known as the Roche limit.** Inside the Roche limit, the planet exerts strong tidal forces that **prevent debris in the ring amalgamating into a moon.**

Roche Limit and the case of Quaoar further decoded

- In 1848, Édouard Roche, a French astronomer, calculated what is now known as the **Roche limit.** Material orbiting closer than this distance would tend to be pulled apart by tidal forces exerted by the parent body. Thus, **a ring within the Roche limit would tend to remain a ring, while a ring of debris outside the Roche limit would usually coalesce into a moon.**
- The rings around the giant planets of the solar system – Jupiter, Saturn, Uranus and Neptune – generally fit within the constraints of the Roche limit. Among the distant smaller worlds, Chariklo’s rings actually lie a bit beyond the Roche limit. The ring around Haumea is within the limit.
- Then there is the **Quaoar ring.** At a distance of 2,500 miles, **it is way beyond the Roche limit,** which the scientists calculated to be 1,100 miles. At that distance, according to underlying Roche’s calculations, the **particles should have coalesced into a moon in 10 to 20 years.** The rings shouldn’t be there.

Plausible explanation

- A potential explanation for Quaoar’s distant ring is the **presence of Weywot.**
- Weywot is a **natural satellite or moon of the trans-Neptunian dwarf planet 50000 Quaoar.**
- The moon may have created gravitational disturbances that prevented the ring particles from accreting into another moon.
- At the ultracold temperatures in the outer solar system, icy particles are also bouncier and are less likely to stick together when they collide.

Final Thoughts

- Rings around small solar system bodies billions of miles away may seem esoteric, but the clumping – or non-clumping – of the particles is **key to understanding the beginnings of the solar system.**
- It might seem that a small ring around a small object in the distant solar system doesn’t have broad applicability. But actually this process, of how particles accrete, **is really the beginning step of planet formation.**

SICKLE CELL ANAEMIA (SCA)

GS-III SCIENCE & TECHNOLOGY

Context

- Sickle cell anaemia (SCA), a genetic blood disorder, found mention in the Budget this year.
- Finance Minister Nirmala Sitharaman said that **the government will work in “mission mode” to eliminate the condition by 2047.**

Sickle cell disease

About

- Sickle cell disease is a **group of disorders that affects hemoglobin,** the molecule in red blood cells that delivers to cells throughout the body.

Decoding the disease

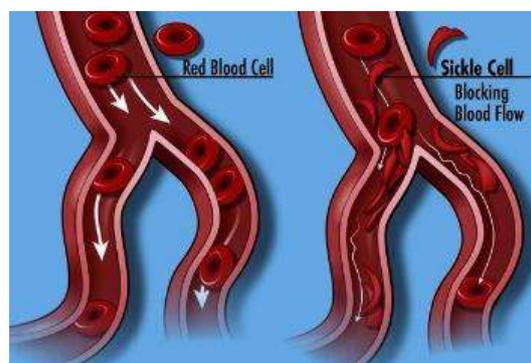
- Haemoglobin which is tasked with carrying oxygen to all the body has **four protein subunits – two alpha and two**
- In some people, **mutations in the gene that creates the beta impact the shape of the blood cell and distort it to look like**

Implications

- A round red blood cell **can move easily through blood vessels** of its shape but **sickle red blood cells end up slowing and blocking,** the blood flow. **Moreover, sickle cells die early, resulting in a shortage of red blood cells that deprive the body of oxygen.** These obstructions and shortages may cause **chronic anaemia, pain, fatigue, acute chest syndrome, stroke, and a host of other serious health complications.**

Treatment:

- Sickle cell disease is a lifelong illness. A **blood and bone marrow transplant** - is currently the only cure for sickle cell disease, but there are effective treatments that can reduce symptoms and prolong life. But challenges include a scarcity of donors, fears around safe supply of blood, risk of infection etc.
- Another option is **in the form of gene therapy and stem cell transplants** – both costly and still in developmental stages. In



oxygen

parts of **beta subunits** a sickle.

because **even**

gene therapy, the DNA inside the haemoglobin gene is edited to stop the disease while in stem cell transplants, the bone marrow affected by sickle cell anaemia is replaced with healthy bone marrow from a donor. Both interventions are currently being tested in clinical trials globally.

Prevalence of SCA in India

- Today, SCD is the most common severe monogenic disorder in the world, with a high prevalence in sub-Saharan Africa, parts of Mediterranean, India and in the Middle East. **In South Asia, the highest prevalence of the disease is in India, where over 20 million patients with SCD live.**
- The sickle gene is widespread among many tribal population groups in India with prevalence of heterozygotes varying from 1-40 per cent.
- India is **the second-worst affected country in terms of predicted births with SCA – i.e. chances of being born with the condition.**

What has India done so far?

- The Indian Council of Medical Research and the National Rural Health Mission in different States are undertaking **outreach programmes for better management and control of the disease.**
- The **Ministry of Tribal Affairs launched a portal** wherein people can register themselves if they have the disease or the trait, in order to collate all information related to SCA among tribal groups.
- The **National Health Mission guideline on Hemoglobinopathies** also identifies “establishing services at the community level for pre-marital and pre-conception screening backed by genetic counselling services” as a strategy for addressing SCA.
- **Genetic counselling** involves creating awareness and advising two carriers about the risks of having biological children. In **pre-marital counselling**, partners are provided with the knowledge of how their sickle genes could affect the newborn baby.
- In the Budget, the Union Health Minister said **the government plans to distribute “special cards” across tribal areas to people below the age of 40.** “The cards will be divided into different categories based on the screening results.” The mission will **receive funding under the National Health Mission.**
- **Concern:** The card system will help us to know the status of the patient, but at the same time, it will stigmatise the individual. In one field research, a patient expressed concern that she was not getting a marriage alliance because she was a carrier, so her father tried to “hide it”. There is concern among activists that a card only works to brand the individual as a disease carrier, alienates them, and blames the community for the spread.

Way Ahead

- Focus on **awareness creation, universal screening, support is for capsule hydroxyurea, free blood transfusion** for all Sickle cell patients (men & women), and **counselling through collaborative efforts** of central ministries and state governments can help in eliminating the disease.

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IASGYAN
PREDICT THE UNPREDICTABLE

THE IAS GAZETTE ■ MARCH 2023

Context

- The successful landing and take off of the indigenous LCA Navy on India's first Indigenous Aircraft Carrier is a momentous step forward towards the realisation of our collective vision of AatmaNirbharBharat. The maiden landing of the Mig-29K also heralds the integration of the fighter aircraft with INS Vikrant.

Details

INS Vikrant

About:

- It is country's **maiden indigenous aircraft carrier (IAC-1)**.
- Built by: Cochin Shipyard Ltd.**
- The IAC was commissioned in **2022 making it** the most potent sea-based asset.
- Capabilities:** can project Air Power over long distances, including Air Interdiction, Anti-Surface Warfare, offensive and defensive Counter-Air, Airborne Anti-Submarine Warfare and Airborne Early Warning.
- It has a **STOVAR** (short take off but arrested recovery) system of aircraft launch and recovery on the flight deck.
- It is armed with the **Barak LR-SAM** (long range surface-to-air missile) air defence and **AK-630** close-in weapon system besides a slew of advanced sensors and an electronic warfare suite.

Other specifications

- It is expected to have a top speed of 30 knots (approximately 55 kmph) and is propelled by four gas turbines.
- Its endurance is 7,500 nautical miles at 18 knots (32 kmph) speed.
- The vessel can carry up to 1,500 personnel and has 2,300 compartments.
- The ship shall operate MiG-29K fighter aircraft, Kamov-31 Air Early Warning Helicopters, the soon to be inducted MH-60R multi-role helicopter and the indigenously manufactured Advanced Light Helicopters.
- Italian, Russian help:** While the **design was done with help from the Italian firm Fincantieri**, the Russians collaborated in designing and developing the aviation complex.

Significance of IAC

- Shining example of 'AatmaNirbhar Bharat' as it has nearly **75 per cent indigenous content - from design to steel used in construction to key weapons and sensors**.
- It help secure India's interests in maritime domain.
- It will help to realize the **vision of SAGAR**(Security and Growth for All in the Region) and the wider goal of a **free, open and inclusive Indo-Pacific to ensure peace and stability** in the region.

LCA

Background:

- In 1983, the Government of India established the LCA project with the **initial goal to develop a new light combat aircraft to replace the ageing IAF fighters**, especially the MiG-21 variants.
- In 1984, the Government of India established **Aeronautical Development Agency (ADA) under the aegis of Defence Research and Development Organisation (DRDO) to manage the LCA programme**.

Tejas under LCA Programme:

- The HAL Tejas is an Indian, single engine, delta wing, light multirole fighter.
- In 2003, the LCA was officially named "Tejas". It is the **smallest and lightest in its class of contemporary supersonic combat aircraft**.
- The Tejas is the second supersonic fighter developed by HAL after the HAL HF-24 Marut.
- The Tejas currently has three production models - **Tejas Mark 1, Mark 1A and trainer variant**.

The Mikoyan MiG-29K:

- It is a Russian all-weather carrier-based multirole fighter aircraft developed by the Mikoyan Design Bureau.
- The MiG-29K was developed in the late 1980s from the MiG-29M.
- Mikoyan describes it as a 4+ generation aircraft.

Tejas to add teeth to Indian air combat

Indigenously developed Light Combat Aircraft (LCA), Tejas has been formally inducted to Indian Air Force. The induction occurred almost 15 years after its first test flight and 33 years after the project was taken up

Project first conceived and launched in 1983	Maiden test flight took place on Jan 4, 2001	Designed for air-to-air, air-to-ground and air-to-sea combat roles	Intended to replace the phased out MiG-21 fighter jets
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Specifications (LCA AF MK2)

Crew	Length	Height	Wingspan	Max speed	Engine
One	13.7 m	4.4 m	8.2 m	1.6 mach	GE-F414-INS6

Smallest and lightest multi-role supersonic fighter aircraft of its class

Project executed by Aeronautical Development Agency (ADA) along with Hindustan Aeronautics Limited (HAL)

First advance Fly-by-wire (FBW) fighter aircraft designed, developed and manufactured in India

Inducted on July 1, 2016 into Squadron No. 45 of IAF, also called the "Flying Daggers"

KBK InfoGraphics

- **Equipment:** The MiG-29K/KUB carries modern targeting and navigation system, quad-redundant fly-by-wire flight control system, radar and optical locating stations, helmet-mounted targeting/display system, communications and self-defense equipment, cockpit instrumentation and other aids that working together provide high flight safety, effective use of weapons, as well as handling of navigation and training tasks.
- **Armament:** The MiG-29K/KUB is equipped with short- and medium-range air-to-air missiles, air-to-surface missiles, including Kh-31A/P high-speed missiles, guided aerial bombs, unguided rockets and bombs, and an internal gun.

Main benefits

- Round-the-clock and all-weather capability
- High fighter and attack mission capability
- High flight safety and combat survivability
- high level of maintainability
- Mature operation system in the Russian and foreign air forces.

LEFT WING EXTREMISM

GS-III SECURITY & DEFENSE

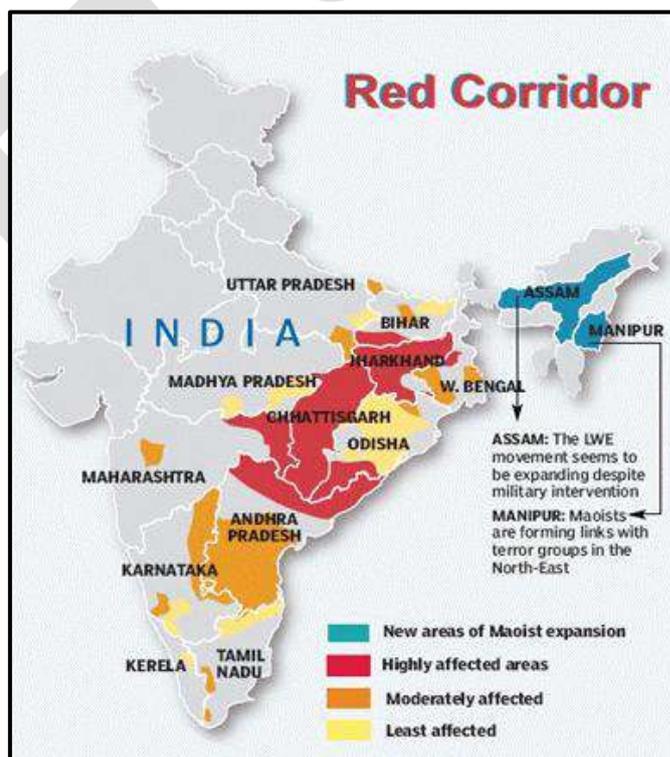
Context

- Union Home Minister Amit Shah has said, there is no place for violence and Left Wing Extremism ideas in the self-reliant new India.

Details

Trends on incidence of violence:

- While incidents of violence from Left-Wing Extremism (LWE) in the country have dropped by 77 per cent between 2009 and 2021, state-wise data showed an increase in such incidents in Chhattisgarh, Madhya Pradesh and Telangana this year in comparison to the previous year, and a decrease in incidents in Maharashtra, Odisha, Jharkhand and Bihar among others, according to data provided by the Ministry of Home Affairs in Rajya Sabha
- Deaths of civilians and security forces have reduced by 85 per cent from a high of 1,005 in 2010 to 147 in 2021.
- While Jharkhand saw 118 incidents and 12 deaths this year, there were 130 incidents and 26 deaths in 2021, 199 incidents and 39 deaths in 2020, and 200 incidents and 54 deaths in 2019.
- To address LWE holistically, the central government approved a national policy and action plan in 2015. This policy envisages a multi-pronged strategy involving security related measures, development interventions, ensuring rights and entitlements of local communities, etc. Steadfast implementation of this policy has resulted in consistent decline in violence in LWE affected areas.



Steps undertaken

- The Government has adopted a holistic approach to deal with Left Wing Extremism, in the areas of security, development, ensuring rights and entitlements of local communities, improvement in governance and public perception management.
- Though primarily a State subject, Ministry of Home Affairs (MHA) has promulgated a 'National Policy and Action Plan' since 2015 to address the Left Wing Extremism (LWE) menace holistically and the progress & the situation is being monitored rigorously and this Policy consists a multi-pronged approach.
- **Review and monitoring mechanisms:** These include intelligence sharing through Multi-Agency Centre (MAC) at the Central and State levels, and Multi Agency Centre (SMAC) at the subsidiary level on a 24x7 basis.
- **Better inter-state coordination:** Government of India has taken a number of steps to improve inter-state coordination which includes frequent meetings and interactions between the official machinery of the bordering districts of Left Wing Extremism affected States across the country.
- **Tackling the challenge of Improvised Explosive Devices (IEDs):** The Union Home Ministry has formulated a Standard Operating Procedure (SOP) on 'Issues related to Explosives/IEDs/Landmines in naxal affected areas' and the same has been circulated to the stakeholders for compliance.

- **Strengthening of air support:** State Governments and the Central Armed Police Forces (CAPFs) have been provided with enhanced air support in terms of UAVs and helicopters for anti-naxal operations, including evacuation of casualties/injured persons.
- **SAMADHAN** doctrine is the one-stop solution for the LWE problem. It encompasses the entire strategy of government from short-term policy to long-term policy formulated at different levels. SAMADHAN stands for-
 - S- Smart Leadership,
 - A- Aggressive Strategy,
 - M- Motivation and Training,
 - A- Actionable Intelligence,
 - D- Dashboard Based KPIs (Key Performance Indicators) and KRAs (Key Result Areas),
 - H- Harnessing Technology,
 - A- Action plan for each Theatre,
 - N- No access to Financing.

Development Initiatives:

For **development of LWE Affected States**, Government of India (GoI) has taken several developmental initiatives which include:

- Sanction of 17,600 Kilometers of **road under Road Requirement Plan-I**.
- To improve telecom connectivity in LWE affected districts, **Mobile Towers** have been installed
- For financial inclusion of the people in LWE affected districts, **Post Offices, Bank Branches, ATMs and Banking Correspondents have been opened**
- For imparting quality education to the youth in areas affected by LWE, special focus is given to opening of **Eklavya Model Residential Schools (EMRS)**.
- Under **Special Central Assistance (SCA) Scheme** for further impetus to development in the most affected districts, more than 10000 projects have been taken of which more than 80% are already completed.
- **Integrated Action Plan (IAP)/ Additional Central Assistance (ACA):** commenced in 2010-11 covering 60 Tribal and Backward districts for accelerated development by providing public infrastructure and services
- Implementation of **Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Rights) Act, 2006**
- **Civic Action Programme (CAP):** This Scheme is under implementation from 2010-11.
- **ROSHNI** is a special initiative under, **Pandit Deen Dayal Upadhyaya Grameen Kaushalya Yojana (Formerly Ajeevika Skills)**, launched in June 2013 for training and placement of rural poor youth from 27 LWE affected districts in 09 States
- **Scheme for Special Infrastructure (SSI):** This Scheme was started during the 11th Plan period with 100% funding by the Centre for filling up critical infrastructure gaps, not be covered under any other scheme.
- **Aspirational Districts Programme:** Launched in 2018, it aims to rapidly transform the districts that have shown relatively lesser progress in key social areas.

Security Related Measures:

- **Deployment of the CAPFs:** Battalions of the CAPFs/Naga Battalions (BNs) are deployed for assisting the State Police in the LWE affected States.
- **India Reserve (IR)/Specialised India Reserve Battalion (SIRB):** Naxal affected States have been sanctioned 45 IR battalions mainly to strengthen their security apparatus and also to enable the States to provide gainful employment to youth, particularly in the severely affected belts.
- **Security Related Expenditure (SRE) Scheme:** funds are provided for meeting the recurring expenditure relating to insurance, training and operational needs of the security forces, rehabilitation of Left Wing Extremist cadres who surrender, community policing, security related infrastructure for village defence committees and publicity material to create awareness against violence.
- **Construction/Strengthening of Fortified Police Stations**
- **Greyhounds:** It was raised in 1989 as an elite anti-Naxal force.
- **Operation Green Hunt:** It was started in 2009-10 and massive deployment of security forces was done in the Naxal-affected areas

Role of MHA:

Ministry of Home Affairs is **supporting the State Governments for Capacity Building and strengthening of Security Apparatus** by:

- deployment of CAPF Battalions,
- provision of helicopters and UAVs and
- sanction of India Reserve Battalions (IRBs)/ Special India Reserve Battalions (SIRBs).
- Funds are also provided under Modernization of Police Force (MPF), Security Related Expenditure (SRE) Scheme and Special Infrastructure Scheme (SIS) for modernization and training of State Police.

SRE Scheme:

MHA had categorized certain districts as LWE affected and covered under Security Related Expenditure (SRE) Scheme for

specific resource mobilization to the affected States for counter LWE measure.

- Of these SRE districts, the districts accounting for more than 85% of country-wide LWE violence and are categorized as '**Most Affected Districts**' for focused deployment of resources - both security and development related.
- To arrest the expansion plan CPI (Maoist) and also to restrict them to bounce back in the areas recently taken away from LWE influence, 08 districts have been categorized as '**District of Concern**'. The revised categorization is a more realistic representation of current LWE scenario.

Background

- A number of Left Wing Extremist outfits have been operating in certain remote and poorly connected pockets of the country for a few decades now.
- **Maoist motto, "power flows from the barrel of gun", is their motivating force.**
- Naxalites seek to overthrow the State through violent means.
- They openly proclaim lack of faith in the democratic means of ballot and adhere to the violence as a means of achieving their ends.
- **Naxal affected areas in India are known as the 'Red Corridor'.**
- **The Naxal movement started with the tribal-peasant uprising against landlords in Naxalbari village of Darjiling district, West Bengal in 1967.**
- Later, this militant movement spread all over West Bengal and was carried on by a large number of other groups in different States.
- Naxals are also known for their liaison with external terrorist outfits like LTTE for pooling of resources, particularly in the acquisition of weaponry, communication technology and the like.
- Violence being the driving force of Naxal ideology, they often resort to killing and kidnap.
- **The Maoist insurgency doctrine glorifies violence as the primary means to overthrow the existing socio-economic and political structures.**

Causes of left-wing extremism in India

- The **failure of land reforms** especially land redistribution after independence.
- **Socio-economic inequities, unemployment, despair about the future.**
- Dishonest and self-serving dominant groups
- **Political deprivation** leading to hopelessness or a sense of powerlessness.
- **Lack of title to public land cultivated** by the landless poor.
- Governance deficit in the remote parts of Red Corridor regions.
- **Lack of food security** - corruption in the Public Distribution System (which are often non-functional).
- Disruption of traditional occupations and lack of alternative work opportunities.
- **Displacement of people:** Eviction from lands traditionally used by tribals.

Issues Related to Dealing with LWE

- In the current scenario, barring a few exceptions, many of the senior police officers (IPS cadre) who are parachuted into the central police forces at senior ranks have little or no platoon/battalion experience.
- It is not ideology and revolutionary zeal that is driving people who are engaged in LWE. For many, joining these groups is the only way to survive.
- Threatening Democracy.

Way Forward

- **Innovative measures are required to be employed in preventing IED (Improvised Explosive Device) related incidents** which have caused significant casualties in recent years.
- Emphasis should be laid on the **capacity-building and modernization of the local police forces.**
- States should **rationalize their surrender policy** in order to bring innocent individuals caught in the trap of LWE in the mainstream.
- States also need to **adopt a focused time-bound approach to completely eliminate LWE groups and ensure all-round development of the affected regions.**
- What makes the LWE particularly disturbing is its correlation with the demographic youth bulge in the general Indian population. If the Indian state fails, the widespread unemployment could lead to a serious internal security situation. LWE is its first manifestation.
- The **adverse casualty ratio in police-Naxal operations highlights the fact that insurgencies are best tackled by military forces that are trained and structured for this role**
- The Centre and the States should make efforts in sync that are crucial in eliminating such radicalization amongst groups

BORDER INFRASTRUCTURE**GS-III SECURITY & DEFENSE****Context**

- External Affairs Minister S. Jaishankar released details of the government's projects on border infrastructure and connectivity.

Details

- It focused on initiatives in the north and east along India's 3,488 km border with China (Line of Actual Control or LAC), including ramping up infrastructure on the Indian side in Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh, as well as projects connecting India to "friendly" neighbouring states such as Bangladesh, Bhutan, Nepal and Myanmar.
- Mr. Jaishankar said the Modi government has **"focused on rapid development of infrastructure along Northern Borders with China for obvious strategic reasons"**.
- This was a reference to successive skirmishes with the Chinese People's Liberation Army in Chumar in 2014, Doklam in 2017 and the ongoing standoff along the entire LAC since April 2020 when the Chinese army amassed troops along the border, which resulted in the Galwan clashes, the first such violent incident in 45 years.

What initiatives did the briefing outline?

- It highlighted a multi-pronged approach** – improving connectivity to the LAC through roads, bridges and tunnels, improving cross-border connectivity to neighbouring countries via highways, bridges, inland waterways, railroads, electricity lines and fuel pipelines, modernising and constructing integrated check posts (ICPs) at all the border crossings to smooth trade, and funding and constructing infrastructure projects in neighbouring countries.
- While many of these projects have commenced or been in the pipeline for several decades, the government claimed that it has accelerated them and completed execution.**
- For example, the government said that the length of roads constructed in the China border areas in the period from 2014 to 2022 (6,806 km) "is almost double the length" constructed from 2008-2014 (3,610 km), and cited a similar case for bridges built.
- The report lists dozens of projects in the neighbourhood that have been planned, financed or constructed –
 - some involve major outlays like the railway links to Nepal and Bangladesh, the Mahakali motorable bridge and the Maitri Setu between Tripura and Bangladesh,
 - the Kaladan Multi-Modal Transit Transport Project (KMTP) which includes a 158 km waterway,
 - the Sittwe port project and road to Mizoram.
 - "South Asia's first cross-border petroleum products pipeline" between Motihari in India and Amlekhgunj in Nepal,
 - High Speed Diesel pipeline with Bangladesh that will reduce petrol prices and road congestion, and
 - a Bhutanese dry port in Pasakha bordering West Bengal being developed under an Indian government grant.

Background

- Government has approved the **continuation of the central sector umbrella scheme of the Border Infrastructure and Management (BIM) during the 15th Finance Commission cycle from 2021-22 to 2025-26**, at a cost of Rs.13,020 crore.
- The Scheme is implemented under The Ministry of Home Affairs.**
- It will strengthen the border management and infrastructure for improving policing and guarding the borders.
- It will **promote construction of border fence, border flood lights, border roads and Border Outposts, Operating Bases** to secure Indo-Pakistan, Indo-Bangladesh, Indo-China, Indo-Nepal, Indo-Bhutan and Indo-Myanmar borders.

India's Border length with neighboring countries

- 4,096 km With Bangladesh
- 3,488 km with China
- 3,323 km with Pakistan.
- 1,751 km with Nepal
- 1,643 km with Myanmar
- 699 km with Bhutan
- 106 km with Afghanistan

Other program for improving border infrastructure and management

- In 1960, Jawaharlal Nehru laid the foundation of the Border Roads Organization (BRO), to provide defense infrastructure including roads, bridges, highways, airports, tunnels, buildings and other such structures.
- Government launched a Comprehensive Integrated Border Management System (CIBMS) to improve the capability of Border Security Force in detecting and controlling the cross border crimes like illegal infiltration, smuggling of contraband goods, human trafficking and cross border terrorism etc.
- Project BOLD-QIT (Border Electronically Dominated QTR Interception Technique) under Comprehensive Integrated Border Management System (CIBMS) on the Indo-Bangladesh border.



DEFENCE EXPORT TARGET

GS-III SECURITY & DEFENSE

Context

- The defence ministry's target to raise India's annual defence exports to \$5 billion by 2024-25, from the \$1.5 billion currently, was reiterated by Prime Minister Narendra Modi at the recently concluded Aero India 2023 in Bengaluru.

Details

Steps taken in this direction:

- Towards this, the defence ministry has brought in several new policies, such as earmarking 75 per cent of its defence capital budget for 2023-24 towards procurements from domestic sources and three positive indigenisation lists of 3,738 items, for which there would be an embargo on import beyond timelines specified against them.
- Also, two defence industrial corridors are being set up in Uttar Pradesh and Tamil Nadu, and there is an ongoing simplification of processes for ease of doing business aimed at boosting defence exports.
- India is in talks with several countries to export several of its indigenous big-ticket platforms, such as the Light Combat Aircraft Tejas and the BrahMos supersonic cruise missile made by BrahMos Aerospace Pvt Ltd, a joint venture between India and Russia.
- The key to reaching the \$5 billion defence export goal lies in expanding indigenous offerings, ramping up production for faster and timely deliveries, particularly for PSUs, and developing niche and critical technologies for export for fighting modern warfare but also to eliminate competition.
- Steps to encourage defence research are also being undertaken, such as earmarking 25 per cent of the defence research budget for the private sector in 2022-23, for newer innovation and developing niche technology.

Current export figures

- As per government data, India's defence export value till December 2022 had reached Rs 6,058 crore.
- India's defence exports have grown by 334 per cent in the past five years. They touched nearly Rs 13,000 crore in 2021-22.
- This includes munition list items under category 6 of Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET), for which the Department of Defence Production (DDP) under the Ministry of Defence issues an authorisation.

Which defence equipment does India export?

- The major defence items being exported are Personal Protective items, Offshore Patrol Vessels, ALH Helicopter, SU Avionics, Bharati Radio, Coastal Surveillance Systems, Kavach MoD II Launcher and FCS, Spares for Radar, Electronic System and Light Engineering Mechanical Parts, among others.
- In December last year, the government told Parliament that major items exported by India in the last three years include lightweight torpedoes, weapon locating radar, fast patrol vessels, 120 mm mortar armoured protection vehicle, 0.338 Lapua magnum sniper rifle, and simulators.

What are the major defence platforms India is looking to export?

- India is in talks with Argentina and Egypt, among other countries, to export its indigenous LCA Tejas.
- LCA Mk 2 has seen interest from nearly 16 countries and efforts are on to identify private production agencies to ramp up

manufacturing of the jet.

- India is looking to export the indigenous Advanced Light Helicopter to several countries – and has signed a contract with **Mauritius** for the export of one Advanced Light Helicopter (ALH Mk III) for Mauritius Police Force. The country already operates the ALH and Do-228 aircraft, which is a multi-purpose light transport aircraft.
- India is in talks with **Guyana** to export the Dornier 228 and fast patrol vessels and will aim at exporting the latest HTT-40, Light Utility Helicopters (LUH) and Light Combat Helicopter (LCH).
- Last year, India signed a \$375 million contract with the **Philippines** to export the BrahMos supersonic cruise missile.
- Last year, **Armenia** inked a government-to-government deal to buy the DRDO-developed Pinaka multi-barrel rocket launchers, rockets and ammunition. In 2020, the country is also learnt to have bought Swathi weapon locating radars from India.
- **India's private companies and Defence PSUs currently export defence equipment to over 75 countries.**
- A report released by India Exim Bank stated that **Mauritius, Mozambique, and Seychelles have been among the top customers for India's defence exports** between 2017 and 2021, of which Mauritius was at 6.6 per cent, Mozambique at five per cent and Seychelles 2.3 per cent.
- According to a Stockholm International Peace Research Institute (SIPRI) report released last year, **India is among the top 25 exporters of major arms.** Myanmar has been the biggest importer of Indian arms at 50 per cent during the 2017-2021 period, followed by Sri Lanka at 25 per cent and Armenia at 11 per cent.

Our Super Achievers' in IAS, IPS & IFoS

Our Success since 2016

Year	Success Count
2016	18
2017	27
2018	43
2019	41 ⁺
2020	53 ⁺
2021	45 ⁺

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 JUBIN MAHAPATRA CSE-AIR 46, 2020	 JIVANI K. NAGJIBHAI CSE-AIR 8, 2020	 PREETAM KUMAR CSE-AIR 9, 2021		
 TAMALI SAHA RANK 94, IFOS 2021				

BIODIVERSITY HERITAGE SITES (BHS)**GS-III ENVIRONMENT & ECOLOGY****Context**

- Yaya Tso, known as birds' paradise for its beautiful lake located at an altitude of 4,820 metres, has been proposed as Ladakh's first biodiversity heritage site (BHS)

Details

- Yaya Tso to become Ladakh's first biodiversity heritage site
- The proposed Yaya Tso site will have an approximate area of 60 square kilometers, which will also include the lake's watershed, and is among the most beautiful lakes in Ladakh.
- The Biodiversity Management Committee, the panchayat of Chumathang village, along with SECURE Himalaya Project recently resolved to declare Yaya Tso as Ladakh's first BHS under the Biological Diversity Act.
- **Yaya Tso is a nesting habitat for a large number of birds and animals, such as the bar-headed goose, black-necked crane and brahmny duck, the officials said, adding it also has the distinction of being one of the highest breeding sites of the black-necked crane in India.**

What are Biological Diversity Heritage Sites?

- Biodiversity Heritage Sites (BHS) are areas that are unique, ecologically fragile ecosystems having rich biodiversity comprising of any one or more of the components such as; species richness, high endemism, presence of rare, endemic and threatened species, keystone species, species of evolutionary significance, wild ancestors of domestic/cultivated species or land races or their varieties, past pre-eminence of biological components represented by fossil beds and having cultural or aesthetic values.

Importance of Biological Diversity Heritage Sites

- Biodiversity is closely linked to ecological security.
- Loss of biodiversity and bioresources show an increasing trend mainly due to human activities. Therefore, it is necessary to instil and nurture conservation ethics in the community.
- Declaration of Biodiversity Heritage Sites is a welcome step which will exhibit the conservation ethics and values practiced by these societies to the wider world.
- Such declaration will help them renew their commitment to conservation besides acting as a model for other communities to follow. This is a small but important step that a community can take towards protecting the environment and ensuring sustainability of bio-resources across generations.
- BHS declaration marks the voluntary participation of communities in protection and conservation of biodiversity which helps in expanding the reach of conservation.

Section 37 of the Biological Diversity Act

- As per this section, the State Governments are empowered to notify in the official gazette, in consultation with 'local bodies', areas of biodiversity importance as Biodiversity Heritage Sites.
- Under sub section (2) of Section 37 of the BD Act, the State Government in consultation with the Central Government may frame rules for the management and conservation of BHS.
- Under sub section (3) of Section 37 of the BD Act, the State Governments are empowered to frame schemes for compensating or rehabilitating any person or section of people economically affected by such notification.

Criteria for Identification of BHS

Areas having any of the following characteristics, may qualify for inclusion as BHS.

- Areas that contain a mosaic of natural, semi-natural, and manmade habitats, which together contain a significant diversity of life forms.
- Areas that contain significant domesticated biodiversity component and/or representative agro-ecosystems with on-going agricultural practices that sustain this diversity.
- Areas that are significant from a biodiversity point of view as also important cultural spaces such as sacred groves/trees and sites, or other large community conserved areas.
- Areas including very small ones that offer refuge or corridors for threatened and endemic fauna and flora, such as community conserved areas or urban greens and wetlands.
- Areas that provide habitats, aquatic or terrestrial, for seasonal migrant species for feeding and breeding.
- Areas that are maintained as preservation plots by the research wing of Forest department.

Identification and Declaration of BHS:

- State Biodiversity Boards (SBB) may invite suggestion (or consider those already coming from communities) for declaration of BHSs, through the Biodiversity Management Committees (BMCs) and other relevant community institutions.

GREEN GROWTH

GS-III ENVIRONMENT & ECOLOGY

Context

- Green found prominence in the Union Budget. Green growth – from green credits to green energy to green mobility to green farming – was among the seven main priorities that made it to the Budget this year.

Details

Focus on green growth:

- Green growth is among the four opportunities that can be “transformative during Amrit Kaal”, said Sitaraman.
- Green growth is one of the seven priorities or saptarishi to guide India into Amrit Kaal.
- The prime minister’s vision of “LiFE”, or Lifestyle for Environment, will move the country toward an “environmentally conscious lifestyle”.
- India is moving forward firmly for the panchamrit and net-zero carbon emission by 2070 to usher in green industrial and economic transition.

Green Credit programme:

- To “encourage behavioural change” will be notified under the Environment (Protection) Act. This will incentivise environmentally sustainable and responsive actions by companies, individuals and local bodies, and help mobilise additional resources for such activities.

Budget allocation:

- The budget allocation for the Ministry of Environment, Forest and Climate Change **increased from a revised estimate of Rs 2,478 crore in the last budget to Rs 3,079.4 crore this year.**
- A **separate budget has been allocated for the National Mission on Natural Farming**, at Rs 459 crore.
- The budget for controlling pollution increased from a revised estimate of Rs 600 crore last year to Rs 756 crore in the latest budget.

Green power:

- The **budget for the Ministry of New and Renewable Energy has also increased** this year – by more than Rs 3,000 crore.
- The budget of solar energy central sector schemes has now increased from Rs 185 crore in the last fiscal to Rs 361 crore, as per the latest budget.
- To further green mobility, **the import of capital goods and machinery required for the manufacture of lithium-ion cells for batteries used in electric vehicles will be exempted from customs duties.**
- To steer the economy on the sustainable development path, **funding has also been initiated for Battery Energy Storage Systems:** a capacity of 4,000 MWH will be supported with Viability Gap Funding (VGF)
- A **detailed framework for Pumped Storage Projects** will also be formulated.

More green moves for sustainability:

MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes)

- MISHTI is a **new programme that will facilitate mangrove plantation along India’s coastline and on salt pan lands.**
- The programme will operate through “convergence between MGNREGS, Campa Fund and other sources”.
- This new programme will aim at intensive afforestation of coastal mangrove forests.
- India has such forests on both its Eastern and Western coasts with the Sundarbans in Bengal being one of the largest mangrove forests on the planet.
- **PM PRANAM (Prime Minister Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth)**
- This programme will **seek to incentivise states and union territories promoting alternative fertilisers and the balanced use of chemical fertilisers.**
- The programme aims to ultimately bring down the government’s subsidy burden, which is estimated to reach Rs 2.25 lakh crore in 2022-23: 39 per cent higher than last year’s figure of Rs 1.62 lakh crore.

Bhartiya Prakritik Kheti Bio-Input Resource Centres

- To further facilitate the adoption of “natural farming,” 10,000 Bio-Input Resource Centres will be set-up, creating a **national-level distributed micro-fertiliser and pesticide manufacturing network.**
- This will impact over 1 crore farmers over the next three years, the finance minister said in her speech.

Amrit Dharohar

- This is a scheme that will be **implemented over the next three years to encourage optimal use of wetlands, and enhance biodiversity, carbon stock, eco-tourism opportunities and income generation for local communities.**
- Amrit Dharohar will emphasise on the importance of wetlands and their preservation, with an outlook that is inclusive of local communities as caretakers of the ecosystem.

Others

- Three centres of excellence for Artificial Intelligence will be set up in top educational institutions and leading industry players will “partner in conducting interdisciplinary research, develop cutting-edge applications and scalable problem solutions in the areas of agriculture, health, and sustainable cities.
- Apart from enabling mechanical desludging of septic tanks and sewers in cities and towns to transition from “manhole to machine-hole mode”, an enhanced focus will also be provided for the “scientific management of dry and wet waste.
- The government would give one of the Indian Institutes of Technology a research and development grant to encourage the indigenous development and production of lab-grown diamonds, which is a “technology-and innovation-driven emerging sector with high employment potential

Concerns

- At the same time, the Budget also envisions developments that would not qualify as green growth, such as constructing 50 additional airports, and identifying 100 projects to develop last-mile connectivity for sectors such as coal and ports.
- Moreover, there are no budgetary allocations for crucial projects such as the National Climate Change Action Plan, the National Adaptation Plan and the National Mission on Himalayan Studies.
- This comes at a time when Joshimath and several other towns in the state of Uttarakhand in the Himalaya are facing land displacement.
- India must ensure that financial support is directed towards low-carbon technologies and identify areas of environmental degradation and the areas of the economy on which this has the greatest impact and take steps to address them.
- More infrastructure is also on the cards – infrastructure that may not really promote a green economy. For instance, the government has identified 100 “critical transport infrastructure projects” for last and first-mile connectivity for sectors including ports, coal, steel and fertilizers

RED SANDERS

GS-III ENVIRONMENT & ECOLOGY

Context

- The CITES trade database has recorded 28 incidents of red sanders confiscation, seizure and specimens from the wild being exported from India, a fact sheet prepared by TRAFFIC, a global wildlife trade monitoring organisation has revealed.

Details

- These consignments were exported to China (53.5%), Hong Kong (25.0%), Singapore (17.8%) and the United States of America (3.5%) from 2016 to 2020.

About Red Sanders (Red Sandalwood)

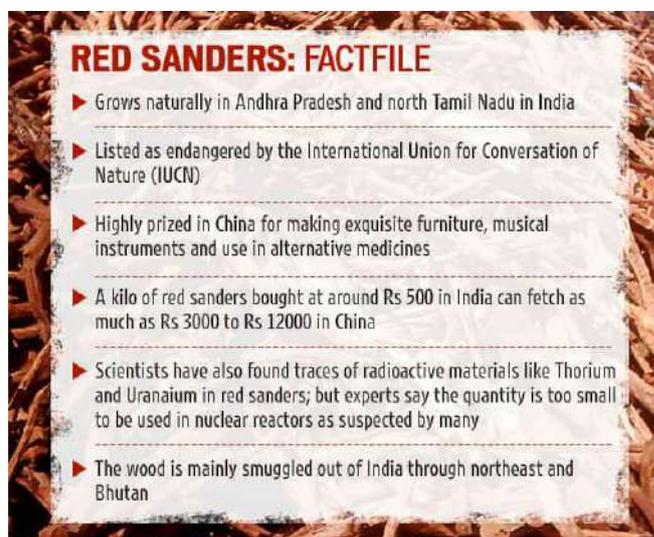
- The species, *Pterocarpus santalinus*, is an **Indian endemic tree species.**
- **Geographical range:** restricted in the Eastern Ghats. It is endemic to a distinct tract of forests in Andhra Pradesh
- **Protection status:** ‘Endangered’ category in the International Union for Conservation of Nature’s (IUCN) Red List.

Uses

- known for their **rich hue and therapeutic properties.**
- Are high in demand across Asia, particularly in China and Japan, for use in **cosmetics and medicinal products** as well as for **making furniture, woodcraft and musical instruments.**

Why its status is downgraded?

- **Threats:** Over-exploitation and smuggling.
- **Natural causes:**



- Slow growth of the species and continued harvesting leaves no time for recovering naturally
- Cattle grazing and invasive species.

About the CITES

- Also known as the Washington Convention, CITES is an international agreement (Secretariat - Geneva, Switzerland) between governments to ensure that international trade in wild animals and plants does not threaten the survival of the species.
- It was drafted at a meeting of members of the International Union for Conservation of Nature (IUCN) in 1963.
- The convention was opened for signature (in Washington D.C.) in 1973 and CITES entered into force on 1 July 1975.
- With 184 Parties today (India since 1976), CITES is one of the conservation treaties with the most members.
- Although CITES is legally binding on the Parties (meaning they must implement the Convention), it does not replace national legislation.
- Under CITES, plant and animal specimens are classified into three categories (Appendices) based on the threat to their extinction.
- The Convention requires countries to regulate the trade of all listed specimens of wild animals and plants through permits and also seeks to regulate the possession of live animal specimens.

HYDROPOWER GENERATION AND CLIMATE CHANGE

GS-III ENVIRONMENT & ECOLOGY

Context

- Unlike coal-powered power plants, hydropower, which is the second highest power producing source at 13%, is a significant contributor to clean global electricity generation..

Details

- Based on observations and climate projections, a two-member team from IIT Gandhinagar studied the hydroclimatic changes in the catchment areas and their implications for hydropower generation in 46 major dams located in north, central and south India.

Findings

Projected increase:

- Under warmer climate, team expects hydropower production to increase across the country due to substantial increase in precipitation leading to increased inflow to the reservoirs. Based on selected hydroelectric dams, the projected increase in hydropower potential in India is 10-23%.
- **A warmer and wetter climate is projected to bring about 5%-33% increased rainfall. As a result, hydropower production is very likely to increase by 9%-36% for most dams and this will come from increased inflow (7-70%) into the dams.**
- Due to global warming, there will be a simultaneous rise in extreme inflow and high reservoir storage conditions for most dams.
- **The risk comes from very high and sudden inflow due to extreme rainfall, especially when the reservoirs are already full. Any further increase in inflow when the dams have already reached their maximum storage capacity can pose challenges for reservoir operations**
- Reservoirs can help prevent flooding, but when they are already full and if the inflow is high, then the dams can create a flood-like situation due to sudden water release. Chennai in 2015 and many places in Kerala in 2018 witnessed massive flooding due to heavy inflow into already full reservoirs.
- Compared with central and south India, north India is projected to experience higher warming in the future.
- Similar to substantial warming, most reservoir catchments are likely to witness increased precipitation due to global warming.
- The study found that inflow to a few dams in Ganga, Mahanadi, Brahmani, and west-coast river basins is projected to decline in the future. This reduction in inflow is due to increase in atmospheric water demands in response to the considerable warming compared to increase in precipitation.

Timeline of changes

- **The projected change in hydropower potential is the highest in the far period (-5% to 62.8%) and the lowest for the near period (-6.2% to 39%).**
- Substantial warming projected for north India may reduce snow and glacial storage, reducing snowmelt water contribution in the long run.
- But a substantial increase in rainfall is more likely to compensate for the reduction from snowmelt in north India. The projected decline in hydropower even with increased precipitation for a few dams can be attributed to the higher evapotranspiration rate than precipitation in the future.

Context

- Shri Bhupender Yadav, Union Minister for Environment, Forest and Climate Change launched the 'Save Wetlands Campaign' in the presence of Chief Minister of Goa. This campaign is structured on a "whole of society" approach for wetlands conservation, enabling affirmative actions for wetlands conservation at all levels of the society and involving all strata of the society. This campaign over next one year will include sensitizing people of the value of wetlands, increasing the coverage of wetland mitras and building citizen partnerships for wetlands conservation.
- The State Governments and Union Territory administrations celebrated World Wetlands Day (WWD) at all 75 Ramsar sites this year with over 200 events.

Details

About World Wetlands Day:

- **The World Wetlands Day is observed on 2nd February every year all over the world to commemorate the signing of Ramsar Convention on Wetlands of International Importance in 1971.**
- India is a party to the Convention since 1982 and has so far declared 75 wetlands as Ramsar sites covering 23 states and Union Territories.
- **The 2023 theme for World Wetlands Day is 'Wetland Restoration' which highlights the urgent need to prioritize wetland restoration.**
- It is a call on an entire generation to take proactive action for wetlands, by investing financial, human and political capital to save the wetlands from disappearing and to revive and restore those that have been degraded.

Wetlands:

- Wetlands, according to the Environment Ministry, are an "area of marsh, fen, peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres, but does not include river channels, paddy fields, human-made water bodies/tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes."
- Wetlands are locations where water plays a major role in regulating the environment and the plant and animal life that exists there.
- They happen where the water table is at or near the earth's surface, or where the land is flooded.
- "Lands transitioning between terrestrial and aquatic eco-systems where the water table is generally at or near the surface or the land is covered by shallow water," according to the definition of wetlands.

Types of wetlands

Coastal Wetlands:

- Coastal wetlands include shorelines, beaches, mangroves, and coral reefs, which are situated between land and open sea and are not impacted by rivers.
- Mangrove wetlands, which may be found in protected tropical coastal locations, are an excellent example.

Shallow Lakes and Ponds:

- Shallow lakes and ponds are wetlands with limited flow and are made up of permanent or semi-permanent bodies of water.
- Vernal ponds, spring pools, salt lakes, and volcanic crater lakes are among them.

Marshes:

- These are characterised by herbaceous (non-woody) flora suited to wet soil conditions and are occasionally saturated, flooded, or ponded with water.
- Tidal marshes and non-tidal marshes are the two types of wetlands.

Swamps:

- These are dominated by trees and shrubs and are predominantly nourished by surface water supplies.
- Swamps can be found in floodplains that are either freshwater or saltwater.

Bogs:

- Bogs are wet peatlands found in historic lake basins or landscape depressions. Rainfall provides almost all of the water in bogs.

Estuaries:

- The area where rivers meet the sea and the water transforms from fresh to salt may be home to a diverse range of wildlife.
- Deltas, tidal mudflats, and salt marshes are among the wetlands.

What is the importance of wetlands?

- Wetlands are extremely productive ecosystems that account for about two-thirds of the world's fish catch.
- Wetlands play a crucial part in the watershed's ecosystem. The combination of shallow water and high nutrient levels is perfect for the growth of creatures that serve as the foundation of the food web, feeding a variety of fish, amphibians, shellfish, and insects. Wetlands are extremely productive ecosystems that account for about two-thirds of the world's fish catch.
- Microbes, plants, and wildlife in wetlands play a role in world water, nitrogen, and sulphur cycles. Instead of releasing carbon dioxide into the sky, wetlands retain it in their plant communities and soil.
- Wetlands serve as natural barriers that capture and release surface water, rain, snowmelt, groundwater, and flood waters throughout time. Wetland vegetation also lowers soil erosion and slows the pace of flood flows, decreasing flood heights.
- Wetlands are essential for human and environmental survival. More than one billion people rely on them for a living, and wetlands are home to 40% of the world's biodiversity.
- Food, raw materials, genetic resources for pharmaceuticals, and electricity are all dependent on wetlands.
- They are vital in transportation, tourism, and people's cultural and spiritual well-being.
- They offer habitat for animals and plants, and many of them sustain a diverse range of life, including species and animals found nowhere else.
- Many wetlands are natural wonders that attract tourists, and many are significant to Aboriginal people.
- Wetlands also have a lot of advantages for industry. They are important to the commercial and recreational fishing sectors because they serve as nurseries for fish and other freshwater and marine species.

What are the threats to wetlands?

- Wetlands near metropolitan areas are increasingly being developed for residential, industrial, and commercial purposes. Urban wetlands are critical for the long-term sustainability of public water sources.
- Paddy fields have been planted across vast swaths of marshes. The hydrology of the adjoining wetlands was considerably affected by the construction of a vast number of reservoirs, canals, and dams to supply irrigation.
- Natural water filters are found in wetlands. They can only clean up fertilisers and pesticides from agricultural runoff; they can't clear up mercury from industrial sources or other forms of contamination.
- Increased air temperature, precipitation changes, higher storm, drought, and flood frequency, increased atmospheric carbon dioxide concentration, and sea level rise might all have an impact on wetlands.
- Material is removed from a marsh or riverbed. Dredging of streams lowers the water table in the area and dries off nearby wetlands.
- Wetlands are drained by digging canals into the earth that collect and convey water away from the area. The water table is lowered, and the wetland is dried off.
- Exotic imported plant species such as water hyacinth and salvinia pose a threat to Indian wetlands. They block up rivers and crowd out native plants.

Facts

- **India has the largest network of Ramsar Sites in Asia, making these sites a critical ecological network for conservation of global biological diversity and supporting human well-being.**
- The Ministry of Environment, Forest and Climate Change (MoEFCC) launched **Mission Sahbhagita in 2022 with a mission of 'a healthy and effectively managed network of 75 wetlands of national and international significance** which support water and food security; buffer from floods, droughts, cyclones and other extreme events; employment generation; conservation of species of local, national and international significance; climate change mitigation and adaptation actions; and recognition, conservation and celebration of cultural heritage.'

Must read:

<https://www.iasgyan.in/blogs/ramsar-convention>

GLOBAL CLIMATE RESILIENCE FUND

GS-III ENVIRONMENT & ECOLOGY

Context

- Former US secretary of state Hillary Clinton Sunday announced that a global Climate Resilience Fund, in partnership with Self Employed Women's Association (SEWA), will work to tackle challenges faced due to rising temperatures due to climate change.

Details

About the fund:

- **The fund will empower women and communities to fight climate change and help provide new livelihood resources and education**

- The **50 million dollar** Global Climate Resilience Fund for women was announced by Clinton Global Initiative with the American Indian foundation, SEWA (Self Employed Women's Association founded by late activist Ela Bhatt) and other organisations.
- It aims to offer solutions to the problems of women working under the sun, especially for workers in the informal sector like construction, waste recycling, plastic, farming, etc.
- The Clinton Global Initiative (CGI), Rockefeller Resilience Centre, Desai Foundation, the AI Gore Foundation, Council for Inclusive Capitalism and the American India Foundation that worked during the 2001 earthquake will work with SEWA to address this significant challenge.

SEWA

- **Self-Employed Women's Association (SEWA) was set up in 1972 by Ela Bhatt.**
 - She belonged to a family of freedom fighters; her grandfather had walked the Dandi March with Mahatma Gandhi.
 - Her ideology was shaped by the freedom movement, she was a trained lawyer, and She associated with the Textile Labour Association.
 - In 1968, the closure of two major textile mills in Ahmedabad gave Bhatt her first understanding of the importance of women's involvement in running homes.
- According to Ela Bhatt, **SEWA is a trade union of women who "did not need to come together against anyone, they just needed to come together for themselves"**.
- SEWA allows any self-employed woman to become a member with an annual membership fee of just Rs 10. The organisation took a conscious decision to keep men out.
- The network of SEWA is spread across 18 Indian states, in other countries in South Asia, South Africa, and Latin America.

History:

- SEWA was born out of the Textile Labour Association founded by Anasuya Sarabhai and Mahatma Gandhi in 1920, but it could not register as a trade union until 1972 because its members did not have an "employer", and were thus not seen as workers.
- In 1974, SEWA Bank was established to provide small loans to poor women; it was recognised by the International Labour Organisation (ILO) as a microfinance movement.

Impact:

- SEWA has built many institutions for the poor on the principle that "the poor do not need charity, they need an effective tool to aspire and come out of the vicious circle of poverty and vulnerability".
- It has helped rehabilitate women in person, and even in political or social crises, by empowering them through skilling and training.
- **It has changed the lives of over 2.1 million members and has been recognised as a model for the world.**
- The Unorganised Workers Social Security Act (2008), the National Rural Livelihoods Mission (2011), and the Street Vendors Act (2014), are seen as successes of SEWA's struggle. The PM Street Vendors Atmanirbhar Nidhi (PM-SVANidhi) scheme is seen as being inspired by SEWA's microfinance model.

MARINE PROTECTED AREAS

GS-III ENVIRONMENT & ECOLOGY

Context

- **Roughly 10 million square kilometres of the ocean must be annually brought under Marine Protected Areas (MPA) to protect 30 per cent of the world's ocean by 2030**, according to experts speaking at the ongoing fifth International Marine Protected Areas Congress.

Details

- Countries set a target of protecting 30 per cent of the planet's lands and oceans by 2030 at the 15th Conference of the Parties (COP15) to the Convention on Biological Diversity (CBD) held in 2022.
- Currently, MPAs represent only about 6 per cent of the ocean. Of this, 2.4 per cent are fully and highly protected and 3.6 per cent are highly protected. The remaining 0.8 per cent are designated and 2 per cent have been proposed and committed.
- Fully protected areas prevent extractive or destructive activities, while highly protected MPAs allow light extractive activities.
- New MPAs must increase dramatically to 30 per cent in the next seven years, an expert from Marine Conservation Institute said.
- However, it is essential to focus on the quantity and quality of MPAs, they added. Implemented and actively managed MPAs that are fully or highly protected yield the greatest conservation outcomes.

What are MPAs?

- **A marine protected area (MPA) is a section of the ocean where a government has placed limits on human activity.**

- Many MPAs allow people to use the area in ways that do not damage the environment. Some ban fishing. A few do not allow people to enter the area at all.
- MPAs have been established because the ocean and the things that live in it face many dangers. Threats to the ocean include overfishing, litter, water pollution, and global climate change. These threats have caused a decline in the population of many fish, marine mammals, and other sea creatures.
- Marine protected areas can have many different names, including marine parks, marine conservation zones, marine reserves, marine sanctuaries, and no-take zones. More than 5,000 MPAs have been established around the world. Together, they cover 0.8 percent of the ocean.
- Marine protected areas can be established in a variety of aquatic habitats.
- Some MPAs are in the open ocean. Many MPAs protect coastlines. Others cover estuaries, places where rivers enter the sea. In estuaries, freshwater and saltwater mix. Some freshwater habitats, including protected areas in the Great Lakes, are also considered MPAs.

Goals of MPAs

- The main focus of many MPAs is to **protect marine habitats and the variety of life that they support**. For example, the Galápagos Marine Reserve.
- Some MPAs **focus on conserving historic sites such as shipwrecks**. In 1975, the USS Monitor National Marine Sanctuary was established to protect the remains of the USS Monitor ship.
- Other MPAs are established in order to **ensure that resources are sustainable**—that they will not run out. By having limits that prevent overfishing, these MPAs ensure that fish can reproduce and maintain healthy populations. Georges Bank, off the coast of New England and Nova Scotia, Canada, was once one of the world's greatest fisheries.

Levels of Protection

- The strictest type of MPA allows no human entry at all.
- This not only prevents people from fishing, but also prevents people from disturbing delicate habitats.
- No-entry MPAs tend to be small and are often used for research.
- In a no-take MPA, fishing and collecting are not allowed, but people can travel through the area and use it for recreation, such as snorkeling or swimming
- In multiple-use MPAs, the area is protected, but some fishing is allowed.
- Many MPAs are divided up into different zones. In some zones, fishing is allowed, while in other zones, people might not be permitted entry at all.

KELP FORESTS

GS-III ENVIRONMENT & ECOLOGY

Context

- Even as large underwater forests of kelp, brown marine algae seaweeds, are declining by roughly 1.8 per cent annually, there is little information on how local conditions impact their response to global stress factors.

Details

About Kelps:

- Kelp forests are under water areas with a high density of kelp, which covers a large part of the world's coastlines.
- They are recognized as **one of the most productive and dynamic ecosystems on Earth**.
- Smaller areas of anchored kelp are called kelp beds.
- Kelp forests **occur worldwide throughout temperate and polar coastal oceans**.
- In 2007, kelp forests were also discovered in tropical waters near Ecuador.
- In context, algal kelp forest combined with coral reefs account for less than 1% of global primary productivity.
- Physically formed by **brown macroalgae**, kelp forests provide a **unique habitat for marine organisms and are a source for understanding many ecological processes**.
- Kelp forests can **influence coastal oceanographic patterns and provide many ecosystem services**.

Importance:

- Kelps cover 25 per cent of the world's coastlines and provide food and shelter for fish, invertebrates and marine mammal species. They also offer crucial services such as carbon sequestration and erosion control, according to scientists.

Threats:

- Kelps are increasingly threatened by climate change, eutrophication and shoreline development, among other human-induced stressors.
- One such threat is from bryozoa, moss animals that grow as mats on kelps. They drive the seaweed to sink into the seafloor and disintegrate.

- The outbreak can be linked to high temperatures. For example, in 2015, researchers observed an expansive outbreak of bryozoa. These observations coincided with 'the blob', a marine heat wave that emerged across the northeast Pacific Ocean.

Study:

- Kelp forests – underwater ecosystems formed in shallow water by the dense growth of several different species known as kelps – are declining because of climate change, showed a new study.

Findings:

- Kelp populations at equatorward-range edges are particularly vulnerable to climate change as these locations are undergoing warming at or beyond thermal tolerance thresholds
- Due to this, the unique adaptive or evolutionary genetic diversity that the rear-edge populations (populations in warm, low-latitudes) may contain is also under threat due to rapid warming.
- ***Ecklonia radiata*, the dominant and most widely distributed Laminarian kelp in the southern hemisphere, rapidly succumb to warmer temperatures in spring and summer when temperatures exceed 27 degrees Celsius.**
- New populations were found in shallower and cooler winter months with temperatures around 20°C, the findings indicated.
- Contemporary climate change is threatening the high and unique genetic diversity found among eastern Australian low-latitude range-edge populations, with warming causing declines of *radiata* along this coastline
- Kelp can sometimes persist at lower latitudes, aided by cool water upwelling or in deep-water refugia where they are protected by thermocline (the transition layer between the warmer mixed water at the surface and the cooler deep water below)
- **Identification of these refuge areas (a location which supports an isolated or relict population of a once more widespread species) is vital to ensure important genetic diversity is protected and to understand how extant and past climates shape species distribution and evolutionary diversity.**

INDIA'S LITHIUM DISCOVERY AND ASSOCIATED RISKS

GS-III ENVIRONMENT & ECOLOGY

Context

- Lithium reserves have been found **for the first time in the country in Jammu and Kashmir.**
- The 5.9-million-ton reserve of lithium, found in Jammu and Kashmir, is **of the best quality.**

Details

Lithium:

- Referred to as "**white gold**" - **Lithium metal is soft, white, and lustrous**—and several of its alloys and compounds are produced on an industrial scale. Lithium is a **non-ferrous metal** and is one of the key components in EV batteries.

Appearance:

- A soft, silvery metal.
- It has the lowest density of all metals.
- It reacts vigorously with water.

Uses:

- **Electronics:** The most important use of lithium is in rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles.
- **Glass and Grease:** Lithium-ion batteries are also used in ceramics and glass, lubricating greases, polymer production, and air treatment.
- **Medical:** Lithium is also used in some non-rechargeable batteries for things like heart pacemakers, toys and clocks. It is also used in psychiatric medications and in dental imprints. Lithium carbonate is used in drugs to treat manic depression.
- **Nuclear Weapons:** The lighter of the two lithium isotopes is used in the production of Tritium, a key component of nuclear weapons.
- **Infrastructure:** Lithium metal is **made into alloys with aluminum and magnesium**, improving their strength and making them lighter. Aluminum-lithium alloys are used in aircraft, bicycle frames and high-speed trains.
- **Fuel:** Lithium hydride is used as a means of storing hydrogen for use as a fuel.
- **Other:** A magnesium-lithium alloy is used for armour plating. Lithium chloride is one of the most hygroscopic materials known, and is used in air conditioning and industrial drying systems (as is lithium bromide). Lithium stearate is used as an all-purpose and high-temperature lubricant.

Biological role

- Lithium has no known biological role. It is toxic, except in very small doses.

Natural abundance

- Lithium **does not occur as the metal in nature**, but is found combined in small amounts in nearly all igneous rocks and in the waters of many mineral springs.
- Spodumene, petalite, lepidolite, and amblygonite are the more important minerals containing lithium.

- Most lithium is currently produced in Chile, from brines that yield lithium carbonate when treated with sodium carbonate.
- The metal is produced by the electrolysis of molten lithium chloride and potassium chloride.

Lithium Production in the world

- Australia, Chile, China and Argentina are the world's top four lithium-producing countries.

Lithium Triangle

- The Lithium Triangle is a **region of the Andes rich in lithium reserves around the borders of Argentina, Bolivia and Chile.**
- The lithium in the triangle is concentrated in various salt pans that exist along the Atacama Desert and neighboring arid areas.
- The area is thought to hold around 54% of the world's lithium reserves.
- The Indian Navy has shown interest in the Lithium Triangle as lithium will be required on Li-ION batteries that are planned to be fitted in future submarines.

Recent finds in India

- As of now, **India currently imports all its lithium needs.**
- The Department of Atomic Energy, Government of India has discovered **1600kg Lithium in Mandla district of Karnataka.**
- The find in Mandya, Karnataka is extremely small in quantitative terms, but it marks some initial success in the attempt to domestically mine Lithium.
- Lithium reserves in large quantity has been found **for the first time in the country in Jammu and Kashmir.**
- The **Marlagalla-Allapatna area, along the Nagamangala Schist Belt**, which exposes mineralized complex pegmatites (igneous rocks), is seen as among the most promising geological domains for potential exploration for lithium and other rare metals.

Significance of domestic exploration

- In the coming future, battery manufacturing is expected to accelerate over the coming years, particularly as electric vehicles become more prevalent.
- Thus, analysts expect worldwide demand for Lithium will more than double by 2024.
- However, as of now, India is entirely relying on the import of lithium-ion batteries from other countries, and is particularly dependent on China, who has dominated the lithium manufacturing industry.
- It is estimated, that China controls around half of the world's lithium production, thereby relying on its own reserves, as well as imports from South America.
- The new discovery will reduce import dependency and promote make in India, along with Atmanirbhar Bharat in the energy sector.

India's Lithium Story

- India's first Lithium plant has been set up at Gujarat in 2021, where Manikaran Power Limited will invest Rs 1000 crore to set up this refinery. The refinery will use Lithium ore to produce base battery material.
- TATA is working on 100% made in India Li-ion batteries.
- The Indian Space Research Organisation (ISRO) manufactures these batteries, but their quantity is presently limited, and they are severely restricted in use.
- In 2018, Central Electro Chemical Research Institute in Tamil Nadu, in collaboration with RAASI Solar Power Private Limited signed a Memorandum of Agreement for Li-battery operation and technology transfer to India.

What are the geostrategic concerns?

- Critical mineral dependencies constitute a major geostrategic concern in the transition to net-zero carbon energy systems. A high level of dependence on China for Li and other crucial metals and their derivatives are also perceived to be sources of energy security risks.
 - The growing geopolitical rivalry with China makes India's security considerations more immediate as well, especially also in light of the longstanding, and recently escalating, territorial and border disputes.
 - **To reduce dependence on China, the Indian government and industry are pushing for a 'Rare Earths Mission' to exploit the country's critical mineral reserves, which account for 6% of the world's rare-earths' reserves prior to the discovery of Li in J&K.**
- The new discovery has more geostrategic implications considering the geopolitical sensitivity of its wider location. **Although Reasi is in the relatively more stable Jammu region, the Union territory of J&K (previously a state) has been the site of historical cross-border tensions between India and Pakistan, domestic insurgency, and terrorism.**

What are the environmental effects of Li mining?

- Extracting Li from hard rock mines, similar to what has already been proposed in J&K, entails open-pit-mining followed by roasting the ore using fossil fuels. **Industry estimates suggest that this process consumes 170 cubic metres of water and releases 15 tonnes of CO₂ for every tonne of Li extracted.**

Open-pit-mining, refining, and waste disposal from these processes substantially degrades the environment, including depletes and contaminates waterways and groundwater, diminishes biodiversity, and releases considerable air pollution. This said, the geological context of mining in J&K differs from Australia, which has the largest Li stock in hard rock mines, in one major way.

- **The Himalaya is the youngest mountain range in the world and is much more unstable.** Incidents of land sinking have also been reported from a village in Doda district in Chenab valley, which extends to some parts of Reasi.
- **In the densely populated context of India, the socio-environmental effects of mining are likely to be far worse** than they have been in Australia and likely comparable to lithium extraction in South America.

Learnings from South America

- In April 2022, Mexican lawmakers introduced reforms to create a state-owned entity to extract, process and sell Li and outlaw all direct private investment and production in the Li sector. **Li mining has had adverse socio-environmental consequences in the region, testing its laws meant to protect Indigenous peoples.**
- In 2019, Chile's environmental regulators approved a \$25-million compliance plan for Li miner SQM. However, the company failed to satisfy authorities, who reversed their decision in 2020.
- While such comparisons must account for inter-regional differences, **these developments point to the importance of a strong regulatory apparatus that can address both the environmental and the social consequences of Li mining.**

Steps has India taken so far

Extracting the Metal

- India – whose diplomatic ties with Latin America have historically been rather weak – had high-level visits with all three countries of the lithium triangle in 2019.
- India, through its Khanij Videsh India Limited (KABIL), had signed an agreement with an Argentinian firm to jointly prospect lithium in Argentina.
- The same delegation from KABIL has also visited Bolivia and Chile to explore possibilities of lithium extraction.
- This underlines India's interest in the regions' lithium.
- The visit of President Shri Ram Nath Kovind to Bolivia – which is the first-ever state visit to the country – has resulted in a Memorandum of Understanding for Cooperation in Geology and Mineral Resources.

Trivia

During FSP 2016-17 to FSP 2020-21, Geological Survey of India carried out 14 projects on Lithium and associated elements in Bihar, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Meghalaya, Karnataka and Rajasthan. During the current FSP 2021-22, GSI has taken up 5 projects on Lithium and associated minerals in Arunachal Pradesh, Andhra Pradesh, Chhattisgarh, Jammu & Kashmir and Rajasthan.

Towards domestic production of lithium-ion batteries

- The Indian government has started to explore domestic production of lithium-ion batteries.
- The government asked states to compete for establishing domestic manufacturing facilities for lithium-ion batteries.
- This led Telangana to announce 200 acres of land available to build a 5 GW lithium-ion battery factory.
- To promote the domestic production, the government has announced an increase in basic customs duty on parts of electric passenger vehicles (from April 2020) and lithium-ion cells (from April 2021).
- India's Manikaran Power and Australia's Neometals company stroke a deal in June 2020, to jointly fund a refinery in Australia to produce battery grade material for electric vehicles
- The domestic exploration push, comes at a time when India has stepped up its economic offensive against China.

Potential Geological domains of Lithium in India

- Brines of Sambhar and Pachpadra in Rajasthan, and Rann of Kachchh in Gujarat.
- The major mica belts in Rajasthan, Bihar, and Andhra Pradesh, and the pegmatite belts in Odisha and Chhattisgarh apart from Karnataka, are the other potential geological domains.

Delay in mapping reserves

- Experts say while India requires lithium for its energy needs, there has been **no comprehensive effort to map local reserves of**

lithium so far. India is seen as a late mover in attempts to enter the lithium value chain.

- The discovery is coming at a time when EVs are predicted to be a sector ripe for disruption.
- There can be an inflection point for battery technology – with several potential improvements to the li-ion technology, and alternatives are in advanced stages of commercialization.

Way Ahead

- The growing demand for Lithium in India is driven by the goal of Indian government **to become one of the largest electric vehicle markets world over.**
- NITI Aayog has set an ambitious target **to increase the number of electric vehicles by 30 percent by 2030.**
- In line with these goals, it is high time for India to engage in extraction and exploitation of lithium and develop an industry to produce lithium-ion products domestically.

GLOBAL SEA-LEVEL RISE

GS-III ENVIRONMENT & ECOLOGY

Context

- **India, China, Bangladesh and the Netherlands face the highest threat of sea-level rise globally, according to a new report by the World Meteorological Organization (WMO).**

Details:

Findings of the report:

- The report – **“Global Sea-level Rise and Implications”** – stated that several big cities in all continents are threatened by the rise in sea level.
- These include Shanghai, Dhaka, Bangkok, Jakarta, Mumbai, Maputo, Lagos, Cairo, London, Copenhagen, New York, Los Angeles, Buenos Aires and Santiago.
- It is a major economic, social and humanitarian challenge.
- **Sea-level rise threatens coastal farmlands and water reserves and resilience of infrastructures as well as human lives and livelihoods, the report noted.**
- **The impacts of average sea-level rise are boosted by storm surges and tidal variations, as was the situation during the landfall of hurricane Sandy in New York and Cyclone Idai in Mozambique.**
- According to future estimates based on climate models and ocean-atmosphere physics, the WMO reported that the speed of melting of the largest global ice mass in Antarctica is uncertain.
- **While sea-level rise is not globally uniform and varies regionally, continued and accelerating sea-level rise will “encroach on coastal settlements and infrastructure and commit low-lying coastal ecosystems to submergence and loss”, according to the report.**
- If trends in urbanization in exposed areas continue, this will exacerbate the impacts, with more challenges where energy, water and other services are constrained.
- Climate change will increasingly put pressure on food production and access, especially in vulnerable regions, undermining food security and nutrition and increases in frequency, intensity and severity of droughts, floods and heatwaves, and continued sea level rise will increase risks to food security in vulnerable regions.
- According to WMO, the population potentially exposed to a 100-year coastal flood is projected to increase by about 20% if global mean sea level rises by 0.15 metres relative to 2020 levels.
- This exposed population doubles at a 0.75-metre rise in mean sea level and triples at 1.4 metres rise without population change.

Case studies

- **Mumbai:** Around 998 buildings and 24 km of road length will be affected by potential sea-level rise by 2050.
- **Chennai:** road length of 5 km and 55 buildings are at the risk; in Kochi, around 464 buildings are likely to be impacted by 2050 with the number rising to around 1,502 buildings during high tide.
- **Thiruvananthapuram:** due to sea-level rise by 2050 and sea-level rise with high tide, 349 and 387 buildings, respectively, are likely to be impacted.
- **Visakhapatnam:** Around 206 buildings and 9 km of the road network are likely to be inundated due to potential coastline changes by 2050.

What’s causing sea level to rise?

- Global warming is causing global mean sea level to rise in multiple ways.
 - First, **glaciers and ice sheets worldwide are melting and adding water to the ocean.**
 - Second, the **volume of the ocean is expanding as the water warms.**

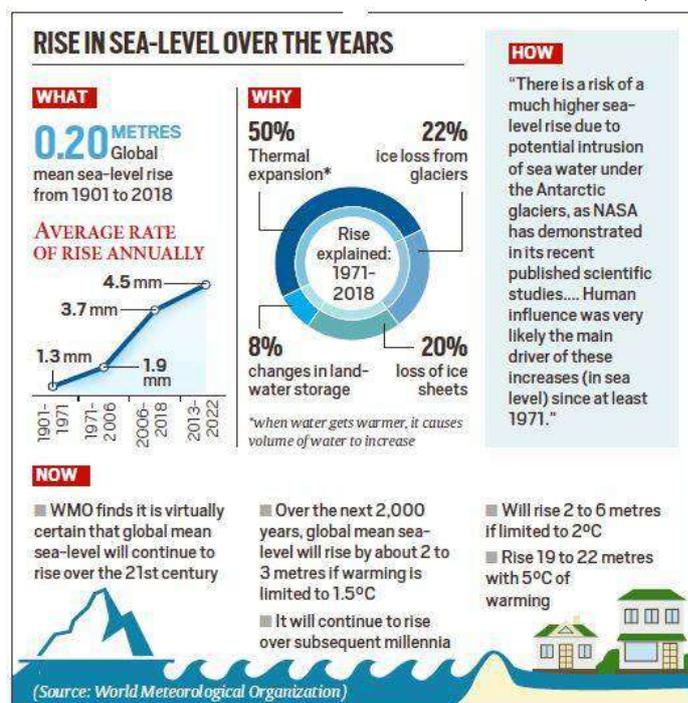
- Third, much smaller contributor to sea level rise is a decline in the amount of liquid water on land—aquifers, lakes and reservoirs, rivers, soil moisture. This shift of liquid water from land to ocean is largely due to groundwater pumping.

Consequences of Sea level rise

- Devastating effects on coastal habitats farther inland
- Destructive erosion
- Wetland flooding
- Threatens infrastructure necessary for local jobs and regional industries.
- Aquifer and agricultural soil contamination with salt
- Threatening farmland, housing or recreation areas.
- Lost habitat for fish, birds, and plants.

How drowning of cities can be prevented?

- Land reclamation
- Increasing the height of roads
- Strengthening buildings against corrosion or relocating them.



World Meteorological Organization (WMO)

- It is an intergovernmental organization with a membership of 193 Member States and Territories.
- It was established by the ratification of the WMO Convention in 1950.
- WMO became the specialised agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences a year later.
- The UN Economic and Social Council is the parent organization of WMO.
- WMO is headquartered at Geneva.
- WMO is dedicated to international cooperation and coordination on
 - the state and behaviour of the Earth's atmosphere, its interaction with the land and oceans,
 - the weather and climate it produces, and
 - the resulting distribution of water resources.
- It facilitates and promotes
 - the establishment of an integrated Earth System observation network to provide weather, climate and water-related data
 - the creation of standards for observation and monitoring
 - the provision of weather, climate and water-related services - to reduce disaster risks and contribute to climate change adaptation etc.
 - the coordination of research and training in meteorology and related fields
- Major reports published by the WMO are - Status of World Climate; Greenhouse Gas Bulletin.

LEAD POISONING

GS-III ENVIRONMENT & ECOLOGY

Context

- There have been numerous instances of people suffering lead poisoning on account of them dealing with lead related products such as recycling old lead-acid batteries

Details

- The tolerable limit of 5 µg/dL has been set by WHO.

Treatment:

- Treatment for lead poisoning involves **chelation**, in which the patient is given medication that binds with lead molecules and facilitates their excretion through urine.
- But it can also lead to the loss of essential elements like iron, zinc and calcium.

An ongoing crisis:

- Lead poisoning is not a new concern. For more than a century, scientists have been aware that the **naturally occurring metal has no biological function that can benefit the human body, but can cause devastating physical and developmental impacts.**

- However, despite the awareness, lead toxicity continues to be a public health concern.
- **Half the children in India report high blood lead levels**, reveals a 2020 report by the UN Children’s Fund (UNICEF) and Pure Earth, a US-based environmental health non-profit.
- The report says 275 million children in India record blood lead levels of beyond the tolerable limit of 5 µg/dL. Of these, 64.3 million children’s blood lead levels exceed 10 µg/dL
- Adults are also affected by lead toxicity.
- In terms of average blood lead levels among the population, some 23 states exceed the 5 µg/dL margin
- Further, a 2016 analysis by the Institute for Health Metrics and Evaluation (IHME), an independent population health research centre at the University of Washington School of Medicine, US, estimates that **lead toxicity in India contributes to 4.6 million Disability-Adjusted Life Years (number of years lost due to disease burden) and 165,000 deaths annually.**
- Lead toxicity is not just a concern in India. **The UNICEF-Pure Earth report notes around one in three children worldwide record blood lead levels of over 5 µg/dL.** Countries with this burden include Iran, Afghanistan, Yemen, Peru, Vietnam, the Philippines and parts of Central Africa.

Everyday risks
There is potential for lead exposure in several common occupations and products that are used in nearly every household

OCCUPATIONAL SOURCES	Non-Occupational Sources
Battery work	Traditional medicine
Mining	Vehicular exhaust
Glass manufacturing	Contaminated cosmetics and sindoor
Automobile repair	Household storage batteries
Ceramic work	Household paints
Painting	Contaminated spices
Pottery	Effluent from lead-based industries
Smelting	Contaminated soil, dust and water near lead-based industries
Printing work	Food grown in lead contaminated areas
Plumbing	Retained bullets
Soldering	Food stored or cooked in lead-coated vessels
Making lead pipes and plastic	Painted toys

Source: "Assessment of Lead Impact of Human and India's Response", Niti Aayog and Council of Scientific Research

Debilitating impacts:

- The adverse impacts of lead entering the human body have been known since 1920.
- **Once lead enters the blood stream, it goes directly to the brain, particularly so in children.** This is because there is no specific blood-brain barrier for lead that can restrict movement of the metal.
- **During pregnancy, if the woman consumes lead in some form, there is no placental barrier either, so the lead is transferred to the foetus**
- In a newborn, lead poisoning can result in premature birth, low birth weight and slow growth. In children and adults, it can cause anaemia as well as neurological, skeletal and neuromuscular illnesses.

Causes of spread:

- In India, it could be due to the fact that **lead does not get as much attention as other public health concerns.**
- First of all, the country **lacks systems to screen populations** for possible exposure.
- Even if screening occurs, **determining the source of exposure is not easy.**
- A study identified leaded petrol as a key source. India had already begun phasing out leaded fuel in 1994, first by introducing low-lead petrol and then by mandating use of unleaded fuel in April 2000.
- Sources of lead poisoning change from location to location, and there are usually multiple exposure sources in any given place.
- According to the NITI Aayog-CSIR report, **some common occupational and non-occupational sources of lead may be present all around people.** These include smelting and mining, which lead to a release of lead into the atmosphere risking lives of workers in these industries as well as those who live in nearby areas.
- The report notes agricultural practices close to smelting and mining industries have also resulted in elevated lead levels in meat, milk and soil.
- Many developing and under-developing countries have **a lack of stringent laws and poor policy implementation, resulting in poor government control over informal recycling sectors...**As a result, enormous quantities of (lead)-acid batteries are recovered without using scientific techniques in an unregulated and uncontrolled way.
- Another **common source is food.** As of now, spices are the only identified sources of lead poisoning

Implementation of measures to protect

- There are measures to protect workers from toxic metal exposure under the Occupational Safety and Health Administration (OSHA) Regulations.
- However, since **implementation of these norms is voluntary and there is no inspection agency, regulation exists only on paper**
- Similarly, though the Factories Act, 1948, also has provisions to protect the health and safety of workers, it is difficult to cover all industries.
- Management of lead-acid batteries came under the Batteries (Management and Handling) Rules, 2001. But enforcement capacity to ensure safe and environmentally sound recycling has been inadequate.
- In 2022, the Union Ministry of Environment, Forest and Climate Change notified the Battery Waste Management Rules, 2022. The new rules aim at reducing share of battery recycling in the informal sector and stress on extended producer responsibility.

- The country initiated a phase out of lead-based paints. **But even then, small and medium-scale manufacturers continue to record high levels of lead in their paints.**

Way forward

- **Regular screening and testing of lead sources** will inform about region-wise prevalence and help tailor interventions.
- The country must also **enhance capacity for testing**, currently done for blood lead levels
- There are **gaps in treatment protocols**. CSIR underlines the need to train healthcare workers to monitor, detect and treat this condition.
- The final tool is **public awareness**. There is a need to devise strategies on a state level, through regional bureaucracy, local press and vernacular language to have tangible impact.

SEAGRASSES

GS-III ENVIRONMENT & ECOLOGY

Context

- A species of marine seagrass found in the Mandapam region near Rameswaram has the potential to be used in chemotherapy treatment for liver cancer (hepatocellular carcinoma), according to a study conducted by a team of researchers from University of Madras and Presidency College.

Details

- The species, *syringodium isoetifolium*, was collected from Mandapam region almost two years ago.
- The present study showed that the **isolated compound phlorizin, extracted from the seagrass has potent anti-cancer activity against HepG2 cell lines (liver cancer cell lines) and has the potential to be used in chemotherapy for liver cancer patients.**

About Seagrasses

- These are **flowering plants** which are found in **our sea beds and ocean floors**. It is one of the groups of marine angiosperms. They often lives entirely submerged.
- With tiny flowers and strap-like or oval leaves, they **require sunlight for photosynthesis**.
- Though seagrasses inhabit all types of substratas (layers) from mud to rock, the **lush green seagrass beds are found extensively in muddy and sandy substratas**.
- **Distribution:** The major seagrass beds exist along our coastline of **Gulf of Mannar and Palk Bay** regions on the east coast, **Gulf of Kachchh region on the west coast, the lagoons of islands in Lakshadweep in the Arabian Sea and Andaman and Nicobar Islands in the Bay of Bengal**.
- **Important Species:** Some of the important seagrasses are Sea Cow Grass (*Cymodocea serrulata*), Thready Seagrass (*Cymodocea rotundata*), Needle Seagrass (*Syringodium isoetifolium*), Flat-tipped Seagrass (*Halodule uninervis*), Spoon Seagrass (*Halophila ovalis*) and Ribbon Grass (*Enhalus acoroides*). These were once abundant in the Gulf of Mannar region but are now threatened.
- **Reproduction:** Seagrasses reproduce through both **sexual and asexual methods**.
 - The pollen from the flower of the male plant is transferred to the ovary of the female flower through the sexual reproduction method. This is known as **submarine pollination**. Most species undergo this process and complete their life cycle underwater.
 - Seagrasses can also **reproduce asexually by branching off at their rhizomes** (modified subterranean plant stem that sends out roots and shoots from its nodes). Because of this character, they can recover after being cut by grazers like dugongs or disturbed by storms.
- Based on field surveys and satellite data, the National Centre for Sustainable Coastal Management has estimated the **total extent of seagrass ecosystem in India to be 516.59 km²**.
- Seagrass ecosystems play an important role in **sequestering carbon, nurture fish communities and support marine mammals such as sea cows or dugongs**.
- **Usage:**
 - **Traditional medicine:** used for a variety of therapeutic purposes such as wound-healing, fever, stomach aches, muscle pains and skin diseases.
 - **Biomedical applications** such as anti-cancer, anti-diabetic, anti-inflammatory, anti-fungal, anti-bacterial and anti-viral activities.

Seagrasses - 'Ecosystem Engineers'

- Seagrasses are known for providing many **ecosystem services**. They are considered to be 'Ecosystem Engineers'.
- Seagrasses help **maintain water quality**. They trap fine sediments and suspended particles in the water column and increase water clarity.

- They **filter nutrients** released from land-based industries before they reach sensitive habitats like coral reefs.
- Ocean bottoms without seagrasses are prone to intense wave action from currents and storms. The extensive vertical and horizontal root systems of seagrasses **stabilise the sea bottom similar to land grasses that prevent soil erosion.**
- Seagrass habitats **protect juvenile and small adult fish from large predators.** Marine animals that live in soft sea bottom sediments also take shelter in seagrass meadows.
- Seagrasses **protect worms, crabs, starfishes, sea cucumbers, sea urchins, etc, from strong currents.** Seagrass leaves support seaweeds by providing anchoring facilities. Seahorses and lizardfish are found living in seagrass meadows almost throughout the year.
- Seagrasses **provide food as well as habitat for fishes,** octopuses, shrimp, blue crabs, oysters, sponges, sea urchins, clams, etc. They are called '**the lungs of the sea**' as they release oxygen into the water through photosynthesis.
- Some endangered marine organisms like **dugong,** green turtle, etc, graze directly on seagrass leaves. Many other microorganisms take the nutrients indirectly from seagrasses.
- **Bottle-nosed dolphins feed on the organisms** that live in seagrass areas. Detritus (natural waste) of decomposed dead seagrass supplies food for worms, sea cucumbers, crabs, anemones and ascidians.
- Seagrass meadows **provide ideal nursery sites for important commercial marine** life like squids and cuttlefish in Tamil Nadu.
- Seagrasses were used as **fertiliser for sandy soil.** The grasses had been used for bandages also.
- Seagrasses absorb 83 million tonnes of carbon from the atmosphere annually. Seagrasses **can capture carbon from the atmosphere up to 35 times faster than tropical rainforests.**

Why there is need to protect sea grasses?

- Seagrass beds are **facing decline** all over the world at the **rate of 2-5 per cent annually.** Some 30,000 square kilometres of seagrass has been lost during recent decades at a global level.
- Seagrasses face **natural disturbances** like grazing, storms, ice-scouring and desiccation. Human disturbances like eutrophication, mechanical destruction of habitat, overfishing and release of nutrients play havoc on seagrasses.
- **Siltation, trawling, coastal engineering construction, pollution,** etc, are causing deterioration of seagrasses. Sea Cow (Dugong) and Green Turtle that depend on seagrass for their food also face a severe threat.
- Protection and restoration of seagrasses can play a significant role in **mitigating climate change.**
- If seagrass habitats are lost, the marine organisms that depend on them for their survival may also **face extinction, resulting in the loss of marine ecosystem productivity.**
- There is an urgent need to take earnest measures to conserve seagrasses and their habitats.
- The International Union for the Conservation of Nature should intervene immediately and study the status of the different seagrass species before they become extinct.

Measure taken for seagrass conservation

- Seagrasses have been studied for over two decades with the financial support of the Ministry of Environment, Forest and Climate Change and the State/UT Governments.
- Academic and research institutions have been actively involved in **seagrass mapping, species diversity and its transplantation.**
- Government has initiated a project across the States of Andhra Pradesh, Maharashtra, and Odisha on enhancing climate resilience of India's coastal communities, which includes a grant of US\$ 43.419 million by Global Climate Fund (GCF) covering 24 ecosystems such as **mangroves and seagrasses.**

BBNJ TREATY

GS-III ENVIRONMENT & ECOLOGY

Context

- A new round of negotiations on the much-awaited **United Nations High Seas Treaty for conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ)** began in New York February 20, 2023.

Details

- The two-week meeting resumed after member nations **failed to reach a consensus on the treaty at the fifth session of the Intergovernmental Conference (IGC) on the BBNJ in August 2022.**
- **The high seas are areas beyond the 200 nautical mile limit of the exclusive economic zones of coastal states.**
- Home to around 270,000 species, the high seas cover more than two-thirds of the global ocean.
- Over 1,550 marine animals and plants face a risk of extinction, with climate change impacting at least 41 per cent of threatened marine species
- Only 1.44 per cent of the high seas are protected.
- **The legally binding treaty, if adopted, will safeguard global ocean health, climate resilience, socio-economic well-being**

and food security for millions of people.

Sharing of MGRs

- Member states discussed an important element under the treaty: The benefit sharing of marine genetic resources (MGRs).
- It includes marine plants, animals and microbes from areas beyond national jurisdiction.
- The element aims to address the inequalities in sharing benefits from samples, basic and applied research results as well as monetary benefit sharing from MGRs.

What is the proposed UN High Seas treaty?

- Also referred to as the 'Paris Agreement for the Ocean', the treaty to deal with Biodiversity Beyond National Jurisdiction has been under discussion for several years.
- The proposed treaty concerns the ocean existing beyond the Exclusive Economic Zones that lie from the coast of a country to about 200 nautical miles or 370 km into the sea, till where it has special rights for exploration.
- Waters beyond that are known as open seas or high seas.
- The treaty was to be negotiated under the United Nations Convention on Laws of the Sea (UNCLOS) of 1982 which governs the rights of countries regarding marine resources.
- As there is no treaty for conserving the health of vast swathes of the earth's oceans, a UN resolution in 2017 had decided to rectify this while setting 2022 as the deadline.
- The pandemic resulted in many delays, and later, a High Ambition Coalition, which now has more than 100 countries including India, the US, and the UK, came about and put the focus on '30x30' goals – protecting 30% of the ocean by 2030. After the latest deadlock, talks will only resume next year, unless a special session is called.
- Some aspects of negotiations included establishing marine protected areas to put limits on certain activities, environmental impact assessments or clearances for sustainability of works, financial support to countries and sharing other scientific knowledge. The
- International Union for Conservation of Nature has said binding agreements are needed for this treaty to be effective.

About United Nations Convention on Biological Diversity (CBD)

- CBD is a **legally binding Convention** recognized for the first time, that the conservation of biological diversity is “a common concern of humankind” and is an integral part of the development process.
- The agreement **covers all ecosystems, species, and genetic resources.**

Objectives

- The conservation of biodiversity
- Sustainable use of the components of biodiversity
- Sharing the benefits arising from the commercial and other utilization of genetic resources in a fair and equitable way
- It acknowledges that substantial investments are required to conserve biological diversity.

Further read: <https://www.iasgyan.in/daily-current-affairs/biodiversity-in-areas-beyond-national-jurisdiction>

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PANGONG TSO

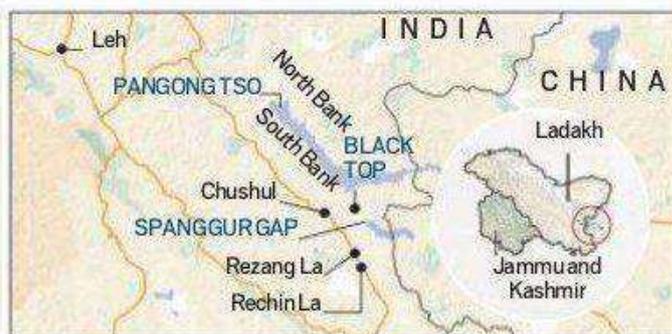
PLACES IN NEWS

Context

- India's first frozen lake marathon was held in Ladakh's Pangong Tso.

Geography

- Pangong Tso is an endorheic saline lake spanning eastern Ladakh and West Tibet.
- It has a land-locked basin separated from the Indus River basin by a small elevated ridge.
- It is 134 km long and divided into five sublakes, called Pangong Tso, Tso Nyak, Rum Tso (twin lakes) and Nyak Tso.
- The lake, a glacial melt, has mountain spurs of the Chang Chenmo range jutting down, referred to as fingers.



Pangong Tso and LAC

- Pangong Tso is in disputed territory. The Line of Actual Control passes through the lake.
- Approximately 50% of the length of the overall lake lies within Tibet China, 40% in Ladakh India and the rest is disputed and is a de-facto buffer zone between India and China.
- An Inner Line Permit is required to visit the lake as it lies on the Sino-Indian Line of Actual Control.

Recognition

- The lake is in the process of being identified under the Ramsar Convention as a wetland of international importance.
- This will be the first transboundary wetland in South Asia under the convention.

SOUTH CHINA SEA

PLACES IN NEWS

Context

- Indonesia's President Joko Widodo took over the 2023 chairmanship of the Association of Southeast Asian Nations.
- He is also pushing back against China's so-called "nine-dash line" which claims hegemony over almost the entire South China Sea.

About

- Location:** The South China Sea is a marginal sea of the Western Pacific Ocean. It is bounded in the north by the shores of South China (hence the name), in the west by the Indochinese Peninsula, in the east by the islands of Taiwan and north-western Philippines (mainly Luzon, Mindoro and Palawan), and in the south by Borneo, eastern Sumatra, and the Bangka Belitung Islands.
- State Boundaries:** Clockwise from the north - China, Taiwan, the Philippines, Malaysia, Brunei, Indonesia, and Vietnam.
- Straits nearby:** It communicates with the East China Sea via the Taiwan Strait; the Philippine Sea via the Luzon Strait; the Sulu Sea via the straits around Palawan; the Strait of Malacca via the Strait of Singapore; and the Java Sea via the Karimata and Bangka Strait.
- Gulf that are its parts:** The Gulf of Thailand and the Gulf of Tonkin are part of the South China Sea.
- Economic and Geostrategic importance:** One-third of the world's maritime shipping passes through it. Huge oil and natural gas reserves are believed to lie beneath its seabed. It also contains lucrative fisheries, which are crucial for the food security of millions in Southeast Asia.
- Rivers flowing:** Major rivers that flow into the South China



Sea include the Pearl, Min, Jiulong, Red, Mekong, Rajang, Pahang, Agno, Pampanga, and Pasig Rivers.

- **Territorial claims:** The South China Sea disputes involve both island and maritime claims within the region by several sovereign states, namely Brunei, the People's Republic of China (PRC), Taiwan (Republic of China/ROC), Indonesia, Malaysia, the Philippines, and Vietnam.

Islands and seamounts

- The South China Sea contains over 250 small islands, atolls, cays, shoals, reefs, and sandbars, most of which have no indigenous people, many of which are naturally underwater at high tide, and some of which are permanently submerged. The features are:
 - The Spratly Islands
 - The Paracel Islands
 - Pratas Island and the Vereker Banks
 - The Macclesfield Bank
 - The Scarborough Shoal
- The nine-dash line refers to the ill-defined demarcation line used by the People's Republic of China (China) for its claims of the major part of the South China Sea.

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- SUCCESS

SHORT NEWS ARTICLES

GS-I **CULTURE & HISTORY**

Mukaab

Context

- Saudi Arabia unveiled its latest grand plan to transform its capital city. The new project coming up in Riyadh is called the Mukaab – “cube” in Arabic. It will stand 400 metres high, wide and long, big enough to hold 20 Empire State Buildings.

Details

- The Mukaab will be at the heart of the New Murabba Project, a plan to create “the world’s largest and modern downtown” in Riyadh.
- Set to be completed by 2030, it will be helmed by Crown Prince Muhammad bin Salman.
- This is the latest among a string of ambitious architectural projects planned and undertaken by Saudi Arabia as a part of its Vision 2030, aimed at revolutionising the country’s economy and lifestyle.

What is the Mukaab?

- To be constructed in central Riyadh, the Mukaab “will house over 100,000 residential units, 9,000 hotel rooms and 1.4 million square metres of office space, as well as dozens of entertainment and culture venues.”
- There will also be 1.8 million sq. metres of space dedicated to community facilities.
- Spread over 19 sq. km, the new Murabba project will be built around the concept of sustainability and will add SAR 180 billion (roughly \$ 47 billion) to Saudi Arabia’s non-oil GDP.

Sursingar, Karakattam & Mandolin

Context

- In his Mann ki Baat address, Prime Minister Narendra Modi spoke of several musical instruments and folk artists who he hoped would “continue to inspire everyone at the grassroots towards making performing arts more popular”.

Details

- heritage

Ustad Bismillah Khan YuvaPuraskar:

- It is conferred upon “emerging, talented artists in the field of music and performing arts”.
- UppalapuNagamani is the winner of the Ustad Bismillah Khan YuvaPuraskar 2021 for Carnatic Instrumental.

Sursingar

- Sursingar is a **stringed musical instrument that is similar to the sarod, but which is older and produces deeper notes.**
- The instrument is made of wood and has a gourd attached to a hollow wooden handle with a metal fingerboard.
- The strings of the instrument, usually four in number and made of brass or bronze, are plucked with a metal pick.
- The Sursingar can be played either holding it vertically in front of the musician and supported by his left shoulder like the Veena, or holding it parallel to the ground like the Sarod, or like the Sitar, which is held at an angle of 50-60 degrees to the ground.
- The Sursingar (along with the Rudra Veena and the Surbahar) usually accompanies Dhrupad, the genre of Hindustani vocal music which has a low, deep, and thoughtful pitch.
- With very few artisans now making the Sursingar, the instrument is rarely used in performances.
- **Multi-instrumentalist Joydeep Mukherjee is credited with reviving the Sursingar, along with another “lost” stringed instrument, the Radhika Mohanaveena, named after its creator, Radhika Mohana Maitra.**

Mandolin:

- **Mandolin is another stringed instrument, usually with eight strings that are plucked with a pick, similar to a lute.**
- The Mandolin is a moderately sized instrument, smaller than the Veena, Sitar, or guitar, and was developed in Europe in the 18th century as an evolution of the older Mandora (Mandola).
- The instrument’s modern form and proportions were strongly influenced by its maker Pasquale Vinaccia of Naples (1806-82), and in the 20th century, it was built in a family of sizes from soprano to contrabass.
- The Mandolin has long been part of the Indian film music tradition

- The greatest exponent of the Mandolin in Indian classical music was the late Uppalapu Srinivas, often known as 'Mandolin' Srinivas
- India's best known Mandolinists today are SnehashishMozumder, Pradipto Sengupta, and N S Prasad.

Karakattam:

- Karakattam is an **ancient folk dance of Tamil Nadu in which performers in colourful saris dance with a pot (karakam) on their head to invoke Mariamman, the goddess of rain.**
- V Durga Devi of Salem is a well knownKarakattam dancer.

Lavani Dance

Context

- A NCP leader has directed members of his party to not organise raunchy public shows in the name of Lavani, a folk song-and-dance performance that is popular in Maharashtra.

Details:

What is the Lavani folk art form?

- The word Lavani comes from 'lavanya' or beauty.
- **Lavani is a traditional folk art form in which women dancers wearing nine-yard-long sarees in bright colours, make-up, and ghunghroos perform on dholak beats on a stage before a live audience.**
- As an indigenous art form, Lavani has a history going back several centuries, and it attained particular popularity in the Peshwa era in the 18th century.
- Traditionally, performances were held in front of kings or lords, and for the entertainment of tired soldiers resting during breaks in fighting.
- There are several sub-genres of Lavani, of which the most popular is the Shringarik (erotic) kind, in which the lyrics are often teasing, with sensuous dance steps and delicate gestures employed to convey erotic meaning.
- Over the years, Lavani has gained more acceptability among the people, even though certain taboos around it continue. The audience has historically been all-male, but in recent years, some women too have begun to attend performances.

Pouplarity:

- Lavani became well known outside Maharashtra – throughout India and even outside the country – following its use in popular media such as cinema.
- Over the past few years, with the explosion in the use of social media, short clips of dances have become very popular.

Museum Grant Scheme

Context

- Ministry of Culture provides financial assistance for digitization of museum collections under Digitization of Museum component of Museum Grant Scheme (MGS): Shri G. Kishan Reddy

Details:

- Ministry of Culture operates Museum Grant Scheme (MGS), one of the components of which is digitization of museum collections.
- Under this component, financial assistance is provided to Central/State Governments, Societies, Autonomous bodies, local bodies, Public Sector Undertakings, Academic Institutions and Trusts registered under Societies Registration Act, 1860 for digitization of museum collections.
- Digital documentation of antiquities in following 5 Site Museums of Archaeological Survey of India in Madhya Pradesh has been done through National Mission for Monuments and Antiquities format:

1. Archaeological Site Museum at Sanchi, District-Raisen.
2. Archaeological Site Museum at Khajuraho, District-Chattarpur.
3. Archaeological Site Museum at Chanderi, District - Ashoknagar.
4. Archaeological Site Museum at Shivpuri, District - Shivpuri.
5. Archaeological Site Museum at Gwalior, District - Gwalior

Museum Grant Scheme:

- This scheme was **launched in 2013.**
- The objective of the scheme is to provide financial assistance to the State Governments, Autonomous bodies, Local Bodies, Societies and Trusts registered under the Societies Act for setting up of new Museums as well as for development of existing museums.
- The scheme also aims to develop at least 1 Central / State Government Museum located in a State Capital each year.
- The Scheme has three components:-

Component A: Establishment and Development of District and Regional Museums: Under this component museums have been classified into two categories-

Category-I: Government-owned State level Museums and renowned Museums with exquisite collection and

Category-II: all other Museums. The maximum amount of financial assistance provided under this Component is as under:-

Setting up of Category-I new Museums	Rs. 10 Crore
Setting up of Category-II new Museums	Rs. 5 Crore
Development of existing Category-I Museum	Rs. 8 Crore
Development of existing Category-II Museum	Rs. 4 Crore

Component B: Development of Museums in State Capitals : Financial assistance under this component is provided to existing renowned museums of the Central or State Government located in the Capital cities. The maximum financial assistance under this component is limited to Rs. 15 Crore per museum.

Component C: Establishment and Development of Large Scale Museums in Public Private Partnership Mode: Under this component, it is proposed to establish large scale museums as joint ventures with State Governments and the civil society in Public Private Partnership Mode. The maximum financial assistance provided under this component is 40% of the project cost subject to a maximum of Rs. 20 Crore per museum.

GEOGRAPHY

Andes Mountains

Context

- The United Nations refugee agency reported that seven Haitian migrants died in the Andean highlands of Peru.

About

- Location:** The Andes, Andes Mountains or Andean Mountain Range are the longest continental mountain range in the world, forming a continuous highland along the western edge of South America.
- Dimensions:** The range is 8,900 km long, 200 to 700 km wide, and has an average height of about 4,000 m.
- Extension:** The Andes extend from north to south through seven South American countries: Venezuela, Colombia, Ecuador, Peru, Bolivia, Chile, and Argentina.
- Plateaus:** The Andes are the location of several high plateaus. The Altiplano plateau is the world's second-highest after the Tibetan plateau. These ranges are in turn grouped into three major divisions based on climate: the Tropical Andes, the Dry Andes, and the Wet Andes.
- Highest Mountain range:** The Andes Mountains are the highest mountain range outside Asia. The highest mountain outside Asia, Argentina's Mount Aconcagua, rises to an elevation of about 6,961 m above sea level.
- Origin:** The Andes are the result of tectonic plate processes, caused by the subduction of oceanic crust beneath the South American Plate as the Nazca Plate and South American Plate converge.
- Sections:**
 - The Andes can be divided into three sections:
 - The Southern Andes:** in Argentina and Chile, south of Llullailloco.
 - The Central Andes:** in Peru and Bolivia.
 - The Northern Andes:** in Venezuela, Colombia, and Ecuador. In the northern part of the Andes, the separate Sierra Nevada de Santa Marta range is often treated as part of the Northern Andes.



Aubrites

Context

- On August 17, 2022, a meteorite streaked over India, breaking apart as it descended through the air, to scatter over two villages in Banaskantha, Gujarat.

- The meteorite is a "**rare, unique specimen**" of **aubrite**, analysis by a group of scientists has revealed.

Aubrites

About:

- Aubrites are a **group of meteorites named for Aubres, a small achondrite meteorite that fell near Nyons, France, in 1836.**

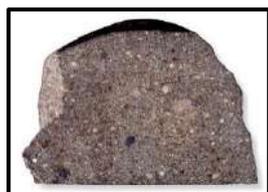
Composition:

- They are primarily **composed of the orthopyroxene enstatite** and are often called enstatite achondrites. They **originated in an asteroid.**
- Aubrites **"are coarse-grained igneous rocks that formed"** in oxygen-poor conditions, and thus **"contain a variety of exotic minerals that are not found on Earth"**. For example, the mineral heideite was first described in the Basti meteorite.
- Aubrites are primarily composed of large **white crystals of the Fe-poor, Mg-rich orthopyroxene, or enstatite**, with minor phases of **olivine, nickel-iron metal, and troilite**, indicating a magmatic formation under extremely reducing conditions.
- Aubrites contain **sulfides of calcium, chromium, manganese, titanium, and sodium—all normal lithophile elements—and silicon-bearing FeNi metal.**



Physical Features:

- Aubrites are typically **light-colored with a brownish fusion crust.** Most aubrites are heavily brecciated; they are often said to look "lunar" in origin.



CHONDRITES

At over 4.5 billion years old, chondrites are some of the most primitive and pristine rocks in the solar system and have never been melted.

Chondrites have a distinctive appearance, **made from droplets of silicate minerals mixed with small grains of sulphides and iron-nickel metal.**

Chondrites are the material from which the solar system formed. They **have been little changed compared with rocks from larger planets**, which have been subjected to geological activity. Chondrites can tell us a lot about how the solar system formed.

The most basic types, known as **carbonaceous chondrites, are rich in water, sulphur and organic material.** They are thought to have **brought volatile material to Earth when it was newly formed,** helping to **establish the atmosphere and other conditions required to sustain life.**

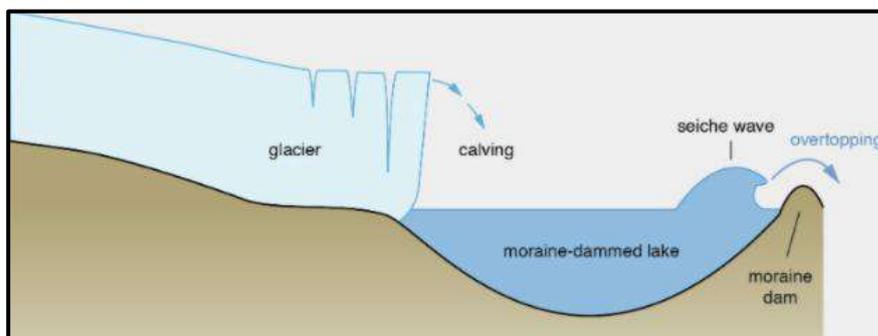
Glacial Lake

Context

- Around 15 million people across the world face the risk of sudden and deadly flooding from glacial lakes, which are expanding and rising in numbers due to global warming.

Glacial Lake Outburst Flood (GLOF)

- A **glacial lake outburst flood(GLOF)** is a type of **outburst flood** caused by the failure of a **dam containing a glacial lake.**
- An event similar to a GLOF, where a body of water contained by a glacier, is called a **jökulhlaup.** The dam can consist of **glacier ice** or a **terminal moraine.** Failure can happen due to **erosion,** a buildup of **water pressure,**



an **avalanche** of rock or heavy snow, an **earthquake** or **cryoseism,** **volcanic eruptions** under the ice, or massive displacement of water in a glacial lake when a large portion of an adjacent glacier collapses into it.

- Increasing glacial melting because of climate change, alongside other environmental **effects of climate change(i.e permafrost melting)** mean that regions with glaciers are likely to see increased flooding risks from GLOFs. This is especially true in the Himalayas where geologies are more active.

Recent Study

- Around 15 million people across the world face the risk of sudden and deadly flooding from glacial lakes, which are expanding and rising in numbers due to global warming, according to a new study published in Nature. More than half of those who could be impacted live in four countries: India, Pakistan, Peru and China.
- 'Glacial lake outburst floods threaten millions globally.'
- Increasing glacial melting because of climate change, alongside other environmental effects of climate change (i.e permafrost melting) mean that regions with glaciers are likely to see increased flooding risks from GLOFs. This is especially true in the Himalayas where geologies are more active.
- GLOFs **can prove to be catastrophic** as they mostly arrive with little warning and result in large-scale destruction of property, infrastructure, and agricultural land. They can **also lead to the death of hundreds of people**.

Earth's Innermost Layer

Context

- Seismologists at The Australian National University believe they've documented evidence of a distinct fifth layer lurking underneath it – the "innermost inner core".

Earlier Assumptions

- For the longest time since Danish scientist Inge Lehmann used seismic waves to discover Earth's inner core in 1936, our rocky spheroidal planet was thought to have four layers: **the crust, the mantle, the outer core, and the inner core**.
- Earth's inner core – which is about 70% the size of the Moon with a diameter of 2,440 km – was previously thought to be the hottest and densest of all four concentric layers. Its interaction with the 6,970 km-wide molten outer core drives convection currents – heat released from solidification – to create and maintain Earth's magnetic field.
- Temperatures that far deep ought to be extreme, making this steaming cauldron of iron and nickel currently inaccessible.

New Findings

- New findings published in *Nature Communications* confirm the **existence of a distinct fifth layer – a solid ball measuring 650 km across**.
- This "innermost inner core" is an **iron-nickel alloy ball**.
- The scientists found the 'hidden' core by studying seismic waves that traveled back and forth across the Earth's entire diameter up to five times.
- The earthquake waves probed places near the center at angles that suggested a different crystalline structure inside the innermost layer. Effectively, the alloy is skewing the travel times for the waves as they pass through.

Significance

- The findings create room for further research – which could lay **bare the mystery of how a major global event caused a significant change in its composition**.
- This inner core is like a **time capsule of Earth's evolutionary history** – it's a fossilized record that **serves as a gateway into the events of our planet's past** [and hides information related to the] events that happened on Earth hundreds of millions to billions of years ago.

GS-II POLITY

Neutral Citation System

Context

- The Chief Justice of India (CJI) announced that the Supreme Court will adopt a "neutral citation system" for its judgments.

Details

- The Chief Justice of India expressed optimism that High Courts will adopt neutral citations for their rulings as well.
 - The high courts in Delhi, Kerala, and Madras have already adopted neutral citations.

What is a "citation"?

- A case citation could be **regarded as a judgment's name tag**. Normally, it would include a reference number, the verdict's year, the name of the court that gave it, and a brief description of the journal that published the verdict.

What is a neutral citation?

- In the case of a neutral citation, **the court would provide its citation, as opposed to those provided by conventional law reporters**.
- **Law Reporters are journals or annual digests that publish judgements**, generally characterized by an editorial remark to make it easy for lawyers to consult constitutional and legal material.

- For example, the citation in "Supreme Court Cases," a journal published by the Eastern Book Company, is (1973) 4 SCC 225 for the famous Kesavananda Bharati case. The citation appears in the All-India Reporter (AIR) as AIR 1973 SC 1461.
- A neutral citation format has been used by some High Courts, including the Delhi High Court. For instance, the neutral citation used by the Delhi High Court is formatted as No-YEAR/DHC/XXXXXX.

Why neutral citation required?

- **While discussing cases, verdicts frequently use citations from several Law Reporters.** A uniform citation is required since artificial intelligence (AI) has made it possible to translate judgements and document court proceedings.

How the Supreme Court will implement the neutral citation system?

- The Chief Justice stated that "Our most recent initiative is neutral citations for every Supreme Court decision. So, all 30,000 decisions will have neutral citations. The first tranche will last until January 1, 2023, the second until 2014 judgements, and ultimately we will go back to 1950. Hence, neutral citations will now be used in all verdicts".

Joint Parliamentary Committee (JPC)

In News

- **The Opposition Parties in Parliament demanded a probe by a Joint Parliamentary Committee (JPC) into the allegations of fraud and stock manipulation** against the Adani Group.
 - Earlier the opposition demanded JPC probes into the Rafale deal and demonetization, but the demand was not granted. Ever since the new government came to power in 2014, no JPC has been set up.

Joint Parliamentary Committee (JPC)

- The Parliament set up a **Joint Parliamentary Committee (JPC) for a special purpose**, like for the detailed scrutiny of a subject or Bill.
- A JPC is **set up after one House of Parliament has passed a motion and the other has agreed to it.**
 - **Members of the JPC are decided by the Parliament.** The number of members can vary – there is no fixed number.
- It has **members from both the Houses and from both the ruling parties and the opposition.**
 - It is dissolved after its term ends or its task has been completed.
- The mandate of a JPC depends on the motion constituting it.
 - For example; the terms of reference for the JPC on the stock market scam would ask the committee to look into financial irregularities, to fix responsibility on persons and institutions for the scam, to identify regulatory loopholes and also to make suitable recommendations.
- A JPC can scrutinize documents and summon people for questioning to fulfil its mandate.
 - It then submits a report and makes recommendations to the government.
- The **recommendations of a JPC are not binding on the government.**
 - The government can launch further investigations based on what the JPC has suggested, but it can't be forced to do so.
- The **government needs to report on the follow-up action taken based on the recommendations of the JPC.**
 - The JPC committees then submit 'Action Taken Reports' in Parliament based on the government's reply.

According to the Lok Sabha website, there have been 6 JPCs set up so far. These are;

1. JPC to enquire into Bofors Contract.
2. JPC to enquire into irregularities in Securities and Banking Transactions.
3. JPC on Stock Market Scam and Matters relating thereto.
4. JPC to examine matters relating to the Allocation and Pricing of Telecom Licenses and Spectrum.
5. JPC on Pesticide Residues in and Safety Standards for Soft Drinks, Fruit Juice and other Beverages.
6. JPC to Examine the Constitutional and Legal Position Relating to Office of Profit.

GOVERNANCE

Special Category Status

Context

- Bihar's Finance Minister said that if the poor States are not given special assistance by the Centre, then regional disparities are bound to increase in the country.

Details

- The Bihar Government Minister commented **in response to the Union Finance Minister's claim that the Finance Commission has made a recommendation to the Centre, in which it said that no State will be accorded the special status.**

- The Bihar Government Minister highlighted that "Despite being one of the poorest States in the nation, Bihar has experienced growth that is higher than the national average. NITI Aayog has acknowledged that Bihar achieved significant progress in several sectors over the past ten years, but due to its weak foundation, it may still take some more time to catch up with the others. This is the reason that we have been demanding special assistance from the Centre".

Special Category Status (SCS)

- Special category status is a classification given by the Centre to assist the development of states that face geographical and socio-economic disadvantages.
- The **classification was done on the recommendations of the 5th Finance Commission in 1969.**
- The special category status was introduced to benefit certain backward States having hilly terrains, strategic international borders and economic and infrastructural backwardness.
- The special category status has been granted to eleven 11 states: Assam, Nagaland, Himachal Pradesh, Manipur, Meghalaya, Sikkim, Tripura, Arunachal Pradesh, Mizoram, Uttarakhand, and Telangana.
 - Telangana is the latest Indian State to get the status as it was carved out of Andhra Pradesh.
- There is **no provision for SCS in the Constitution.**
- Special Category Status for plan assistance was granted in the past by the National Development Council to the States that are characterized by several features necessitating special consideration.
- The **14th Finance Commission has done away with the 'special category status' for states, except for the Northeastern and three hill states.** Instead, it suggested that the resource gap of each state be filled through 'tax devolution', urging the Centre to increase the states' share of tax revenues from 32% to 42%, which has been implemented since 2015.

Parameters for Special Category Status

- Hilly Terrain;
- Low Population Density And/Or Sizeable Share of Tribal Population;
- Strategic Location along Borders With Neighbouring Countries;
- Economic and Infrastructure Backwardness;
- Nonviable Nature of State finances.

Benefits to States with the special status

- The Centre pays 90% of the funds required in a centrally-sponsored scheme to special category status states as against 60% or 75% in the case of other states, while the remaining funds are provided by the state governments.
- Unspent money does not lapse and is carried forward.
- These states receive large exemptions from excise and customs duties, income tax, and corporate tax.
- The states in the Special Category receive 30% of the Center's Gross Budget.

INTERNATIONAL RELATIONS

India-South East Asia Defence Co-Operation

Context

- **In line with the expanding military cooperation with South East Asian nations, an Indian Navy Kilo class conventional submarine, INS Sindhukesari, docked in Jakarta, Indonesia, for the first time.**

Details:

- India has **steadily expanded its defence and security cooperation with countries in the region**, many of which are engaged in disputes with China in the South China Sea.
- In recent years, **India has signed logistics support agreements with several countries to enhance reach and sustenance of military assets while deployed far from home.**

Agreements:

- The Navy has 16 conventional submarines in service, seven Russian Kilo-class, four German-origin HDW submarines and five French Scorpene class submarines.
- With the Kilos and the HDWs ageing, a Medium Refit cum Life Certification (MRLC) programme is underway to increase their life.
- **INS Sindhukesari, which was inducted in February 1989, underwent the MRLC at Severodvinsk, Russia in 2018.**
- Of the 10 Kilo class submarines originally procured from Russia, Sindhurakshak was lost in an accident, Sindhuvir was transferred to Myanmar and Sindhuhdvaj was decommissioned in July 2020 after 35 years.
- A Kilo-class submarine, INS Sindhuratna has completed MRLC in Russia.
- India has offered to sell its military hardware which has been positively received by many. For instance, **Philippines is the first export customer for the BrahMos supersonic cruise missiles for which Indonesia and Thailand are also in talks with.**
- Indonesia has also expressed interest in the Light Combat Aircraft among others.

About Kilo submarines:

- The Kilo class submarines have a displacement of 2,300 tonnes, a maximum diving depth of 300 metres, top speed of 18 knots, and are able to operate solo for 45 days with a crew of 53.

New Start Treaty

Context

- The United States said that Russia was not complying with New START, the last remaining arms control treaty between the world's two main nuclear powers, as tensions soar over the Ukraine war.

Details:

Background:

- The New START Treaty, which came into force in 2011, caps the number of strategic nuclear warheads that the United States and Russia can deploy, and the deployment of land- and submarine-based missiles and bombers to deliver them.
- S. President Joe Biden said that **his administration was ready to "expeditiously" negotiate a framework to replace New START, which is due to expire in 2026, if Moscow demonstrated its willingness to resume work on nuclear arms control.**
- But Russia's mission to the United Nations said Washington had withdrawn from separate talks with Moscow on strategic stability over the Ukraine conflict, and needed to decide what it wanted.

The Treaty:

- It is a treaty between the United States of America and the Russian Federation on measures for the further reduction and limitation of strategic offensive arms.
- It came into force on 5th February, 2011.
- New START has replaced the 1991 START I treaty, which expired in December 2009, and superseded the 2002 Strategic Offensive Reductions Treaty (SORT), which terminated when New START entered into force.
- The START Framework of 1991 (at the end of the Cold War) limited both sides to 1,600 strategic delivery vehicles and 6,000 warheads.
- The May 2002 Strategic Offensive Reductions Treaty (SORT), also known as the Moscow Treaty, committed the United States and Russia to reduce their deployed strategic nuclear forces to 1,700-2,200 warheads apiece.
- It continues the bipartisan process of verifiably reducing the USA and Russian strategic nuclear arsenals by limiting both sides to 700 strategic launchers and 1,550 operational warheads.
- It was to lapse in February 2021, but after receiving renewal approval from USA and Russia, will be extended for a five-year period.

India-Mongolia Relations

Context

- The 11th meeting of India-Mongolia Joint Working Group was held in New Delhi.

Details:

- Both sides reviewed the progress on various bilateral defence cooperation initiatives and identified means to further enhance the existing areas of cooperation and articulated steps in this direction.
- During the meeting, both the sides expressed satisfaction at the ongoing defense cooperation between the two countries despite the limitations imposed by Covid-19 pandemic.
- **Joint Working Group met for the first time in person since the pandemic.**
- Both sides acknowledged the growing ties between the countries.

Background:

- It may be recalled that India established diplomatic relations with Mongolia in 1955. Mongolia has declared India as a strategic partner and "spiritual neighbour".
- In 2015, "strategic partnership" between the two Asian democracies was declared during visit of Prime Minister Shri Narendra Modi.
- **India was the first country outside the former Soviet bloc of nations to open diplomatic relations with Mongolia in 1955.**

Defence:

- Defence is an important element of bilateral engagements with Mongolia.
- Joint defence exercises code-named **Nomadic Elephant**.
- India is also an active participant in an annual week-long joint training exercise called the **Khaan Quest**, hosted by Mongolia.

Culture:

- India and Mongolia have interacted through Buddhism throughout history.
- In a special gesture towards people of Mongolia, **four Holy Relics of Lord Buddha are being taken from India to Mongolia for an 11-day exposition as part of celebrations of Mongolian Buddh Purnima falling on 14th June, 2022.**

Visits:

- In 2015, **Mongolia witnessed the first ever visit by the Prime Minister of India (a part of India's Act East policy).**

International Fora:

- Mongolia has publicly reiterated its support for India's membership to the permanent seat of the expanded United Nations Security Council (UNSC).
- India has played an important role in getting Mongolia membership to key international forums, including the United Nations (UN), despite strong opposition from China and Taiwan. India also championed the inclusion of Mongolia in the Non-Aligned Movement.
- In a reciprocal gesture, Mongolia co-sponsored a 1972 UN resolution with India and Bhutan for the recognition of the newly liberated Bangladesh.
- India is a member whereas Mongolia is an observer state at the Shanghai Cooperation Organisation (SCO).

Trade:

- India - Mongolia bilateral trade was USD 38.3 million in 2019, down from USD 52.6 million in 2018.

HEALTH

Lymphatic Filariasis

Context

- Mass drug administration campaign for elimination of Lymphatic Filariasis is being carried out through door-to-door administration of anti-filarial drugs in endemic districts of Karnataka. Karnataka is one among the ten high-burden States in the country, with LF.



Lymphatic Filariasis

- **About:** Lymphatic filariasis is a human disease caused by parasitic worms known as filarial worms.
- Lymphatic filariasis is classified as a **neglected tropical disease. It is most common in tropical Africa and Asia.**
- **Cause:** Three types of worms are known to cause the disease: *Wuchereria bancrofti*, *Brugia malayi*, and *Brugia timori*, with *Wuchereria bancrofti* being the most common. These worms damage the lymphatic system.
- **Transmission:** The worms are spread by the bites of infected mosquitoes.
- **Symptoms:** While most cases have no symptoms, some people develop a syndrome called **elephantiasis**, which is marked by **severe swelling in the arms, legs, breasts, or genitals**. Affected people are often unable to work.
- **Prevention and Treatment:** It can be achieved by treating entire groups in which the disease exists, known as **mass deworming**. Medications used include **anti-parasitics such as albendazole with ivermectin**. Efforts to **prevent mosquito bites are also recommended**.

Marburg Virus Disease

Context

- The World Health Organisation (WHO) convened an urgent meeting after Equatorial Guinea confirmed its first outbreak of Marburg virus disease or MVD.

Marburg Virus Disease

About

- Marburg virus disease is a highly virulent disease that causes **haemorrhagic fever, with a fatality ratio of up to 88%.**
- It is **in the same family as the virus that causes Ebola virus disease i.e family Filoviridae.**

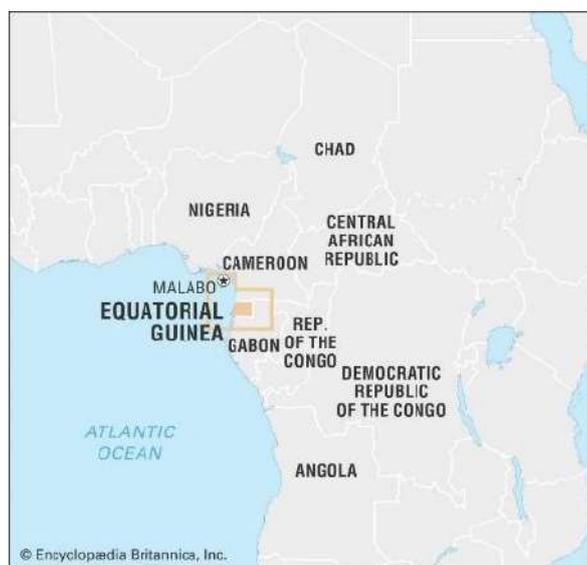
Origin

- The virus was **initially detected in 1967** after simultaneous outbreaks in Marburg and Frankfurt in Germany; and in Belgrade, Serbia.

Cause

- It is caused by either of the two Marburgviruses: **Marburg virus (MARV) and Ravn virus (RAVV)**. MVD is a **viral hemorrhagic fever (VHF)**, and the clinical symptoms are indistinguishable from Ebola virus disease (EVD).
- Marburgvirions contain non-infectious, linear non-segmented, **single-stranded RNA genomes.**

Prevalence



- Marburg Viruses are endemic in arid woodlands of equatorial Africa.

Symptoms

- The common symptoms of a virus are fever, headache, fatigue, abdominal pain, and gingival hemorrhage.

Transmission

- Fruit bats of the Pteropodidae Family are the key carriers of the disease.
- It typically infects humans following prolonged exposure to mines or caves inhabited by Rousettus bat colonies.
- Human-to-human transmission takes place through direct contact with the blood, secretions, organs/bodily fluids of infected people.

Vaccine and Treatment

- There are no approved vaccines or antiviral treatments for the virus yet.
- Early supportive care with rehydration and symptomatic treatment improves survival rates.

Equatorial Guinea

- Equatorial Guinea is on the west coast of Central Africa.
- The country is bordered by Cameroon to the north and Gabon to the east and south.
- The capital is Malabo. Equatorial Guinea lies between latitudes 4°N and 2°S, and longitudes 5° and 12°E. Despite its name, no part of the country's territory lies on the equator.
- Equatorial Guinea has a tropical climate with distinct wet and dry seasons.

GS-III **ECONOMY**

All India Domestic Workers Survey

Context

- The Minister of State for Labour and Employment, informed that the Labour Bureau, an attached office of the Ministry of Labour & Employment, has undertaken an **All India Domestic Workers Survey** by collecting information from the selected household across States and UTs including Maharashtra.

About the Survey

- The first ever All India Survey on Domestic Workers (DW) was conducted in the year 2021.
- The government launched this pan-India survey to identify, count and understand the socio-economic characteristics of the domestic workers rendering services in private households as maids, cooks, babysitters, care-takers, tutors and watchman, among others, and their employers.

Definition of Domestic Worker in the Survey

Any person engaged by a household shall be classified as a domestic worker if the frequency of visits by the worker to the household is at least four days during the last 30 days and the goods and/or services produced by the worker is consumed by the members of the household against payment either through cash or kind, instruction manual for the survey said.

Domestic Workers in the Country

- According to the latest data on the e-Shram portal, around 8.8% of the registered 8.56 crore informal sector workers fall in the category of domestic workers. India has around 38 crore workers in the informal sector.
- At the current rate of registration in the e-shram portal, there would be 3-3.5 crore domestic workers in the country. Domestic workers are the third-largest category of workers after agriculture.

What was the need of the Survey?

- Domestic workers constitute a significant portion of total employment in the informal sector. However, there is a dearth of data on the magnitude and prevailing employment conditions of domestic workers. The survey is intended at having time series data on domestic workers.

Aim of the Survey

- The All-India Survey on Domestic Workers is aimed to estimate the number and proportion of domestic workers at the National and State level, the percentage distribution of domestic workers with respect to Live-in/Live-out, formal/ Informal Employment, Migrant/Non-Migrant, their wages, and other socio-economic characteristics.
- The survey will also provide the Household Estimates of Live-in/Live-out domestic workers and average number of domestic workers engaged by different types of households. The main objectives are to:
 - Estimate the number/proportion of DWs at the National and State level.
 - Household Estimates of Live-in/ Live-out DWs.
 - Average number of DWs engaged by different types of households.

UPI-Paynow Linkage

Context

- India's Unified Payments Interface – better known as UPI – and Singapore's PayNow have been officially integrated.

Background and Details

- The project to link both the fast payment systems was initiated in September 2021 to facilitate faster, more efficient and transparent cross-border transactions relating to trade, travel and remittances between the two countries.
- They allow for a “**real-time payment linkage**”.
- This will enable **faster remittances between the two countries at a competitive rate.**

What are UPI and PayNow?

UPI

- Unified Payments Interface (UPI) is **India's mobile-based fast payment system**, which facilitates customers to make round-the-clock payments instantly, using a Virtual Payment Address (VPA) created by the customer.
- It eliminates the risk of sharing bank account details by the remitter.
- UPI supports both Person-to-Person (P2P) and Person-to-Merchant (P2M) payments and it also enables a user to send or receive money.

PayNow

- PayNow is a fast **payment system in Singapore.**
- It enables peer-to-peer funds transfer service, available to retail customers through participating banks and Non-Bank Financial Institutions (NFIs) in Singapore.
- It allows users to send and receive instant funds from one bank or e-wallet account to another in Singapore by using just their mobile number, Singapore National Registration Identity Card (NRIC)/Foreign Identification Number (FIN), or VPA.

Significance of the UPI-PayNow linkage

- Cross-border retail payments are generally less transparent and more expensive than domestic transactions.
- The UPI-PayNow linkage is a significant milestone in the development of infrastructure for cross-border payments between India and Singapore and closely **aligns with the G20's financial inclusion priorities of driving faster, cheaper and more transparent cross-border payments.**

How will it benefit the citizens of both countries?

- The UPI-PayNow linkage **will enable users of each of the two fast payment systems to make instant, low-cost fund transfers on a reciprocal basis without a need to get on board the other payment system.**
- It will **also help the Indian diaspora in Singapore, especially migrant workers and students,** through the instantaneous and low-cost transfer of money from Singapore to India and vice-versa.
- Of the total inward remittances to India in 2020-21, the share of Singapore stood at 5.7 per cent, according to the RBI Remittance Survey, 2021.

Solar Panel Manufacturing

Context

- According to the Ministry for New and Renewable Energy, by 2026, the Indian industry will be able to manufacture solar modules worth 100 gigawatts (GW) annually, and help the country be a net exporter of solar power.
- This would significantly aid India's target of installing 500 GW of electricity capacity from non-fossil sources by 2030.

Details

- India was to have installed 175 GW of renewable energy – from solar, wind, biomass and small hydropower sources – by December 2022 but has only **installed 122 GW**. Of this, solar power was to have been 100 GW though only 62 GW has been installed.

Challenges

Cost

- A key bottleneck has been the cost of solar modules (or panels). While India has traditionally relied on China-made components such as poly-silicone wafers, necessary to make modules, higher customs duty on them (to make equivalent India-manufactured components more competitive) has shrunk supply.

Land acquisition

- Apart from module prices, land acquisition has been a major challenge for solar power manufacturers. Despite the Centre commissioning 57 large solar parks worth 40 GW in recent years, only 10 GW have been operationalized. “Installing a megawatt of solar power requires on average four acres of land.

Non-Convertible Bonds

Context

- NHPC raised Rs 996 crore through the issuance of non-convertible bonds on private placement basis.

What are NCDs?

- Non-Convertible Debenture is a financial instrument issued by Corporates for specified tenure to raise resources / funds through public issue or private placement. This debt instrument **cannot be converted into equity**.
- It is a **fixed income instrument same as bank fixed deposit and can be traded on stock exchanges**.
- Interest can be earned monthly / quarterly / annually / cumulative and on maturity principal amount is paid to the debenture holder.

Benefits of investing in NCDs

- If one is looking for an investment that generates fixed income periodically, NCDs may be an ideal investment as it offers.
- Higher rate of interest as compared to fixed deposits, postal savings or similar investments.
- If the bonds are listed, liquidity as **one can sell it in the secondary market before its maturity**.
- If listed bond possibility of capital appreciation i.e. one can sell your bond at a price higher than your cost price in the market.

Taxation on NCD

- As per section 193 of the Income Tax Act, 1961, there is no tax deduction at source (TDS) from any securities issued by a company, in a dematerialized form and listed on a recognized stock exchange in India.
- However, **NCDs allotted to non-resident Indians (NRIs) will be subject to TDS as per section 195 of the Income Tax Act, 1961.**
- For individual investors, if the NCDs are sold before a year, the profits will be added to the income of the investor and he will have to pay taxes at the same rate as per the income tax slab.
- For any profit made by selling NCDs after a year, tax will be paid at 10%, if indexation is not done or 20% if the indexation is done.

Minimum investment

- Amount invested by a single investor is as decided by the company and varies with the issuances. Usually investors can start investing with amounts as low as Rs 10000/-.

Basis of NCD allotment

- Allotment is based on "First come first serve" basis.

Where are NCDs bought from and sold to

- Debentures can be bought and sold through secondary market. They are traded like shares.

Is NCD a Share or a fixed deposit?

- NCD is neither a share nor fixed deposit. It is similar to fixed deposit in the sense that at time of redemption, the return is fixed.

Vostro Accounts

Context

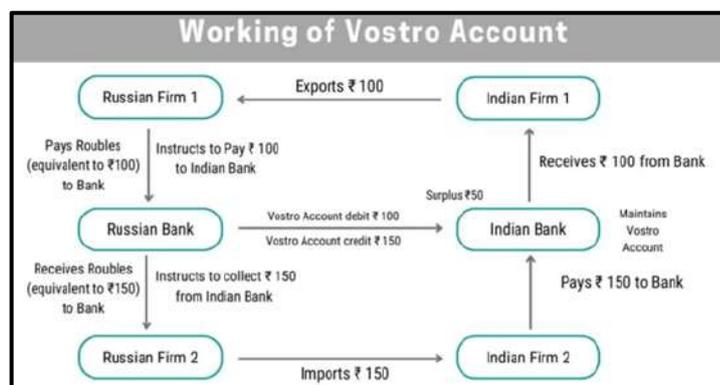
- Government officials have informed that 20 Russian banks, have opened **Special Rupee Vostro Accounts (SRVA) with partner banks in India.**

Vostro Account

- A vostro account is **an account that domestic banks hold for foreign banks in the former's domestic currency, in this case, the rupee.**

Description

- 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.
- Note:** The bank of a partner country; e.g. German banks may approach an **Authorised Dealer(AD) bank** in India for the opening of Special Rupee Vostro account.
- The AD bank then will seek approval from the RBI with details of the arrangement and subsequent to the approval granted by the RBI, the Special Rupee Vostro account in the Indian AD bank by a German bank shall be opened.
- The trade settlement shall then start between the parties in INR. The exchange rate between the currencies of two trading partner countries may be market determined.



In a nutshell,

- Domestic banks use it **to provide international banking services to their clients** who have global banking needs.
- It is **an integral offshoot of correspondent banking** that entails a bank (or an intermediary) to facilitate wire transfer, conduct business transactions, accept deposits and gather documents on behalf of the other bank.
- It helps domestic banks gain **wider access to foreign financial markets** and serve international clients without having to be physically present abroad.

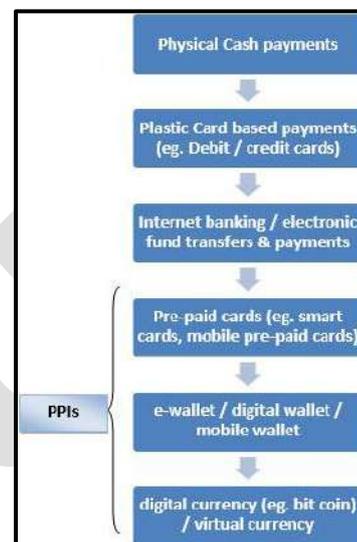
Prepaid Payment Instrument

Context

- The Reserve Bank of India (RBI) permitted all inbound travellers from the Group of Twenty (G-20) countries and non-resident Indians to access Unified Payment Interface (UPI) for their merchant payments (P2M) at select airports while they are in the country.

What are Prepaid Payment Instruments?

- **Prepaid payment instruments** are methods that facilitate purchase of goods and services against the value stored on such instruments.
- The value stored on such instruments represents the value paid for by the holder, by cash, by debit to a bank account, or by credit card.
- The prepaid instruments can be issued as smart cards, magnetic stripe cards, internet accounts, online wallets, mobile accounts, mobile wallets, paper vouchers, and any such instruments used to access the prepaid amount.



SCIENCE & TECHNOLOGY

Chandrayaan 3

Context

- ISRO has successfully conducted the flight acceptance hot test of the CE-20 cryogenic engine **that will power the Cryogenic Upper Stage of the LVM3 launch vehicle for the Chandrayaan-3 mission.**

Chandrayaan 3

- Chandrayaan-3 is a follow-on mission to Chandrayaan-2 to demonstrate **end-to-end capability in safe landing and roving on the lunar surface.**
- It **consists of Lander and Rover configuration.** It will be **launched by GSLV MkIII from SDSC, Sriharikota.** The propulsion module will carry the lander and rover configuration **till 100km lunar orbit.**

Further Details

- It will **demonstrate India's capability of soft landing on a celestial body, with the rover.**
- It will then communicate with Earth via the existing orbiter from Chandrayaan-2 and take images 100 km from Moon's orbit.
- The **orbiter has an estimated lifespan of seven years.**
- It aims at studying not just one area of the Moon but all the areas combining the exosphere, the surface as well as the sub-surface in a single mission.
- With Chandrayaan-1, ISRO achieved immense success as the 'Moon Impact Probe' by Chandrayaan-1 lunar remote sensing orbiter detected water in vapor form in trace amounts.
- With Chandrayaan-3, India aims to further the study of the lunar surface, **focussing on the South Pole or dark side of the Moon that has not seen sunlight in billions of years, which is believed to have ice and vast mineral reserves.**

Why exploring the Moon is imperative?

- Moon is a promising **testbed to showcase technologies required for deep-space missions.**
- Exploring the Moon will **enhance our understanding of the celestial body clearly, stimulating the advancement of technology, promoting global alliances and inspiring future generations of explorers and scientists.**

Why Lunar South Pole of the Moon is targeted for exploration?

- The Moon provides the **best linkage to Earth's early history and civilization.**
- The exploration will offer an **undisturbed historical record of the inner Solar system environment.**
- The Lunar South pole is especially interesting because the lunar surface area that remains in shadow is much larger than that at the North Pole.

- Further, there could be a possibility of the presence of water in permanently shadowed areas around it.
- In addition, the South Pole region has craters that are cold traps and contain a fossil record of the early Solar System.

Genetically Modified Trees

Context

- For the first time, Genetically Modified Trees have been planted in a U.S. forest.

About

- A **genetically modified tree (GMt, GM tree, genetically engineered tree, GE tree or transgenic tree)** is a tree whose DNA has been modified using genetic engineering techniques.
- In most cases the aim is to introduce a novel trait to the plant which does not occur naturally within the species.
- Examples include resistance to certain pests, diseases, environmental conditions, and herbicide tolerance, or the alteration of lignin levels in order to reduce pulping costs.
- Genetically modified forest trees are not yet approved ("deregulated") for commercial use with the exception of insect-resistant poplar trees in China and one case of GM Eucalyptus in Brazil. Several genetically modified forest tree species are undergoing field trials for deregulation.
- Now, the poplars are the first genetically modified trees planted in the United States outside of a research trial or a commercial fruit orchard.

Note: The development, testing and use of GM trees remain at an early stage in comparison to GM crops.

Caesium-137

Context

- A Caesium-137 capsule lost in transit was discovered when a vehicle equipped with specialist detection equipment picked up the radiation.
- The small, round and silver capsule containing radioactive Caesium-137 went missing in transportation through Western Australia a few weeks back.

Cesium and Cs-137

- Cesium (Cs) is a **soft, flexible, silvery-white metal** that **becomes liquid near room temperature**, but easily bonds with chlorides to create a crystalline powder. **The most common radioactive form of Cesium is Cesium-137 (Cs-137).**
- Cs-137 is also **one of the byproducts of Nuclear Fission processes** in nuclear reactors and nuclear weapons testing.

Caesium-137 Characteristics

- Caesium-137 has a relatively low boiling point of 671 °C and is **volatilized easily when released suddenly at high temperatures**, as it was in the case of the Chernobyl Nuclear Accident. With atomic explosions, it can travel very long distances in the air.
- After being deposited onto the soil as radioactive fallout, it moves and spreads easily in the environment because of the **high water solubility of** Caesium's most common chemical compounds, which are salts.
- A Cs-137 atom emits radiation in the form of **medium-energy gamma rays**, and to a lesser extent, **high-energy beta particles**.
- Caesium-137 has a **half-life of approximately 30 years**, which means that after a period of 30 years, the amount of Cs-137 will have halved due to radioactive decay.

Applications of Cs-137

- Cs-137 is produced by nuclear fission for **use in medical devices and gauges**.
- In larger amounts, Cs-137 is used in **medical radiation therapy** devices for treating cancer; in industrial gauges that **detect the flow of liquid through pipes**; and in other industrial devices to **measure the thickness of materials, such as paper, photographic film, or sheets of metal**.

Health Hazards

- External exposure to large amounts of Cs-137 **can cause burns, acute radiation sickness**.
- Exposure to Cs-137 **can increase the risk for cancer** because of exposure to high-energy gamma radiation.
- High levels of radioactive Cesium in the body can cause **nausea, vomiting, diarrhea, bleeding, coma, and even death**. This may occur after nuclear accidents or the detonation of atomic bombs.

Quasicrystals

Context

- Scientists have discovered a third natural source of quasicrystals.

About

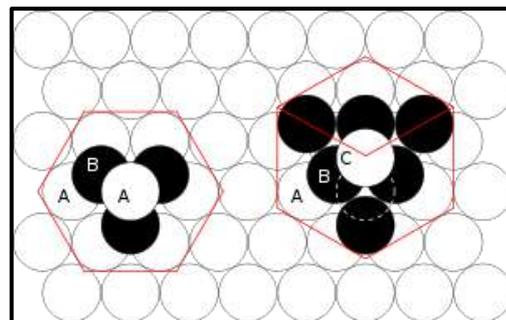
- Quasicrystal, also called quasi-periodic crystal, is a **matter formed atomically in a manner somewhere between the amorphous solids of glasses (special forms of metals and other minerals, as well as common glass) and the precise pattern**

of crystals. Like crystals, quasicrystals contain an ordered structure, but the patterns are subtle and do not recur at precisely regular intervals.

- Rather, quasicrystals appear to be formed from two different structures assembled in a nonrepeating array, the three-dimensional equivalent of a tile floor made from two shapes of tile and having an orientational order but no repetition. Quasicrystals **have poor heat conductivity, which makes them good insulators.**

In a nutshell,

- Quasicrystals are physical lattices with translational disorder that retain local, rotational symmetry.
- Unlike quasicrystals, 'perfect' crystals have both translational and rotational symmetry, and are always close-packed.



Prevalence

- Quasicrystals rank among the **most common structures in alloys of aluminium with such metals as iron, cobalt, or nickel.**
- The first natural quasicrystal found was as microscopic grains in a **fragment of the Khatyrka meteorite** lying in the Koryak mountains of Russia.

Applications

- While no major commercial applications yet exploit properties of the quasicrystalline state directly, quasicrystals form in compounds noted for their high strength and light weight, suggesting **potential applications in aerospace and other industries.**
- Quasicrystals can be used in **surgical instruments, LED lights and non-stick frying pans.**
- **Other uses:** Selective solar absorbers for power conversion, broad-wavelength reflectors, and bone repair and prostheses applications where biocompatibility, low friction and corrosion resistance are required.

Air-Launched Unmanned Aerial Vehicle (ALUAV)

Context

- A prototype of **the Air-Launched Unmanned Aerial Vehicle (ALUAV)** developed jointly by India and the United States is likely to be flight tested later this year, said a member of the U.S. government delegation to Aero India 2023.

What is ALUAV?

- In 2021, India and the US signed an agreement to jointly **develop air-launched unmanned aerial vehicles (ALUAV) or drones that can be launched from an aircraft.**
- Basically, the ALUAV **will be carried like a bomb on an aircraft.** It **will be launched from the air, instead of the ground-launched conventional UAV.**

Significance

- The agreement is a **significant step towards deepening defence technology collaboration between the two nations** through co-development of defence equipment.
- The aim is to **bring sustained leadership** focus to promote collaborative technology exchange and **create opportunities for co-production and co-development of future technologies for Indian and US military forces.**

NISAR

Context

- NISAR (NASA-ISRO Synthetic Aperture Radar), got a send-off ceremony at the American space agency's Jet Propulsion Laboratory (JPL) in Southern California.

NISAR

About

- The **NASA-ISRO Synthetic Aperture Radar (NISAR)** mission is a joint project between NASA and ISRO to co-develop and launch a dual-frequency synthetic aperture radar on an Earth observation satellite. The satellite will be the **first radar imaging satellite** to use dual frequencies.

Launch of the Mission

- The satellite will be launched from India aboard a GSLV in Q1 of 2024.
- The orbit will be a **Sun-synchronous, dawn-to-dusk type.** The **planned mission life is three years.**

Mandate

- It will be used for remote sensing, to observe and understand natural processes on Earth. For example, its left-facing instruments will study the Antarctic cryosphere.
- NISAR satellite, will use advanced radar imaging to map the elevation of Earth's land and ice masses 4 to 6 times a month at resolutions of 5 to 10 meters. It is designed to observe and measure some of the planet's most complex natural processes,

including ecosystem disturbances, ice-sheet collapse, and natural hazards such as earthquakes, tsunamis, volcanoes and landslides.

- The satellite will also measure groundwater levels, track flow rates of glaciers and ice sheets, and monitor the planet's forest and agricultural regions, which can improve our understanding of carbon exchange.
- By using synthetic aperture radar (SAR), NISAR will produce high-resolution images. **SAR is capable of penetrating clouds and can collect data day and night regardless of the weather conditions.**
- All data from NISAR would be freely available 1 to 2 days after observation and within hours in case of emergencies like natural disasters.

Terms of Agreement

- Under the terms of the agreement, NASA will provide the mission's L-band synthetic aperture radar (SAR), a high-rate telecommunication subsystem for scientific data GPS receivers, a solid-state recorder, and a payload data subsystem. ISRO will provide the satellite bus, an S-band synthetic aperture radar, the launch vehicle, and associated launch services.

Significance of NISAR

- Data collected from NISAR will reveal information about the evolution and state of Earth's crust, help scientists better understand our planet's natural processes and changing climate, and aid future resource and hazard management.

DEFENSE & SECURITY

Hindustan 228 Aircraft

Context

- HAL gets DGCA nod for new variant of passenger aircraft Hindustan 228-201 LW

Details

Features:

- This variant of Hindustan 228-201 LW has **maximum take-off weight of 5,695 kg with 19 passengers.**
- Being in the sub-5,700 kg category, this variant offers several operational benefits for operators

Benefits:

- This variant provides several operational benefits for operators, such as **reduced pilot qualification requirement enabling pilots with Commercial Pilot Licence to fly the aircraft, enhanced availability of pilot pool for the aircraft, and reduced operational cost**
- In addition, the new variant will result in reduced training requirements for flying and ground crew, including aircraft maintenance engineers.

Aero India 2023

Context

- Over 200 agreements worth around Rs 80,000 crore were signed during the 2023 edition of Aero India, India's biggest aviation exhibition. Some 800 defence companies took part in the show, 700 of which were Indian.

Details:

Main highlights:

- More than 80 countries were present at the five-day event, at which India sought to sharpen its self-reliance message, and made export pitches for indigenous military platforms, equipment and weapon systems to several participating countries.
- Russia, which has been at war for almost a year now, registered its usual measured presence at the exhibition.
- The United States, by contrast, had a high-voltage presence, with its leading defence companies and largest-ever delegation, and through aerial demonstrations and static displays of its latest aircraft.
- Several British, French, and Israeli defence companies pitched a range of equipment and partnerships to the Indian military.
- With India pushing its self-reliance plans, including earmarking 75 per cent of the capital budget for 2023-24 for domestic procurements, almost all foreign companies spoke about the Make in India programme, and joint development and co-production in India.
- Among the 700 Indian companies at the event was a range of startups displaying niche technologies and innovative solutions for the military.

Themes:

- Spanning over five days, the event, on the **theme 'The runway to a billion opportunities'**, radiated the rise of a strong & self-reliant 'New India' by displaying India's growth in aerospace and defence capabilities.
- **The 'CEOs Round Table', under the chairmanship of the Raksha Mantri, was held on the theme 'Sky is not the limit: opportunities beyond boundaries'.**

- The **Bandhan ceremony** witnessed signing of Memoranda of Understanding (MoUs)/Agreements, Transfer of Technologies, Product Launches and other major announcements
- The annual defence innovation event, **Manthan**, was the flagship technology showcase event
- The 'India Pavilion', based on '**Fixed Wing Platform**' theme, showcased India's growth in the area, including the future prospects.

About Aero India:

- Aero India is a biennial air show and aviation exhibition held in Bengaluru, India at the Yelahanka Air Force Station.
- It is organised by the Defence Exhibition Organisation, Ministry of Defence.
- **The Aero India is the largest air show in Asia.**
- The Defence Ministry of India, Indian Air Force, Hindustan Aeronautics Limited Defence Research and Development Organisation (DRDO), Department of Space, the Union Civil Aviation Ministry and other such organisations join hands to organise the Aero India show making it the largest air show in Asia.
- The first edition of the air show was held in 1996.

Exercise Dustlik-2023

Context

- As part of a military-to-military exchange program between the Indian Army and Uzbekistan Army, the fourth edition of biennial training Exercise DUSTLIK (2023) will be conducted in Pithoragarh, Uttarakhand.

Details

- The Indian contingent will be represented by the 14th Battalion, The GARHWAL RIFLES, part of Western Command in this bilateral exercise.
- The Uzbekistan Army will be represented by troops of the North Western Military District of Uzbekistan Army.
- This joint exercise is aimed at enhancing military capability to undertake multi-domain operations in a Sub Conventional scenario under United Nations Mandate.

Background

- India and Uzbekistan have relations that go back in history.
- **India was one of the first countries to recognize the state sovereignty of Uzbekistan after the latter's independence.**
- The **protocol on establishment of diplomatic relations** between India and Uzbekistan was signed in Tashkent on 18 March 1992.
- **A Virtual Summit between PM and President Mirziyoyev was held in December 2020.** Bilateral relations now encompass a wider canvas, including on political and strategic issues, defence and security, trade and investment, energy, agriculture, S&T, education and people-to-people ties.
- **There are regular High Level visits/meetings, Regional Exchanges, Parliamentary Exchanges**

Bilateral and multilateral Mechanisms

- **National Coordination Committees**
- **Inter-Governmental Commission**
- **Foreign Office Consultations**
- Joint Working Group on Counter Terrorism
- **India-Central Asia Business Council**
- **India- Central Asia Dialogue**

Defence and Security Cooperation

- Raksha Mantri inaugurated the first-ever joint military exercise 'Dustlik' between India and Uzbekistan in 2019.
- India has also assisted in setting up an India Room at the Armed Forces Academy of Uzbekistan in Tashkent.
- India and Uzbekistan share common perspectives on a number of security issues, including on terrorism, trans-national organized crime, illegal trafficking and smuggling, etc.

Development assistance

- In response to a request for LOC of USD 1 billion by the Uzbek Government, a Line of Credit Agreement for USD 200 million for construction of affordable housing and social infrastructure projects was signed between the State Investment Committee of Uzbekistan and the EXIM Bank in
- A Joint Centre for Information Technology was set up in 2006 and upgraded in 2014 with Indian assistance. An India-Uzbekistan Entrepreneurship Development Centre (EDC) was inaugurated on 24 December 2018 in Tashkent. An Indian expert has been deputed at EDC for training and capacity building of Uzbek entrepreneurs.
- India has offered grant assistance for implementation of High Impact Community Development Projects to Uzbekistan.

Education and Culture

- Uzbekistan has been sending candidates under the ITEC programme since 1993.

- The Samarkand State University has set up an Indian Study Centre, which is headed at present by a senior professor from India.
- Indian films, actors and songs are extremely popular across the country. There is interest in reviving the tradition of co-production and organization of and participation in film festivals. There is a growing trend among Indian film producing houses to use Uzbekistan as a location to shoot their films.
- There are regular visits of cultural troupes from both sides.

Diaspora

- There are about 1800 Indian nationals living in Uzbekistan. They are involved mostly in pharmaceutical and hospitality businesses; some are university and school teachers; and many serve as doctors in local hospitals and many work in the oil and gas sector.

ENVIRONMENT & ECOLOGY

Omorgus Khandesh

Context

- A new beetle species has been discovered in India, according to a paper published in the New Zealand-based journal *Zootaxa*

Details:

About:

- *Omorgus Khandesh* is **necrophagous** and is, therefore, also called a **keratin beetle**.
- During the decomposition of a body, blowflies are amongst the first ones to arrive in the early stages.
- Meanwhile, the final successional stage is with the arrival of the keratin feeders, thus their importance in forensic science.
- **The new species belongs to the Trogidae family.**
- **With the addition of this new species, now there are a total of 14 extant species of this family in India.**
- The beetles of this group are **sometimes called hide beetles** as they tend to cover their body under the soil and hide.
- They are not photogenic; they are usually black or grey and encrusted in dirt.
- Their bumpy appearance is distinct, with short, dense setae all over the body.
- The new species is morphologically most similar to *Omorgus rimulosus*. The latter is redescribed and illustrated to enable accurate recognition of both species in the new paper.
- *Omorgus Khandesh* is mainly associated with bird and mammal nests or burrows and the details of their life histories are poorly known.
- They feign death upon being disturbed and become motionless.

Importance:

- The beetle is important for forensic science as it helps **detect the time of death of an animal or human.**

How are they different from regular beetles?

- They are carrion feeders and are the last one to attend the carrion.
- Hence, they are of forensic importance in the detection of the time of the death of the animal/human.
- As they are mostly associated with bird and mammal nests/burrows, the details of their life histories are poorly known.
- These new found beetles are less studied in the Oriental region, India particularly as compared to the other part of the world.

Important Fact:

- **Dr Kalawate is the first woman scientist to have discovered a new species in the country**

National Green Tribunal

Context

- The National Green Tribunal (NGT) has imposed a fine of ₹2,232 crore on the Delhi government for damage caused to the environment due to improper solid and liquid waste management.

Details:

National Green Tribunal:

- **It is a Statutory Body under National Green Tribunal (NGT) Act 2010.**
- It ensures environmental justice.
- It is not bound by the Code of Civil Procedure; it is guided by principles of natural justice.
- Disposal of applications within 6 months.
- The act proposed to Set up 5 places of Sittings:
 - New Delhi

- Bhopal
- Pune
- Kolkata
- Chennai

Members:

- Currently, 10 expert members and 10 judicial members (the Act allows for up to 20 of each).
- Only a Judge of the Supreme Court or a Chief Justice of a High Court Can be appointed as Chairman.
- Members are chosen by a Selection Committee (headed by a sitting judge of SC).
 - Judicial members are chosen from applicants who are serving or retired judges of High Courts.
 - **Expert members are Chosen** from applicants who are either serving or retired bureaucrats, not below the rank of an Additional Secretary.
- Expert members must have a doctorate in a related field.
- Chairman and members term of 5 yrs and are not eligible for re-appointment.

Powers:

- NGT pass orders or provides Compensation under:
 - The Water (Prevention and Control of Pollution) Act.
 - Water (Prevention and Control of Pollution) Cess Act, Forest (Conservation) Act.
 - Air (Prevention and Control of Pollution) Act.
 - Environment (Protection) Act 1986.
 - Public Liability Insurance Act 1991.
 - Biological Diversity Act 2002.

Whale Stranding

Context

- Pilot whales were stranded near the shore of Kalpitiya, a town located on Sri Lanka's west coast. Although mass strandings have been occurring since the times of Aristotle – back then, they were considered a gift from the gods as the stranded whales and dolphins were a rich source of food and oil – experts don't know exactly why they take place

Details:

- Apart from Sri Lanka, Australia's Tasmania has also seen mass beaching of whales.

What is whale stranding and why does it happen?

- **Whale stranding is a phenomenon in which whales are stuck on land, usually on a beach.**
- Other aquatic animals like dolphins and porpoises are also known to beach.
- **Most of the stranding events involve single animals but sometimes, mass strandings, consisting of hundreds of marine animals at a time, can happen.**
- The reasons for mass strandings are several, including the topography of the region, illness, human activities and increasing noise pollution in the oceans.
- **Among the major hotspots for the beaching of aquatic animals are Tasmania, New Zealand's Golden Bay and Massachusetts's Cape Cod in the United States.**

Impact of human activities:

- Experts believe that mass strandings could be becoming more common as the health of oceans continues to deteriorate due to human interference.
- **One of the prime reasons for such incidents could be an increase in noise pollution in the oceans.**
- The latest whale beaching event in Sri Lanka might have been caused due to the "recent seismic activity in the Indian Ocean".
- **Several studies have shown that noise from large commercial ships, military sonars or offshore drilling severely impacts whales' and other marine animals' ability to use sound to navigate, find food and protect themselves.** This can drive them ashore by deafening, disorienting, or frightening them.
- Another factor could be the **rising temperatures of the oceans that cause changes in prey and predator distribution, resulting in whales coming closer to shore.**

Prevention:

- It's very difficult to prevent them.
- **Also, as strandings happen due to several reasons, no one-size-fits-all solution would work.**
- However, "taking more care of our actions in the ocean to try and minimise human activities which might impact marine life" might help reduce the chances of such incidents.

Keoladeo National Park

Context

- The Rajasthan state Forest Department has proposed to construct a zoo inside Keoladeo National Park, a World Heritage Site popularly known as Bharatpur bird sanctuary, to display a range of wetland species, including rhinos, water buffaloes, crocs, dolphins and exotic species.

Details

- The purpose of this zoo, called **Wetland ex-situ Conservation Establishment (WESCE)**, says the Detailed Project Report (DPR) of the Rajasthan Forestry and Biodiversity Development Project (RFBDP), is “to rejuvenate the bio-diversity of Keoladeo National Park, thereby boosting its outstanding universal values.”
- **The Rs 15-crore WESCE plan for Bharatpur is part of the ambitious RFBDP for which Agence Française de Développement (AFD), the overseas development arm of the French government, has agreed to fund up to Rs 1,200 crore over eight years.**

Bharatpur Sanctuary

- Formerly known as the Bharatpur Bird Sanctuary, the **Keoladeo National Park is recognised as one of the world’s most important bird breeding and feeding grounds.**
- It originated in as a royal hunting reserve during the 1850s and was a game reserve for Maharajas and the British.
- In fact, Lord Linlithgow, Viceroy of India from 1936 to 1943, shot over thousands of ducks with his hunting party in a single day!
- **In 1982, Keoladeo was declared a national park and then later listed as a World Heritage Site by UNESCO in 1985.**
- The park is home to over 370 species of birds and animals such as the basking python, painted storks, deer, nilgai and more.
- Noted Indian ornithologist and naturalist Salim Ali used his influence to garner government support to create Keoladeo National Park.
- **It was also known as the breeding ground for the rare and elusive to spot Siberian crane**

Similipal Tiger Reserve

Context

- The carcass of a male elephant, aged between 8 and 9, was found near Gopinathpur beat house of Pithabata range, Similipal tiger reserve, in Mayurbhanj district. Villagers first spotted the carcass on Wednesday and informed the forest department.

Details

About:

- 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 (1515m above mean sea level).
- 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:

- An astounding 1078 species of plants including 94 species of orchids find their home in the park.
- 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.
- The park is known for the tiger, elephant and hill mynah.
- **It holds the highest tiger population in the state of Orissa.**
- 55 species of mammals, 304 species of birds, 60 species of reptiles, 21 species of frogs, 38 species of fish and 164 species of butterflies have been recorded from the Park.
- 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 and current status

- 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.
- **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.**

ECONOMIC SURVEY 2023

India's economy

The central thrust of this year's Survey is that India's economy has recovered from the Covid disruption and, at long last, is poised to see sustained robust growth in the rest of the decade.

The phase between 2014 and 2022 — has witnessed "wide-ranging structural and governance reforms that strengthened the economy's fundamentals by enhancing its overall efficiency".

Key Highlights

GDP Growth: The Survey said India's growth estimate for FY23 is higher than for almost all major economies. Despite strong global headwinds and tighter domestic monetary policy, if India is still expected to grow between 6.5 and 7.0 per cent, and that too without the advantage of a base effect, it is a reflection of India's underlying economic resilience; of its ability to recoup, renew and re-energise the growth drivers of the economy.

Inflation: The RBI has projected headline inflation at 6.8% in FY23, outside its comfort zone of 2% to 6%. High inflation is seen as one big factor holding back demand among consumers.

Unemployment: The Survey said "employment levels have risen in the current financial year", and that "job creation appears to have moved into a higher orbit with the initial surge in exports, a strong release of the "pent-up" demand, and a swift rollout of the capex."

Outlook for 2023-24: The Survey projected a baseline GDP growth of 6.5% in real terms in FY24. However, it detailed some downside risks. For instance, low demand for Indian exports, (due to poor global growth), may widen India's trade deficit and make the rupee depreciate. Similarly, sustained monetary tightening (higher interest rates) may drag down economic activity in FY24.

Conclusion

India is the world's most populous country with a growing youth bulge. It has the world's largest pool of poor people and the largest pool of malnourished children.

A growth rate of 4% in India can feel like a recession and even though a 6% growth should be achievable, it may not create enough jobs to satisfy a growing population.

Context

Recently, the government tabled the Economic Survey 2022-23. The Survey laid out the outlook for India's growth, inflation and unemployment in the coming years.

About

The Survey provides a detailed report of the national economy for the year along with forecasts.

It touches upon everything from agriculture to unemployment to infrastructure. It is prepared by the Economic Division of the Department of Economic Affairs (DEA).

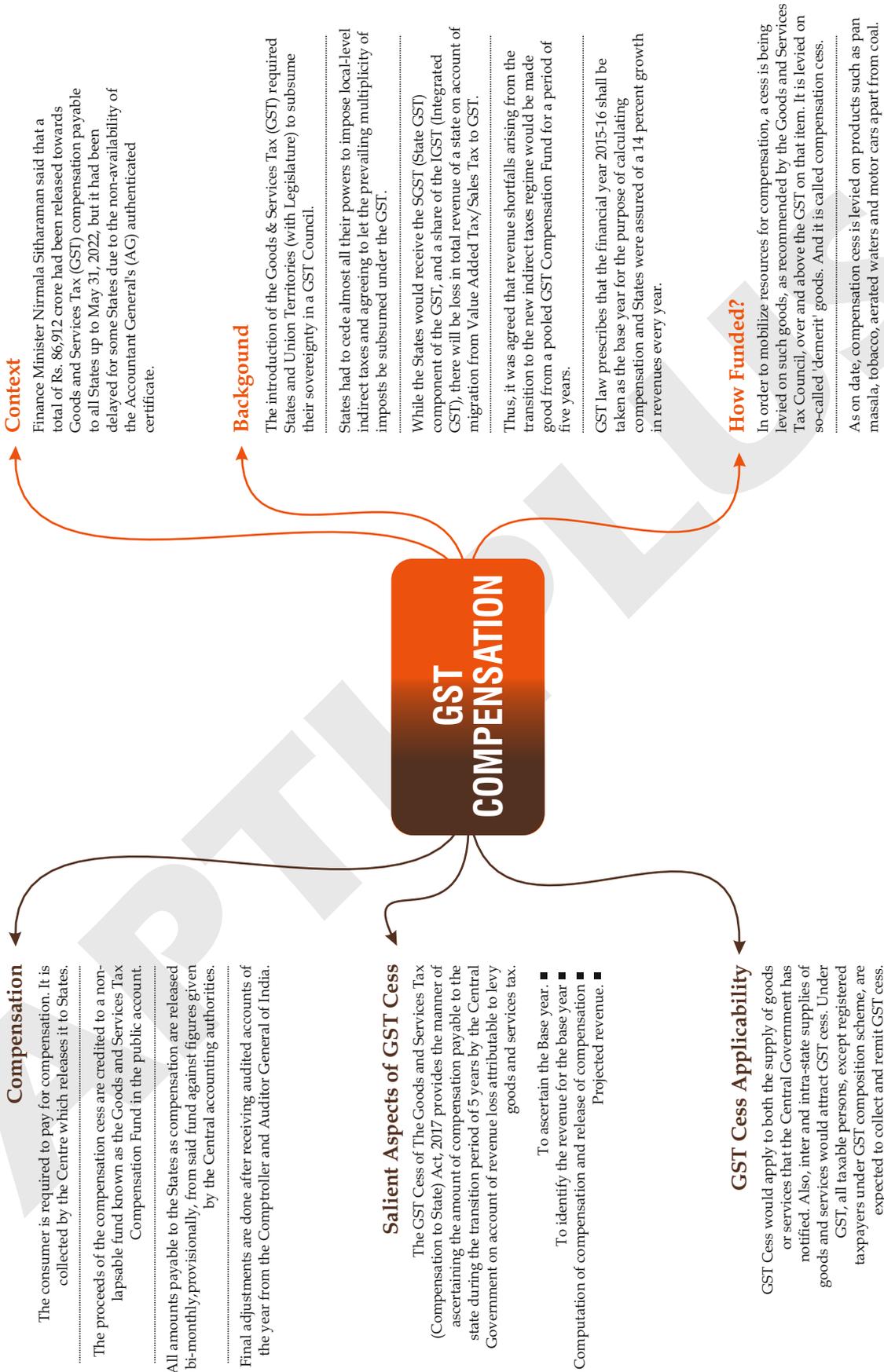
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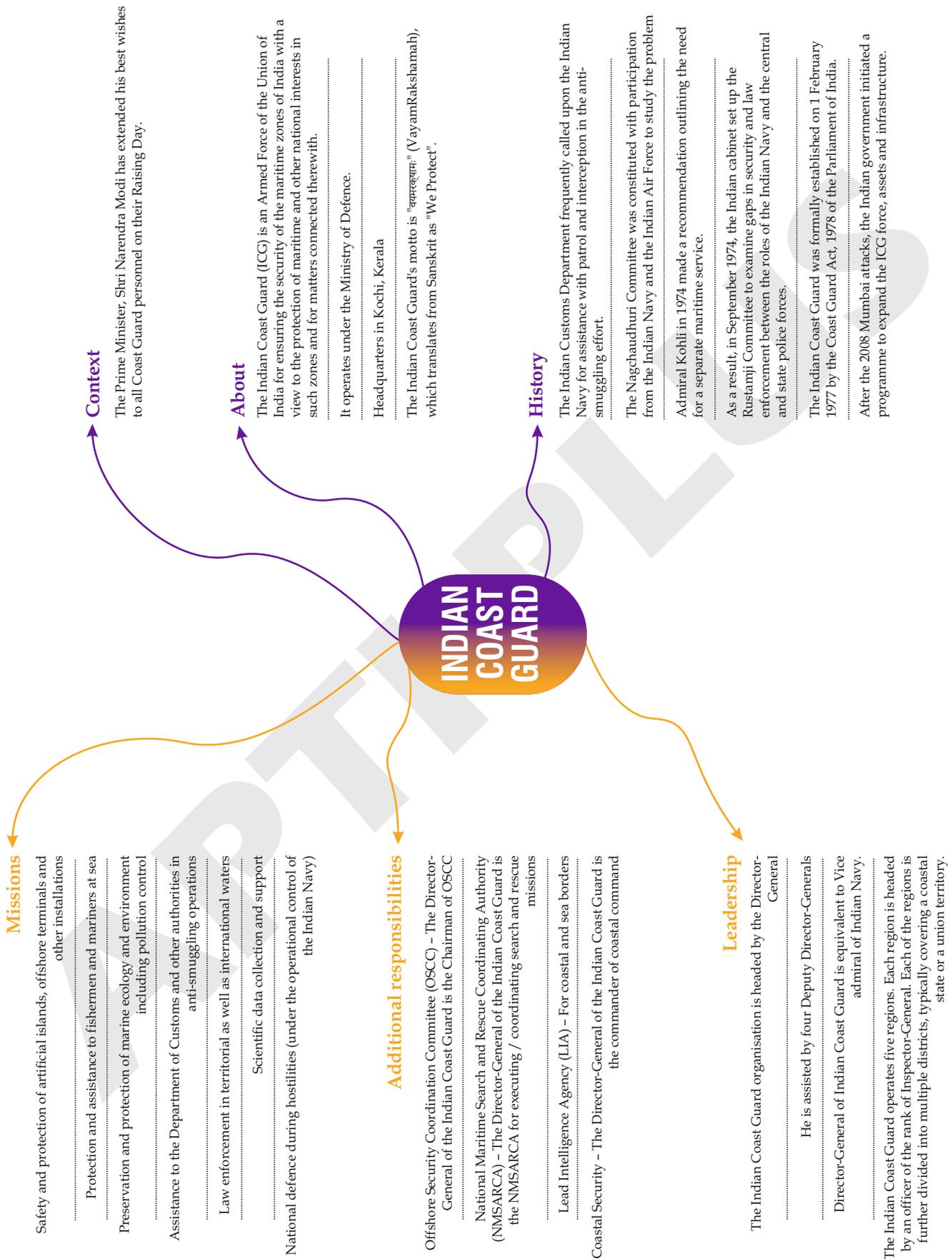
The Survey argued that the situation in 2023 is similar to how the economy was poised in 2003.

It said the period between 2014 and 2022 is analogous to 1998-2002, when despite transformative reforms by the government the Indian economy lagged growth returns.

This was due to temporary shocks such as the US sanctions after India's nuclear test, two successive droughts, the collapse of the tech boom, etc.

But once these shocks faded, the structural reforms paid growth dividends from 2003. The Survey claims the same story is set to repeat from 2023.





About POSCO Act

The POSCO Act was enacted in 2012. It is a gender-neutral act; it also recognizes that boys can also become victims of sexual violence as well. It defines a child as someone under the age of 18.

It also specifically lays down stringent punishment for exposing children to or using them to create child sexual abuse material. The law lays down the procedures for reporting sexual crimes against children.

It places the burden of proof on the accused, following 'guilty until proven innocent' unlike the IPC.

The Act penalizes storage of pornographic material for commercial purposes with a punishment of up to 3 years, a fine, or both.

Prohibition of Child Marriage (Amendment) Bill 2021

According to the National Family Health Survey 2019-21 (NFHS-5), 23% of women between the age of 20 and 24 were married before 18 years of age.

In India, the practice of child marriage was first legally prohibited in 1929 through the Child Marriage Restraint Act, of 1929.

As per the 1929 Act, marriage of girls below the age of 14 years and boys below the age of 18 years was prohibited.

The Prohibition of Child Marriage (Amendment) Bill, 2021 seeks to increase the minimum age of marriage for females to 21 years.

The Bill was referred to the Standing Committee on Education, Women, Children, Youth, and Sports on December 21, 2021.

The Bill was introduced to amend the Prohibition of Child Marriage Act, of 2006.

The main objective is to increase the minimum age of marriage for females to 21 years.

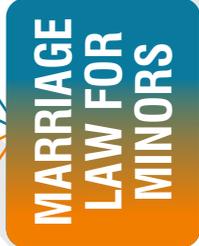
Under the 2006 Act, a person married below the minimum legal age (18 years) may apply for dissolution within two years of reaching majority (before 20 years of age).

Significance of the Bill

Increasing the minimum age of marriage for females to 21 years, ensures gender equality, as the legal marriage age for males is already 21 years, different ages of marriage promote the Stereotype that wives must be younger than their husbands.

The Bill increases the minimum age of marriage for females to 21 years. This signifies that a person married between 18 and 21 years may also apply for voiding the marriage.

Increasing the age of marriage will help in achieving various goals including improvement of maternal and infant mortality rates (IMR and MMR), nutrition levels, the sex ratio at birth (SRB), female labour force participation, and gender equality, and will lead to the empowerment of women.



Concerns

About a quarter of 20-24-year-old women are married before the age of 18 years, despite that being the minimum age of marriage since 1978.

According to NFHS-5 (2019-21), the prevalence of underage marriages remains high, with 23% of women between 20 and 24 years of age married before the age of 18.

Increasing the legal age for marriage for women will increase the number of marriages performed underage and render young adults without legal protection.

Government steps

Beti Bachao Beti Padhao to address the declining Child Sex Ratio.

PM Matru Vandana Yojana (PMMVY) Providing Cash incentives for improved health and nutrition to pregnant and nursing mothers.

Scheme for Adolescent Girls aims at girls in the age group 11-18, to empower and improve their social status through nutrition, life skills, home skills and vocational training.

Pradhan Mantri Mahila Shakti Kendra scheme promotes community participation through the involvement of Student Volunteers for the empowerment of rural women.

National Crèche Scheme to provide daycare facilities to children of the age group of 6 months to 6 years of working women who are employed.

Way forward

The issue of raising the age of marriage for women must be supported with other measures that help delay underage marriages such as access to education and improving women's safety.

There is a need for improved access to education, skill training and employment opportunities, safety for women and strengthening maternal health services to reduce maternal and infant mortality rates.

More awareness needs to be generated to make more children come forward for their child abuse.

Proper training of police, forensic staff and public prosecutors need to be put in place for enhancement of the conviction rate.

The introduction of sex education in schools and educating the children about good touch and bad touch is significant. In 2008-09 Parliamentary committee report mentions the introduction of sex education, but it never materialized. It has to be implemented.

Important Initiatives

National Mental Health Programme (NMHP): India launched NMHP in 1982 to improve the status of mental health in India.

Central and State Mental Health Authorities: The Act established these authorities for the regulation & coordination of mental health services in India.

Right to make an Advance Directive: Under this, every person can state how to be treated or not be treated for the illness during a future mental health situation.

Right to appoint a Nominated Representative: Every person also has the right to appoint a nominee to take, on his/her behalf, all health-related decisions.

KIRAN helpline: It is a 24/7 toll-free helpline launched by the Ministry of Social Justice and Empowerment.

Manodarpan Initiative: It is an initiative launched by the Ministry of Education under Atmanirbhar Bharat Abhiyan.

RAAH app: It is a mobile application that provides free information to the public on mental healthcare professionals and mental healthcare centres.

MANAS App: MANAS stands for Mental Health and Normalcy Augmentation System. It is a comprehensive, scalable, and national digital well-being platform. It has been developed to promote the mental well-being of Indian citizens.

Mental Healthcare Act, 2017

This Act superseded the previously existing Mental Health Act of 1987.

The Act aims at decriminalizing the attempt to Commit Suicide by seeking to ensure that the individuals who have attempted suicide are offered opportunities for rehabilitation from the government as opposed to being tried or punished for the attempt.

The Act aims to safeguard the rights of people with mental illness, along with access to healthcare and treatment without discrimination from the government.

The Act includes provisions for the registration of mental health-related institutions and for the regulation of the sector.

The Act acknowledged that external factors; such as income, social status, and education — impact mental wellbeing, and therefore, recovery needs a psychiatric as well as a social input.

The Act has restricted the usage of Electroconvulsive therapy (ECT) to be used only in cases of emergency, along with muscle relaxants and anaesthesia.

Under the Act, the government was made responsible for creating opportunities to access less restrictive options for community living — such as halfway homes, sheltered accommodations, rehab homes, and supported accommodations.

The Act also discourages using physical restraints (such as chaining), and unmodified electroconvulsive therapy (ECT) and pushes for the right to hygiene, sanitation, food, recreation, privacy, and infrastructure.

INDIA'S MENTAL HEALTHCARE ACT

Context

The National Human Rights Commission (NHRC) in a recently released report raised serious concern over the "inhuman and deplorable" condition of all 46 government mental healthcare institutions across the country.

The report mentions that the government facilities are "illegally" keeping patients long after their recovery, in what is an "infringement of the human rights of mentally ill patients".

Evaluation

The Act safeguards the rights of people in mental healthcare establishments, but enforcement challenges remain.

Almost 36.25% of residential service users at state psychiatric facilities were found to be living for one year or more in these facilities.

The Act takes on a human rights lens by shifting the obligation of care onto different stakeholders — including caregivers, government institutions, police officials, and mental health practitioners.

Poor budgetary allocation and utilization of funds create a scenario where shelter homes remain under-equipped, establishments are understaffed, and professionals and service providers are not adequately trained to deliver proper healthcare.

Way forward

Urgent investment in child and adolescent mental health across sectors, not just in health, to support a whole-of-society approach to prevention, promotion and care.

Urgent investment in strategies to promote good mental health including the prevention of gender-based and other forms of violence

Integrating interventions across health, education and social protection sectors - including parenting programmes and ensuring schools support mental health

Breaking the silence surrounding mental illness, through addressing stigma and promoting a better understanding of mental health.

Issues

According to SEBI, though mutual fund regulations provide for some restrictions to address few conflicts of interest, there are some areas where the Trustees need to pay attention.

Investment by mutual fund (MF) schemes in public issues of its sponsor, its associates and/ or group companies;
Investment by MF schemes for fund raising activities by such companies where its sponsor, associates or group companies are appointed as merchant banker;

Sponsor influencing voting by MF schemes in companies in which it has interest and MF availing services of its sponsor, associates and group companies at terms which are not at arm's length.

SEBI's Proposal

SEBI has recommended that the trustees will be responsible for taking steps so that there are system-level checks in place to prevent fraudulent transactions.

SEBI has also recommended amending certain regulations for AMC and also include additional clauses to enhance the role, responsibility, and accountability of the board of AMC.

In order to strengthen governance and for financial independence, SEBI also suggested that all the existing trustees with board of trustees structure should convert into a trustee company in the next one year.

The markets regulator also proposed the constitution of a 'Unit Holder Protection Committee' (UHPC) by board of AMC.

This will help in an independent review mechanism for the decisions of AMC from the perspective of the unit holders' interest, across all products and services.

Benefits of Investors

SEBI said with increasing scale and reach of the mutual fund industry, trustees' role in respect of unitholders' protection assumes even greater significance. Once finalised, the trustees will ensure that the AMCs act in a manner which is not skewed in favour of AMC's stakeholders.

The key areas of their focus will be fairness of fees and expenses charged by the AMC and misconduct including market abuse / misuse of information by the AMC or AMC employees or distributors. The trustees will ensure that there is no mis-selling of mutual fund schemes to increase asset under management (AUM) and valuation of the AMC.

Context

The capital markets regulator Securities and Exchange Board of India (SEBI) recently proposed to review the role and accountability of trustees of mutual funds with an aim to protect unitholders' interests. Besides, the regulators also put forward some recommendations to enhance the accountability of the board of asset management companies (AMC).

About

A mutual fund is an investment vehicle that pools funds from investors and invests in equities, bonds, government securities, gold, and other assets.

Companies that qualify to set up mutual funds, create Asset Management Companies (AMCs) or Fund Houses, which pool in the money from investors, market mutual funds, manage investments and enable investor transactions.

Mutual funds are managed by sound financial professionals known as fund managers, who have the expertise in analyzing and managing investments. The funds collected from investors in mutual funds are invested by the fund managers in different financial assets such as stocks, bonds, and other assets, as defined by the fund's investment objective.

Role of Trustees

Mutual funds in India have a three-tiered structure – mutual fund, the trustees and the AMC.

Board of trustees or trustee company holds the property of the mutual fund in trust for the benefit of the unit holders. They appoint an AMC to float schemes for the mutual fund and manage the funds mobilised under various schemes.

They are also expected to exercise supervisory oversight over AMC and its activities so as to ensure that AMC acts in the interest of the unitholders.



Context

The Union Government has informed the High court of Delhi that the PM CARES Fund was not created under the Constitution or any law made by the Parliament or the state legislature. It was set up as a public charitable trust.

Recently a petition was made in the court to declare the PM-CARES fund a 'state' under Article 12 of the Constitution to ensure transparency in its functioning.

Arguments by petitioner

The Prime Minister of India and other Government Ministers have asked the general public for contributions to the PM-CARES fund.

Government symbols or a government website were utilized for the donation.

PM-CARES "projects itself as the government of India" indicating that it operates on the domain name of the government of India and has the photograph of the Prime Minister as well as the Ashoka Pillar.

Public announcements made by the government functionaries, arguing that such persons making the statements are "people of responsibility."

About fund

PM CARES Fund has been registered as a Public Charitable Trust under the Registration Act, of 1908.

Prime Minister is the ex-officio Chairman of the PM CARES Fund and the Minister of Defence, Minister of Home Affairs and Minister of Finance, of the Government of India, are ex-officio Trustees of the Fund.

The fund consists entirely of voluntary contributions from individuals/organizations and does not get any budgetary support.

Donations to the Fund would qualify for 80G benefits for 100% exemption under the Income Tax Act, of 1961.

Donations to the Fund will also qualify to be counted as Corporate Social Responsibility (CSR) expenditure under the Companies Act, 2013.

It has also got an exemption under the Foreign Contribution Regulation Act (FCRA), which enables the PM CARES Fund to accept donations and contributions from individuals and organizations based in foreign countries.

PM-CARES Fund is not a public authority under the Right to Information Act (RTI), 2005.

The Comptroller and Auditor General's (CAG) clarified that it wouldn't audit the Fund as it is a charitable organization and is also based on donations from individuals and organizations.

It would be audited by an independent auditor outside of the government.



Eligibility criteria

PM-CARE covers all children who have lost: Both parents Surviving parents or legal guardians/adoptive parents/ single adoptive parents due to the COVID-19 pandemic, starting from 11th March 2020 the date on which WHO declared and characterized COVID-19 as a pandemic till 28th February 2022.

To get benefits under this scheme, a child should not have completed 18 years of age on the date of death of their parents.

Status of funds

The total donation received under the fund is nearly Rs 11,000 crore, while the expenditure made from the fund is about Rs 3,980 crore, according to the latest audited statement.

Rs 1,000 crore was granted for migrant welfare

The government has used a part of the fund to buy medical equipment, including ventilators, to support the fight against COVID-19 and has also provided relief to migrants.

Controversy

Notices were issued by various government departments, "urging" employees to contribute their part of their salary.

Indian Railway, Army, Navy and Air force, Defence PSUs and employees of the defence ministry have donated to the Fund. While a major portion of these contributions has been voluntary, it appears that many government employees weren't given any choice.

Donations are made from Public departments, and therefore the public has the right to know details of the fund and expenditure made under it, but the government made it clear that the fund is outside the preview of the RTI act, and CAG will not audit the fund.

The PMO has also refused to make public any documents related to the PM CARES fund. Total lack of transparency about the use of the funds.

The PM CARES Fund is exempt from scrutiny and monitoring of all foreign donations.

