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## **Supreme Court holds 'piecemeal' extensions given to ED Director illegal**

- The Supreme Court said that the third extension to Sanjay Kumar Mishra's tenure as the Enforcement Directorate (ED) chief was illegal and in violation of its judgment in 2021.
- The top court, however, permitted him to continue in office until July 31 to allow for a smooth transfer.
- It is unfortunate that the Supreme Court has allowed S K Mishra, Director of the Enforcement Directorate (ED), to continue in office till September 15 after it had ruled on July 11 that he could continue only till July 31. The court said he could continue till September 15 after the central government sought his continuation till October 15, claiming that his services are indispensable during the ongoing country review before the Financial Action Task Force (FATF). The court had earlier found that the extensions given to Mishra in 2021 and 2022 were illegal and had rejected the government's argument that his services were indispensable for the FATF review. The government approached the court again with the same argument and the court has now accepted it partially.

### Enforcement Directorate (ED)

- The Enforcement Directorate was established in the year 1956 as an 'Enforcement Unit' under the Department of Economic Affairs.
- Later, in 1957, this Unit was renamed as 'Enforcement Directorate'.
- Administrative control
- Presently, it is under the administrative control of the Department of Revenue (under the Ministry of Finance) for operational purposes.
- Functions
- ED is responsible for enforcement of the Foreign Exchange Management Act, 1999 (FEMA), and certain provisions under the PMLA.
- ED has the power to attach the asset of the culprits found guilty of the violation of FEMA.
- It has also been empowered to undertake, search, seizure, arrest, and survey, etc. against the offences committed under PMLA.
- Appointment of Director of ED
- The ED Director is appointed by the central government on the recommendation of a committee:
- chaired by the Central Vigilance Commissioner and
- members comprising of Vigilance Commissioners, Home Secretary, Secretary DOPT and Revenue Secretary.
- The Supreme Court held that the third extension of service to Sanjay Kumar Mishra, the Director of the Enforcement Directorate (ED), was invalid.

### Background

#### Extension of tenure

- Mishra was first appointed as the ED Director in November 2018, for a fixed period of two years.
- Days before his tenure was to end, the President in November 2020, modified the previous order retrospectively and changed Mishra's tenure to three years.

#### Issue challenged in SC

- In 2020, when Mishra was granted a one-year extension, it was challenged in the top court by an NGO, Common Cause.
- In September 2021 judgment, the court allowed the extension given his tenure was coming to an end in about two months.
- However, the apex court was clear that no further extension was to be granted to Mishra.
- Amendments to the CVC Act and the DSPE Act
- In December 2021, the Parliament passed two bills to replace the ordinances promulgated in November 2021 to enable extension of tenure of the directors of the Central Bureau of Investigation (CBI) and Enforcement Directorate (ED).

#### The two bills, brought in this regard, were:

- The Central Vigilance Commission (Amendment) Bill, 2021, and
- Delhi Special Police Establishment (Amendment) Bill, 2021.
- The amended law allowed the extension of service of ED and CBI chiefs for a period of three years beyond their two-year tenure by granting extensions of one-year each.
- Such extensions were allowed to be granted in public interest.

#### Re-extension of tenure

- Under the amended law, Mishra got an extension from November 2021 to November 2022.
- Last November, his tenure was further extended by a notification till November 2023.
- This was the third extension in the tenure of Mishra, who was to be in office till November 18, 2023, with a total tenure as ED chief lasting five years.

#### Issue again challenged in the court

- The extension of Mishra was challenged by a bundle of petitions, which banked on the September 2021 order of the top court.
- The changes to the CVC and DSPE Act were also challenged before the Supreme Court.
- The petitioners contended that it would defeat the directive issued by SC in 1997 in Vineet Narain and Others v. Union of India to have a fixed tenure of the CBI chief.
- SC in the Vineet Narain vs Union of India (1997) case was of the opinion that the CBI and the ED chiefs should have a minimum tenure of two years.
- On amendments made to the CVC Act, DSPE Act

- The apex court upheld as constitutional the amendments made to the Central Vigilance Commission Act, 2003, The Delhi Special Police Establishment Act, 1946, and the Fundamental Rules in 2021, enabling the tenure extension.
- The apex court said that the legislative enactment can be struck down only on two grounds:
- the appropriate legislature does not have the competence to make the law; and
- it takes away or abridges any of the Fundamental Rights enumerated in Part III of the Constitution or any other constitutional provisions.

### **Role of parliament in establishing a democratic India**

- India is often called the “mother of democracy”.
- The recognition is founded on the solid bedrock of India’s historical and cultural legacy that goes back several years.
- India’s ancient texts refer to institutions and political structures that facilitated deliberation and debate, including participative governance, particularly at the village community level.
- People practising tribal culture have exhibited examples of resilient local self-governance.

#### Importance of Parliament

- Parliaments are the supreme expression of the will of sovereign peoples.
- Members of Parliament in a constitutional democracy like India are legally obligated to seek approval for their plans through free, fair and open elections.
- Parliaments constituted by popular will are bestowed with constitutional and moral authority to enact laws, determine political goals, allocate resources, give voice to the common citizens and hold the executive accountable.

#### Preserving Democratic Ethos

- People of a nation are heart of any parliamentary democracy.
- The Indian people have held onto the democratic ethos which is deeply ingrained in their common psyche.
- That parliamentary democracy has strengthened and flourished in independent India is in itself a testimony to this democratic ethos.
- The Indian Parliament seamlessly continues a historic democratic legacy spanning millennia.

### Overcoming Doubts

- When India attained independence in 1947, serious doubts were expressed about the viability of the democratic experiment, which was considered to be an alien implant on the Indian political terra firma.
- India's founding fathers who were influenced from its history, tradition and culture, and had faith in the political judgement and wisdom of common people, had no hesitation or self-doubt.
- The journey in the last seven decades has justified that faith in the people of India and in their capability to make the right choice when it mattered the most.

### Role of parliamentary system

- India's robust and accommodative parliamentary system manages conflicts, cherishes diversity and nurtures oneness of spirit to keep India united and strong.
- It guides the nation forward on the path of development and prosperity for the last person in the queue.
- It has provided space and respect for diversity in all its dimensions while dealing with all in an even-handed way and never hesitating to reach out to the weaker sections of society.

### Watchdog of the public exchequer:

- It is the final watchdog of the public exchequer, approves the allocation of funds and finances and monitors expenditure.

### Securing Executive Accountability:

- Parliament, is entrusted with securing accountability of the Executive through various instruments available to it in the Constitution, the Rules of Procedure and Conduct of Business, tradition and well-settled precedents.

### Representing citizens:

- Parliament serves as an effective mouthpiece of the people in bringing their issues, concerns, problems and difficulties to the attention of governments and the nation.

### Positive socio-economic change:

- The Parliament of India has played a determined and purposive role in bringing about positive socio-economic change in a society as diverse as India through progressive legislation and debates on matters of contemporary national interest.

#### Passing legislations:

- Parliament has passed many laws since Independence, these pieces of legislation have established India as a nation that promotes the rule of law.
- It also establishes India as a nation that is determined to uplift and improve the quality of life of ordinary citizens, and make society inclusive and fair.

#### Enhancing Parliamentary Scrutiny

- Parliamentary committees are extensions of Parliament.
- These committees are vested with great authority and responsibility to carry out detailed scrutiny of bills, budgetary proposals, programmes and policies and the working of different ministries of the Union government.
- Committees complement and support the work of Parliament enormously since they enjoy greater flexibility in their functioning.
- They can devise their own methodology, take evidence of government officials and elicit views directly from the people, organisations and experts.
- These feedback mechanisms help to sharpen parliamentary scrutiny and oversight of government ministries and departments.

#### Rights and Responsibility of Parliamentarians

##### Parliamentary privileges:

- The Constitution grants members, individually and collectively as members of the Houses of Parliament, certain rights, privileges and immunities to enable them to discharge their responsibilities efficiently, effectively and without fear or favour.
- Parliamentary privileges shield and safeguard the autonomy, authority and dignity of Parliament from incursions by other arms of the state.
- These privileges are vital as they enable members to express their views freely.
- These privileges include:
  - Immunity from prosecution for speech made in the Houses of Parliament.
  - Immunity from arrest in civil matters during parliamentary sessions or committee meetings.

- However, rights come with responsibilities, which members have to remain cognisant of, so that these privileges are not used for frivolous, baseless and defamatory allegations.

#### Responsibility of Parliamentarians:

- The members of Parliament are morally and ethically bound to speak responsibly in the House, and their behaviour and conduct should adhere to the highest parliamentary norms.
- There have been instances when the way Parliament has functioned has disappointed those who look upon the Houses for meaningful deliberation and debates on national issues and those of common concern.
- Occasional disruptions during sittings and displays of unruly behaviour on the part of some members have unfortunately, increased in frequency.

#### Right to question and dissent:

- Right to question and dissent is integral to democracy and should be protected at all costs, this right should not become a licence to foment disruption and disorder in the House when disapproval can be expressed through informed debate, wit and humour.
- The net result of disruptive obstructionism is:
  - Lower productivity of the House
  - Passing of important legislation without detailed debates
  - Wasting the opportunity to demand answers from the government to search questions and raise parliamentary constituency-related issues during Zero Hour.
- Members of Parliament and citizens should introspect as to how the pre-eminence of Parliament among the organs of the state can be restored as a responsible body that is uniquely competent to finding solutions through well-informed, methodical and open deliberation.

#### Parliament's Technological Advancements

- Parliament has integrated information technology to improve connectivity with members, other legislative bodies, and citizens.
- Modern technology and green building norms are incorporated into the new Parliament building.
- The Digital Sansad app has been developed and is being continuously fine-tuned to serve members and stakeholders better.
- Social media coverage of the activities and archival resources of Parliament is being upgraded to connect effectively with the youth.

- As India enters the Amrit Kaal of its existence as a sovereign nation, it is the people of India who will have to find ways to make this representative institution a place worthy of the respect and trust that voters have reposed in their elected representatives. Members of Parliament owe it to the citizens of this great nation to uphold the glory and dignity of Parliament.
- Parliament is not a lifeless institution but a vibrant and living embodiment of the will of more than a billion Indians. Individually and collectively, Parliamentarians are committed to working towards the welfare of citizens, and in this, their authority is amply fortified by the Constitution, the laws of the land and the moral authority bestowed by the people of India.
- Parliament of India's capacious spirit has embraced all shades of opinion with equal respect, while all along resolutely standing up for constitutional values, national interest, unity of the nation and the common good.

### **ECOWAS do in Niger**

- In a coup, soldiers in the West African nation of Niger installed Gen. Abdourahmane Tchiani as head of state after ousting President Mohamed Bazoum, who said he was held "hostage". Along with the difficult economic conditions already prevailing in the country, what has added to the concern for some in the West are the Nigerien calls for assistance from Russia's Wagner Group.
- A mercenary organisation that was also active in the Ukraine war and maintained a footprint in Africa, the Group has fallen out of favour with Russian President Vladimir Putin after its leader Yevgeny Prigozhin attempted a coup in Moscow in late June this year. However, its presence in Africa pre-dates its involvement in Ukraine.
- Apart from the expected international players, such as Russia and the United States, the regional bloc ECOWAS or the Economic Community of West African States has been playing an active role. Its heads of state will meet on 10 August 2023 to discuss their next steps, after Niger's military junta defied their 6 August deadline to reinstate the country's ousted president and the soldiers closed the country's airspace. There is also apprehension that ECOWAS may choose to intervene militarily.

What is ECOWAS?

- Also known as CEDEAO in French, the regional group was established in 1975 through the Lagos Treaty – with a mandate of promoting economic integration among its members. Today, ECOWAS has 15 members: Benin, Burkina Faso,



Cape Verde, Cote d' Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal and Togo. Around 400 million people live in this region.

- Although, following coups in recent years in some of the biggest countries in the bloc – namely Mali, Guinea and Burkina Faso – it suspended the three members and refused to recognise their new governments.
- ECOWAS' larger aims are to have a single common currency and create a single, large trading bloc in areas of industry, transport, telecommunications, energy, financial issues, and social and cultural matters. According to its website, the vision of ECOWAS is the creation of a “borderless region” that is well-integrated. “ECOWAS is meant to be a region governed in accordance with the principles of democracy, rule of law and good governance,” it states.
- At the helm of its organisation structure is the Chairman of the Authority of Heads of State and Government. The Chairman is the current Head of State and Government and is appointed by other Heads of State and Government to oversee its affairs for one year.

What kind of a role has ECOWAS played in the region so far?

- Beyond the goals of economic cooperation, ECOWAS has attempted to quell military conflicts in the region. According to Associated Press, ECOWAS also operated a regional peacekeeping operation known as ECOMOG, led by Nigeria in the 1990s and early 2000s, like in Liberia when forces were first deployed in 1990 during the deadly civil war and in Sierra Leone in 1997 when a democratically elected government was overthrown.
- In 2017, it intervened in The Gambia after longtime President Yahya Jammeh refused to step down after losing the elections which eventually led to the winner Adama Burrow coming to power. It has sent its troops to other countries but never to Niger.
- Incidentally, the ongoing Niger coup's leader, Gen. Tchiani, has previously served as battalion commander for ECOWAS peacekeepers in Ivory Coast after a ceasefire between government and rebel forces in 2003, according to a Reuters report.

And what might ECOWAS do in Niger?

- While its response so far has indicated a military intervention, even if it ends up being limited in scope, the grouping faces many challenges.
- For instance, Mali said it and Burkina Faso, both neighbours of Niger run by military juntas, were sending a delegation of officials to Niger to show support and would consider an attack as an attack on them as well.
- The coups in these countries have been justified by the respective military leaders by pointing to the rising influence of terrorist forces and accompanying security challenges, which they claim the civilian establishment had been

unable to handle. They have also been critical of the Western role in leading efforts to solve such issues but failing.

- Omar Alieu Touray, President of the Economic Community of West African States Commission, briefed the UN Security Council in July this year that from 1 January to 30 June 2023, the region recorded 1,814 incidents of terrorist attacks, which resulted in 4,593 fatalities. By the end of April 2023, half a million refugees were recorded in the region.
- There is also the question of whether longstanding measures of economic sanctions – such as those imposed by ECOWAS – can work, as these countries are also dealing with low economic growth prospects at the moment. France, a former coloniser of Niger, has cut off aid following the coup. Additionally, the presence of more than 2,000 troops from France and the US has also irked some locals, with the coup seeing anti-France graffiti and slogans.
- There are also internal difficulties in launching an attack. As a Foreign Policy article notes, the neighbouring country of Nigeria has its President Bola Ahmed Tinubu currently as the bloc's chair and he has led the call for ECOWAS to intervene militarily. However, the Nigerian Senate has pushed back on approving Tinubu's request for military deployment.

### AI's language gap

- AI tools like ChatGPT offer amazing opportunities — if you happen to speak a language they support. But according to Mekdes Gebrewold, founder of Ashagari consultancy in Ethiopian capital Addis Ababa, even machine translations are impossible in her language. “Tools like Google Translate are not well-constructed for Amharic,” she told DW. “So we pay professionals instead.”
- Billions of people like Mekdes Gebrewold are unable to take advantage of AI-powered tools due to their language. This applies not only to generative AI like ChatGPT or translation services like Google Translate, but also a range of other tools — autocomplete, transcription services, voice assistants and content moderation on social media.

But some are working to change that.

Why do AI tools not work in many languages?

- Modern AI tools are, in essence, advanced autocomplete tools that predict the most likely answer based on the input they get. These predictions rely on vast

amounts of “training data” – digital collections of content that AI engineers use to build their models.

- One important source of training data is the so-called Common Crawl, an openly available dataset consisting of billions of web pages from the internet. About 60% of the examples used to train ChatGPT’s version 3.5 come from this collection.
- However, because of the reliance on this training data, AI tools don’t work when data in a particular language is scarce. This is an issue since the internet is dominated by only a few languages — none more so than English, which alone accounts for almost half of all pages in the Common Crawl.
- Amharic, along with all other African, American, and Oceanian languages, make up less than 0.1% of the Common Crawl. It’s known as a low-resource language with little digital data available. Around the world, billions of people speak these low-resource languages, a category that includes even major languages like Hindi, Arabic, and Bengali.
- There is a clear pattern that shows which languages are left behind. European languages are vastly overrepresented compared to most Asian and all African ones. Dutch, for example, is spoken as a first language by just over 20 million people, similar to Amharic. Yet Dutch appears almost 700 times more in the Common Crawl dataset, and hundreds of times more than even Hindi with its over 300 million native speakers. There are ways around this lack of data, though. Beyond the tech giants of Silicon Valley, machine-learning researchers all over the world are developing AI-powered tools for their own languages.

#### How to bridge AI’s language gap

- Asmelash Teka Hadgu cofounded Lesan, a startup that creates machine translation and speech technology for Ethiopian languages Amharic and Tigrinya. Without vast amounts of online resources, his team works directly with their community and finds creative ways to collect data.
- “We work mainly with students who just love their language,” he told DW. “When we tell them we’re building this thing, they are inspired and want to contribute. So we set out tasks to gather content in our language. And we assist, and reward them financially.”
- This requires a lot of manual labor. Contributors first identify high-quality datasets, such as trustworthy books or newspapers, then digitize and translate them into the target languages. Finally, they align the original and translated versions sentence by sentence to guide the machine learning process.
- With this approach, companies like Lesan cannot hope to rival the billions of pages of English content available, but they might not need to. Lesan, for instance, already outperforms Google Translate in both Amharic and Tigrinya.
- “We’ve shown that you can build useful models by using small, carefully curated data sets,” said Asmelash Teka Hadgu. “We understand its limitations and capabilities. Meanwhile, Microsoft or Google usually build a single, gigantic model for all languages, so it’s almost impossible to audit.”

## More languages need digital support

- Lesan's approach is not unique. Similar projects are being successfully implemented all over the world, even for languages with smaller digital footprints.
- Ethnologue, a global database of languages run by Christian NGO SIL International, lists Amharic among the languages with "Vital" language support. This means that there are at least some machine translation tools, spellcheck, and speech processing available. Thousands of languages worldwide, including many with more than a million users, have even less content and fewer digital tools on offer.
- Asmelash Teka Hadgu is part of a network of African AI pioneers. He is a research fellow at the Distributed AI Research Institute (DAIR), a group of researchers from Africa, Europe, and North America. He is also in regular contact with groups like GhanaNLP and the African grassroots collective Masakhane.
- "We're enabling ownership of these technologies by African founders," he told DW. "This is being built and served by people from these communities. So the financial rewards will also go directly back to them." Outside of Africa as well, researchers around the world are working on other languages including Jamaican Patois, Catalan, Sudanese, and Māori.
- And while tech giants like ChatGPT's OpenAI keep their models secret and inscrutable, initiatives like the global AI collective Hugging Face have been sharing insights and AI models freely. This makes it easier for any researcher to create solutions for their languages.
- "Talent is everywhere, opportunity is not," said Asmelash Teka Hadgu. "If you want to create the best kind of machine translation technology, say, for a Ghanaian language, there will be a Ghanaian who feels passionately and can do it well. Let's empower that."

### What does "Havana Syndrome" mean?.

- The Central government has told the Karnataka High Court that it will look into the matter of the 'Havana Syndrome' in India.
- A petitioner had approached the Karnataka High Court requesting a writ of mandamus for an enquiry on Havana Syndrome in India and the prevention of high-frequency microwave transmission in India.
- The petitioner argued that authorities must consider the grievances raised in the petition under Article 350 of the Constitution.
- Article 350 - Every person shall be entitled to submit a representation for the redress of any grievance to any officer or authority of the Union or a State in any of the languages used in the Union or in the State, as the case may be.
- A single-judge bench of the court disposed of the petition on July 27 after the Centre's counsel agreed to examine the case.
- It directed the Centre to do so within three months.
- Havana is the capital city of Cuba, a country located in the Caribbean region. It is situated on the northern coast of the island of Cuba, and it's known for its historic architecture, vibrant culture, and rich history.
- Microwaves refer to electromagnetic waves with wavelengths that fall between those of radio waves and infrared radiation, typically ranging from about 1 millimeter to 1 meter. They are a type of non-ionizing radiation, which means they don't have enough energy to ionize atoms or molecules (remove electrons from them), unlike higher-energy radiation like X-rays or gamma rays.

#### Havana Syndrome

- Havana Syndrome refers to a set of mental health symptoms that are said to be experienced by US intelligence and embassy officials in various countries.
- It typically involves symptoms such as
  - hearing certain sounds without any outside noise being present;
  - nausea, vertigo and headaches, memory loss and issues with balance.
- In late 2016, US diplomats and other employees stationed in Havana reported feeling ill after hearing strange sounds and experiencing odd physical sensations.
- The symptoms included nausea, severe headaches, fatigue, dizziness, sleep problems, and hearing loss, which have since come to be known as "Havana Syndrome".

#### Causes of Havana Syndrome

- No one is entirely sure. Initially, it was speculated to be a sonic attack done by Cuban intelligence agencies.

- Later, the National Academy of Sciences noted in its report that the best explanation for the syndrome would be pulsed, directed microwaves.
- Microwaves are a type of electromagnetic radiation with wavelengths longer than those of visible light but shorter than those of radio waves.
- They fall within the electromagnetic spectrum between radio waves and infrared radiation.
- Microwaves have frequencies ranging from about 300 megahertz (MHz) to 300 gigahertz (GHz).
- The report suggested that the victims may have been subjected to high-powered microwaves that either damaged or interfered with the nervous system.
- It is suspected that beams of high-powered microwaves are sent through a special gadget known as “microwave weapon”.
- Havana Syndrome in India
- In India, the first such case was reported in September 2021, when a US intelligence officer travelling to New Delhi with CIA director William Burns reported symptoms of Havana Syndrome.
- As of July 2023, the 2021 incident was the only reported occurrence of the syndrome in India.

#### Microwave weapons

- Microwave weapons are supposed to be a type of direct energy weapons.
- It uses beams of high-frequency electromagnetic radiation to heat the water in a human target's skin, causing pain and discomfort.
- A number of countries are thought to have developed these weapons to target both humans and electronic systems.
- China had first put on display its “microwave weapon”, called Poly WB-1, at an air show in 2014.
- The United States has also developed a prototype microwave-style weapon, which it calls the “Active Denial System”.

## Legacy of Voyager Mission

After more than four decades in space, Voyager 2, Earth's longest-running space probe, experienced a communication loss with NASA.

### Voyager Mission

- Originally planned to explore the five outer planets (Mars, Jupiter, Saturn, Uranus, and Neptune) with four complex spacecraft, NASA changed its approach due to budget constraints.
- The agency decided to send two identical probes, Voyager 1 and Voyager 2, initially slated to explore only Jupiter and Saturn. In 1974, they were redirected to explore Uranus and Neptune as well.
- The Voyager spacecraft took advantage of a rare alignment of Jupiter, Saturn, Uranus, and Neptune that occurs once every 175 years.
- This alignment allowed the spacecraft to harness the gravity of each planet, enabling them to swing from one to the next using minimal fuel.

### Features of the Voyager

- **Identical Design:** Both Voyager 1 and Voyager 2 are equipped with 10 different instruments to carry out various experiments. These instruments include cameras for celestial imaging, infrared and ultraviolet sensors, magnetometers, plasma detectors, and cosmic-ray sensors.
- **Nuclear Power Source:** As their missions involved traveling far from the Sun, the spacecraft relied on a small nuclear power plant fueled by the radioactive decay of plutonium pellets, providing hundreds of watts of power.
- **Golden Phonograph Records:** Each spacecraft carries a golden phonograph record, intended as a time capsule for any extraterrestrial life that might encounter the probes in the distant future. The record contains images, natural sounds, music, greetings in multiple languages, and instructions for playing it.

### Notable Achievements of Voyager Spacecraft

- **Jupiter Encounter:** Voyager 1 reached Jupiter on March 5, 1979, followed by Voyager 2 on July 9. Among the exciting discoveries were active volcanoes on Jupiter's moon, Io, and three new moons: Thebe, Metis, and Adrastea.
- **Saturn Revelations:** Voyager 1 passed by Saturn's moon, Titan, revealing it was not the largest moon in the solar system, as previously thought. Titan's atmosphere was found to be composed mainly of nitrogen, and it likely had clouds and methane rain.
- **Uranus Exploration:** Voyager 2 arrived at Uranus in 1986, providing stunning photographs and confirming that its main constituents are hydrogen and

helium. The spacecraft discovered 10 new moons, two new rings, and made significant observations about Uranus's atmosphere.

- Neptune Flyby: Voyager 2 became the first human-made object to fly past Neptune in 1989. It discovered new moons and rings, observed the Great Dark Spot—a massive spinning storm on Neptune—and measured winds blowing at 1,100 kph.

### Continuing Journey Among the Stars

- Entering Interstellar Space: Both Voyager 1 and Voyager 2 officially entered interstellar space in 2012 and 2018, respectively. These milestones helped astronomers define the edge of interstellar space, around 18 billion kilometres from the Sun.
- Communication Loss and Hope: Voyager 2 recently experienced a glitch after a faulty command, affecting its ability to receive commands and transmit data. However, the “heartbeat” signal detected by NASA assures that the spacecraft is still operational, and scientists hope to regain full communication soon.
- Silent Journey: While most instruments on the spacecraft are no longer operational, both Voyagers will continue their silent journey among the stars, powered by their small nuclear power sources. Eventually, their missions will end.
- Voyager 2, a symbol of human ingenuity and exploration, continues its journey through the cosmos, exploring distant planets and paving the way for future space missions. Despite communication loss, the spacecraft's “heartbeat” signal signifies its resilience and ongoing operation, reminding us of the indomitable spirit of human curiosity.

### One nation One election

- One nation One election (ONOE) is the concept of synchronizing the timing of Lok Sabha and State Assembly elections across all States to reduce the frequency of polls throughout the country.
- The first-ever general elections (after independence), to Lok Sabha and State Assemblies were conducted simultaneously in 1951-1952.
- The practice continued in subsequent elections until 1967, after which it was disrupted due to defections and counter-defections in state assemblies.



- The 2015 feasibility report of Election Commission of India (ECI) estimated that total of Rs 9284.15 crore is required for procurement of Electronic Voting Machine (EVMs) and Voter Verifiable Paper Audit Trail (VVPAT).
- The expenditure of ₹8,000 crore over 5 years can be considered massive for maintaining free and fair elections.

#### Need for ONOE:

- There is lack of decisions on code of conduct during elections, so key policy decisions get delayed at the Centre, states and local bodies.
- The frequent occurrence of elections disrupts the continuity of developmental activities due to adherence to election-related codes and rules.
- The implementation of ongoing projects gets derailed during the election periods as the executive and government officials are engaged with the election duties, neglecting routine administration.
- There is a virtual paralysis of administration at various levels in varying degrees.
- Political corruption: enormous amount of money is to be raised for every election and lack of transparency leads to corrupt activities.
- Repeated deployment of forces: a large number of police personnel and paramilitary forces are engaged for peaceful conduct of elections.
- This involves massive redeployment, involving huge costs and diverts key enforcement personnel from their critical functions.
- Horse Trading: by elected representatives could come to an end if ONOE is implemented.
- Horse-trading refers to an incident where one political party allegedly poaches members from other parties to form a government.
- Policy decisions: Frequent elections cause governments to make policy decisions to attract voters.

#### Positives of ONOE:

#### Better utilization:

- Simultaneous elections for Parliament, State assemblies and local bodies would reduce expenditure, ensure efficient utilization of government resources and security forces.
- It enables the government to concentrate on governance once the elections are over.

#### Reduction in costs:

- Election expenses of political parties can be reduced drastically.
- There would be no duplication of fundraising so, public and business community could be relieved from multiple election donations.

Diversion of funds:

- ECI can divert money for election equipments, public awareness and electoral rolls, although initially more funds would be needed for infrastructure.
- The frequency of governments announcing freebies can be reduced and smaller number of elections, allows proper distribution of finances.
- This will save time and money spent on updating electoral rolls.

Ease for Citizens:

- It will make it easier for the citizens to register, find, and update names in electoral rolls once enlisted.

Concerns over ONOE:

Feasibility:

- Article 83(2): Lok Sabha"s term shall normally not exceed five years from the date of its first meeting.
- Article 172: Every Legislative Assembly of every State shall continue for five years from the date its first meeting, unless dissolved earlier.
- Article 356: If a state government is unable to function according to Constitutional provisions, the Union government can take direct control of the state machinery.
- Collapse of Central or State governments before tenure can lead to irregularity and misgovernance.

Need for Amendments:

- Amendments to the Constitution, the Representation of the People Act 1951, and the Rules of Procedure of Lok Sabha and state Assemblies are needed for changes.
- At least 50% of the states should ratify the constitutional amendments.

Concept of federalism:

- It is established on the notion that the entire nation is one and contradicts the content of Article 1 which envisages India as a Union of States.

Logistics:

- Around 30 lakh electronic voting machines (EVMs) and voter-verified paper audit trail (VVPAT) machines at the same time along with maintenance and new manufactures can be challenging.

Accountability of government:

- Recurrent elections are beneficial in a democracy as it allows voters to have their voices heard more frequently.
- The underlying issues of National and State polls are different and there is a need for blending of issues and ensure greater accountability.

Cost of election:

- Substantial cost is associated with frequent elections, which is more for separate elections.
- There should be sufficient discussion on the issue by all political parties, involvement of research groups, and public participation. The committee set up for the purpose must have a diversity of experts from different fields and perspectives to arrive at a consensus. Even if the idea of ONOE is considered, there should be practical ways to implement it in a parliamentary democracy by complex legal and constitutional considerations. At present, Assembly elections in Andhra Pradesh, Odisha, Arunachal Pradesh, and Sikkim are held along with the Lok Sabha polls.

## Measuring Hunger Across States

- India ranked 107 out of 121 countries in the Global Hunger Index (GHI), 2022.
- By 2022, approximately 735 million people (9.2% of the world's population) were in a state of chronic hunger.
- India is home to 224.3 million undernourished people according to the State of Food Security and Nutrition in the World Report of 2022.
- India's National Family Health Survey 5 found that stunting (a sign of chronic malnutrition) had risen in 11 out of the 17 states.
- Wasting (a child who is too thin for his or her height) had increased in 11 states.

Hunger and Food Insecurity:

Hunger:

- Hunger is an uncomfortable or painful physical sensation due to insufficient consumption of dietary energy.
- Chronic hunger is a situation when a person does not consume a sufficient amount of calories (dietary energy) regularly to lead a normal, active and healthy life.
- The Food and Agriculture Organisation (FAO) uses the Prevalence of Undernourishment (PoU) indicator to estimate the extent of hunger in the world.

Food Insecurity:

- A person is food insecure when they lack regular access to enough, safe and nutritious food for normal growth and development and an active and healthy life.
- Causes: Unavailability of food or lack of resources to obtain food.
- Food insecurity can be experienced at different levels of severity.
- FAO measures food insecurity using the Food Insecurity Experience Scale (FIES).

Global Hunger Index (GHI):

The GHI is computed using four indicators:

1. Undernourishment as a percentage of the population (1/3 value)
2. Child stunting under the age of five (1/6 value)

3. Child wasting under five (1/6 value)
  4. Child mortality under five (1/3 value)
- It is published by Concern Worldwide, an international NGO.
  - India's GHI score has deteriorated primarily due to the increasing prevalence of calorie undernourishment.
  - According to the FAO, the PoU in India has been increasing since 2017, reaching 16.3% in 2020.
  - The Indian government has raised concerns about the data and methodology used in calculating the GHI.

State Hunger Index (SHI):

- It enables the development of an India-specific hunger index at the level of States and Union Territories.
- It plays a pivotal role in evaluating the extent of undernourishment at a smaller scale, which is critical for meeting the Sustainable Development Goals (SDGs) of eradicating hunger and malnutrition.
- It is calculated using the same indicators as GHI except for calorie undernourishment, which is replaced by body mass index (BMI).
- Data for stunting, wasting, and mortality among children below the age of five are sourced from the NFHS-5.
- BMI undernourishment is computed using NFHS-5 (2019-21) and Wave 1 of the Longitudinal Ageing Study in India (2017-18).

SHI scoring:

- The SHI score is calculated by involving the combined normalised values of the four indicators using GHI-recommended techniques.
- It ranges between 0 and 100, with higher scores indicating more hunger.
- Scores below 10 signify low hunger, 10-20 moderate, 20-30 serious, 30-40 alarming, and 50 or above extremely alarming.

State-wise rankings:

- The national average of hunger index is 29.
- Bihar, Jharkhand, and Chhattisgarh scored 35, which places them in the alarming category.
- Gujarat, Uttar Pradesh, Assam, Odisha, Madhya Pradesh, Tripura, Maharashtra, and West Bengal all scored above the national average.
- Chandigarh scored 12, and Sikkim, Puducherry, and Kerala all scored below 16.

- Chandigarh, Sikkim, Puducherry, Kerala, Manipur, Mizoram, Punjab, Delhi, Arunachal Pradesh, Andaman and Nicobar Islands, and Tamil Nadu, fall under the moderate hunger category.
- All the other states scoring below the national average and above 20 have a problem of serious hunger.
- No State falls under the low hunger category.
- The impact of COVID-19 on the SHI is not captured here since post-pandemic estimates are not yet available.

#### GHI Criticisms and Challenges in India:

- While the GHI has faced criticism regarding its conceptualisation, indicator selection, and aggregation methods, it does provide critical insight into the state of undernourishment and child nutrition.
- India's poor performance in the GHI is due to its high PoU and child malnutrition.
- India has performed worse than many low-income African nations in child wasting.
- 20% of children in India suffer from wasting.
- The NFHS-5 indicated that one-third of children under the age of 5 are stunted and underweight.
- India has alleviated extreme poverty in the last 15 years as indicated by the but there are still challenges to be faced in addressing the disparity in food insecurity, hunger, and child malnutrition. (National Multidimensional Poverty Index 2023)

#### India's initiatives to combat hunger and Poverty:

- Public Distribution System (PDS): It is an Indian food security system, that distributes food and non-food items to India's poor at subsidised rates.
- National Food Security Act (NFSA) 2013: To help tackle hunger and malnutrition.
- It ensures access to subsidized food grains for about 810 million people and provides meals for pregnant women, children below six years, and lactating mothers under the National Nutrition Mission.
- National Food Security Mission (NFSM): It was launched in 2007 as a Central Sector Scheme (CSS), to increase food production and productivity through area expansion and productivity enhancement interventions in rice, wheat, pulses, oilseeds, etc.
- National Agriculture Market (e-NAM): It is a platform that acts as an online marketplace for farmers to trade their products without geographical boundaries.

- National Food Processing Mission: To promote agri-based industries for efficient use of farm produce and reduce post-harvest losses.
- Minimum Support Prices (MSP) for Agricultural products.
- Pradhan Mantri Fasal Bima Yojana (PMFBY): To provide crop insurance against natural calamities.
- National Horticulture Mission: For the holistic growth of the horticulture sector covering fruits, vegetables, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo.

#### Sustainable Development Goal 2:

- It aims to achieve Zero hunger by year 2030.
- Mission: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
- India has targeted to end hunger and ensure safe, nutritious and sufficient food for all people by 2030.

Food security requires a multi-dimensional approach from social protection to safeguard safe and nutritious food, especially for children to transforming food systems to achieve a more inclusive and sustainable world. There will need to be investments in local, rural and urban areas and social protection so poor people have access to food and can improve their livelihoods.

### **Wildfires ravage Hawaii's Maui island**

Charred frames of cars and homes, scorched electricity poles, ashy roads, and a towering banyan tree blackened by the fire but still standing – these images of the aftermath of the devastating fire in Hawaii's Maui Island have grabbed the world's attention. The wildfires, which have already killed nearly 100 people and left thousands homeless, have become part of a wider global list of unusually intense blazes that have raged across Europe, Canada and the United States.

What happened in Hawaii?.

- Hawaii is no stranger to fires, which burn on a smaller scale with some regularity, especially in the drier parts of the island. The current fires – active in Lahaina, Upcountry and Pūlehu/Kihei – are believed to have started on 8 August 2023, with the one in Lahaina spreading quickly across the town.

- The exact cause of the fires is still under investigation, but experts agree that the fires were bolstered by strong winds from Category-4 Hurricane Dora, which was passing through the Pacific Ocean – far to the southwest of the island. In fact, parts of Maui County were under a high-wind warning from US National Weather Services.
- Low humidity and dry vegetation too precipitated the issue. Initial reports suggest that the changing land-use patterns in Hawaii, which has seen farm and forest lands being replaced by flammable non-native species of grasses like Guinea grass, are a likely cause for the easy spread of the fire.
- “Over the past few decades, wildfire has been increasing in Hawaii as a result of changing climate, as a result of increases in invasive species, and a lot of our active agriculture going out... and becoming fallow. And so we have invasive species, we have fuels on the ground, we have all the conditions that make for a ripe wildfire environment...,” Elizabeth Pickett, co-executive director of the Hawaii Wildfire Management Organization, told Sky News in an interview.
- “And then we have infrastructure and policies and communities who have not quite caught up with the level of threat that we face,” she added.

What is the link between wildfires and climate change?

- Wildfires have been a part of life on Earth, usually following a seasonal pattern during the June-August period. Be it natural or human-made, the phenomenon is a critical part of the ecosystem. A healthy fire is key to ensuring that forests remain robust and resilient. It also aids the natural replenishment of nutrients in the soil, helps sunlight reach the forest floors, and encourages the germination of seeds.
- It is the increasingly intense nature of the wildfires – aided by the warming weather, dry conditions and change in rain cycles – that is now becoming a source of worry. Experts have compared it akin to the difference between throwing a lighted matchstick on a pile of wet, green wood and on dry kindling. And increasingly, climate change is determining the degree of dryness of the latter. July 2023, for instance, saw the highest temperatures on record across the planet and evidence suggests that the record will be broken sooner than later.
- Zoom out and you'll notice that what happened in Hawaii is not an isolated event. In the past month, firefighters in Algeria, Tunisia, Greece, Italy, Spain, Portugal, and Canada, among others, have been battling blazes with varying degrees of success.
- “The Northern Hemisphere has seen significant wildfire activity since the beginning of May this year, with widespread record-breaking fires in Canada and large fires across eastern Russia,” European Union’s Copernicus programme, which monitors atmospheric conditions on Earth, said in a statement on 3 August 2023.
- Besides the destruction of lives and livelihoods, these catastrophic wildfires also release an immense amount of carbon dioxide and other greenhouse gases into the atmosphere. The Canadian wildfires alone have emitted 290 megatonnes of carbon between 1 Jan and 31 July, representing over 25% of the global total for



2023 to date, as per data from the Copernicus programme. Climate change aids wildfires, which, in turn, release the carbon stored in trees as CO<sub>2</sub> and methane, evolving into a vicious cycle.

- There is also one immediate issue– these immense fires contribute adversely to air pollution, leading to long-term and short-term respiratory issues, heart disease and lung cancer. In June, the skies of New York and neighbouring regions turned a hazy orange for days as the smoke from Canadian wildfires drifted south, with those in the state facing levels of pollution over five times the national air quality standard.
- While tackling the climate crisis of the utmost importance, there are measures that communities need to take to mitigate the loss of lives.
- In Maui, the county's hazard mitigation plan had identified Lahaina and other West Maui communities as at risk from wildfires. It had also noted that the county had the second-highest rate of households without a vehicle and the highest rate of non-English speakers.
- "This may limit the population's ability to receive, understand and take expedient action during hazard events," said an Associated Press article, quoting the plan. These factors, combined with unreliable mobile network coverage and the swift pace of the fire (onlookers say an entire town was burned down in less than four hours), contributed to the climbing death toll.
- It is high time that our communities take stock of their susceptibility to wildfires and form coherent mitigation procedures to deal with one. As Hawaii Governor Josh Green said while announcing a review of the island's current policies, "People have asked why we are reviewing what's going on and it's because the world has changed. A storm now can be a hurricane-fire or a fire-hurricane."

## Heavy rains in Himachal Pradesh

Following heavy rains in Himachal Pradesh, landslides have occurred in the state with at least 22 people dead. Of those who have died, nine people got buried underneath the rubble of a collapsed temple and some houses in Shimla. Uttarakhand has also witnessed high rainfall.

What is a cloudburst?

- A cloudburst is a localised but intense rainfall activity. While it can also occur in plains, the phenomenon is most common in hilly regions.
- Not all instances of very heavy rainfall, however, are cloudbursts. A cloudburst has a very specific definition: Rainfall of 10 cm or more in an hour over a roughly 10 km x 10 km area is classified as a cloudburst event. By this definition, 5 cm of rainfall in a half-hour period over the same area would also be categorised as a cloudburst.
- To put this in perspective, in a normal year, India, as a whole, receives about 116 cm of rainfall over the entire year. This means if the entire rainfall everywhere in India during a year was spread evenly over its area, the total accumulated water would be 116 cm high. There are, of course, huge geographical variations in rainfall within the country, and some areas receive over 10 times more than that amount in a year. But on average, any place in India can be expected to receive about 116 cm of rain in a year.
- During a cloudburst event, a place receives about 10% of this annual rainfall within an hour. It is a worse situation than what Mumbai had experienced on 26 July 2005, which is one of the most extreme instances of rainfall in India in recent years. At that time, Mumbai had received 94 cm of rain over a 24-hour period, resulting in the deaths of over 400 people and more than USD 1 billion in economic losses.

How common are cloudbursts?

- Cloudbursts are not uncommon events, particularly during the monsoon months. Most of these happen in the Himalayan states where the local topology, wind systems, and temperature gradients between the lower and upper atmosphere facilitate the occurrence of such events.
- However, not every event that is described as a cloudburst is actually, by definition, a cloudburst. That is because these events are highly localized. They take place in very small areas which are often devoid of rainfall-measuring instruments. The consequences of these events, however, are not confined to small areas.
- Because of the nature of the terrain, the heavy rainfall events often trigger landslides and flash floods, causing extensive destruction downstream. This is the reason why every sudden downpour that leads to the destruction of life and

property in the hilly areas gets described as a “cloudburst”, irrespective of whether the amount of rainfall meets the defining criteria. At the same time, it is also possible that actual cloudburst events in remote locations aren't recorded.

Can cloudbursts be forecast?

- The IMD forecasts rainfall events well in advance, but it does not predict the quantum of rainfall — in fact, no meteorological agency does. The forecasts can be about light, heavy, or very heavy rainfall, but weather scientists do not have the capability to predict exactly how much rain is likely to fall at any given place.
- Additionally, the forecasts are for a relatively large geographical area, at best at a district level. As they zoom in over smaller areas, the forecasts get more and more uncertain. Theoretically, it is not impossible to forecast rainfall over a very small area as well, but it requires a very dense network of weather instruments, and computing capabilities that seem unfeasible with current technologies.
- As a result, specific cloudburst events cannot be forecast. But there are warnings for heavy to very heavy rainfall events, and these are routinely forecast four to five days in advance. The possibility of extremely heavy rainfall, which could result in cloudburst-like situations, is forecast six to 12 hours in advance.

Are cloudburst incidents increasing lately?

- There is no long-term trend that suggests that cloudbursts, as defined by the IMD, are rising. What is well established, however, is that incidents of extreme rainfall, as also other extreme weather events, are increasing — not just in India but across the world.
- While the overall amount of rainfall in India has not changed substantially, an increasing proportion of rainfall is happening in a short span of time. That means that the wet spells are very wet, and are interspersed with prolonged dry spells even in the rainy season. This kind of pattern, attributed to climate change, does suggest that cloudburst events might also be on the rise.

## Autonomy of Election Commission of India (ECI)

- The ECI has handled elections of about 900 million voters (2019) through machinery of 11 million personnel in a setting of economic hardship and inequalities.
- The ECI has emerged as the guardian of the Indian democracy by superintending, directing and controlling the election procedures even when it faces numerous challenges, such as being independent and unbiased.
- It has undertaken steps to keep its operations relevant through initiatives like using state-owned electronic media for political campaigning, efforts to check criminalization of politics, computerization of electoral rolls, and providing voter-identity cards.

### Election Commission of India

- The ECI is an autonomous constitutional authority responsible for administering Union and State election processes in India.
- It was established in 1950 with the authority and decisiveness in matters of elections.
- The body administers elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies, and offices of the President and Vice President.
- Secretariat: New Delhi
- State level: election is subject to overall superintendence, direction, and control of the Commission by the Chief Electoral Officer of the State.
- District and constituency levels: District Election Officers, Electoral Registration Officers, and Returning Officers, perform election work.

### Appointment & Tenure:

- The President appoints Chief Election Commissioner (CEC) and Election Commissioners (EC).
- Election Commission Act, 1991 states the tenure of 6 years, or up to 65 years for its members.
- CEC enjoys the same status, salary, and perks as available to Judges of Supreme Court (SC).
- The CEC can be removed from office only by the Parliament.
- All Election Commissioners have an equal say in the decision-making
- The procedure of appointments of the CEC and the ECs has seen debates in policy and political circles ever since the Constituent Assembly debates.
- The Constituent Assembly set up a sub-committee- Union Constitution Committee to consider the equality, independence, and representation of ECI with following recommendations:

- ECI should be a permanent body of 4 or 5 members or an ad hoc body constituted during peak electoral activity.
- CEC should be appointed by a two-third majority in a joint session of both Houses of Parliament.
- But Parliament was entrusted with the charge of making appropriate laws on the matter.
- It functions as a single-member body till 1988 until the President passed an Ordinance in 1993 converting the ECI into a multi-member body.
- The CEC and two Election Commissioners are appointed by the President of India under Article 324.

#### Debate over appointment in ECI:

- ECI has been a focal point of differences between the government and judiciary, mainly due to clash of opinions on its appointment.
- The Supreme Court judgment directed that the CEC and the ECs will be appointed by the President of India based on the advice of a committee.
- It shall be made up of the Prime Minister, the Leader of the Opposition in the Lok Sabha, or the leader of the single largest Opposition party and the Chief Justice of India (CJI).
- Article 324 contains a provision for such a law to be enacted by Parliament.
- The government introduced a Bill in the Rajya Sabha to replace the CJI from selection committee with a Union Cabinet Minister to be nominated by the Prime Minister.
- ECI could be pushed towards further governmental control by strengthening the perception of a democratic weakening.
- The institutional structures can be drained of their substance in dealing with a matter of electoral victory and consolidation of state power.
- The prevalent system of appointment can lead to a loss of confidence among the people.

#### Need for autonomy:

- To raise the power of ECI on the free and fair bar and pave the way for expunging biases and attachments to the ruling party.
- To curb it from becoming a 'committed', partisan and incumbent-friendly entity.
- Ruling parties have a structural advantage over institutions, making them susceptible to manipulation and prejudice.
- The advisory, quasi-judicial and administrative functions of ECI are based on large-scale elections that need to remain independent from external influence.

#### Suggested Reforms in the system:

V.M. Tarkunde Committee (1975):

- The objective was to address concerns related to electoral process and propose measures to enhance its transparency, fairness, and efficiency.
- It is also known as J.P. Committee as it was appointed by Jayaprakash Narayan.
- It recommended reducing the voting age from 21 years to 18 years and that the ECI should be a three-member body.

Dinesh Goswami Committee on electoral reforms (1990s):

- It was appointed to suggest measures to eradicate flaws in the electoral system.
- It recommended that the CEC should be appointed by the President after consulting the CJI and the Leader of Opposition.
- CEC and EC should be made ineligible for any further appointment after completion of its tenure.
- It led to enactment of the Chief Election Commissioner and other Election Commissioner (Conditions of services) Act, 1961, Representation of the People (Amendment) Act, 1996 and 1998.

Second Administrative Reforms Commission (ARC):

- It recommended that appointments of ECI should be broad-based (through a collegium).
- The committee should include the Lok Sabha Speaker, the Leaders of the Opposition in the Lok Sabha and the Rajya Sabha, the Law Minister, Deputy Chairperson of the Rajya Sabha, and a judge of the Supreme Court nominated by the CJI.
- Any monitoring of ECI by government or its nominee will be destructive of its functions and independence.
- With the change in governance, the ECI needed to adjust to the evolving conditions.
- It has proved to be flexible with the sacred system by adapting to various modern initiatives. The ECI has significant powers that are far more prominent than its counterparts in other democracies. But its autonomy must be ensured by transparent and fair appointment process, Constitutional protection, and independent decision-making.

## The Sanatana Dharma is

- During his incarceration in Alipur jail in 1908–1909, the conviction of India's special role in world affairs is also renewed: 'When it is said that India shall expand and extend herself, it is the Sanatan Dharma that shall expand and extend itself over the world. It is for the Dharma and by the Dharma that India exists.' But what is 'Sanatan Dharma'? Sri Aurobindo explains this in terms that are quite unambiguous: 'That which we call the Hindu religion is really the eternal religion because it is the universal religion which embraces all others.'
- If a religion is not universal, it cannot be eternal. A narrow religion, a sectarian religion, an exclusive religion can live only for a limited time and a limited purpose. This is the one religion that can triumph over materialism by including and anticipating the discoveries of science and the speculations of philosophy.' Before he ends, Sri Aurobindo offers this resounding summation of his theory of nationalism in the 'Uttarpara Speech': 'I say no longer that nationalism is a creed, a religion, a faith; I say that it is the Sanatan Dharma which for us is nationalism. This Hindu nation was born with the Sanatan Dharma, with it, it moves and with it, it grows.'
- When the Sanatan Dharma declines, then the nation declines, and if the Sanatan Dharma were capable of perishing, with the Sanatan Dharma it would perish.' 'The Sanatan Dharma that is nationalism'—this might sum up Sri Aurobindo's credo of what we might term spiritual nationalism. Or still better, the nation of the spirit. Different from ethnic or civic nationalism, or even cultural nationalism based on language, region, religion, or ways of life and cultural practices, Sri Aurobindo's nation of the spirit is about humankind's march to higher consciousness.
- In this manifest evolutionary destiny of the species, past and present forms of nationalism are fated to prove inadequate. Revisiting Sri Aurobindo's idea of Swaraj suggests to us that we are a Sanatani nation with a secular constitution, that 'Sanatana Dharma' cannot be narrow and exclusionary, that the remnants of dead or encrusted knowledge of yesteryears will not suffice to make us a great civilisation again, and that patriotism or devotion to the nation cannot substitute a consistent quest for truth and understanding; and, finally, that new creation requires a new consciousness which cannot spring only from the past. For, as Sri Aurobindo famously said in Essays on the Gita, 'We do not belong to the past dawns, but to the noons of the future.'
- Sri Aurobindo's sanatana dharma is based on the knowledge of spirit and the divine union among men and God. It is a religion based upon truth. Every religion seeks the same truth but approach is different from each other. Eternal religion is that universal truth which every religion seeks to know.
- Sanatana dharma, if we follow the opinion of Sri Aurobindo, is like Platonic 'form' from where every religion will take its form. It is somewhat similar of Swami Vivekananda's Universal Religion.
- Plato saw the world divided into two realms – the material world of appearances which was ever-changing and imperfect and second, was the world of 'forms' which was perfect and unchanging. He argued that everything in the first realm

was only a copy of the perfect form in the perfect realm. He further argues that material realm was perceived through our senses while the realm of forms could only be perceived through intellect and contemplation.

- In article 'The Ideal of the Karmayogin', while speaking about the relation between sanatana dharma and Hinduism, Aurobindo mentioned: Hinduism as the epitome of sanatana dharma. But 'Hinduism as epitome of sanatana dharma' and 'Hinduism as sanatana dharma' are never similar. Hinduism is the proper example of sanatana dharma but it is never equal with sanatana dharma.
- Sri Aurobindo believed that India must rise to give Sanatana Dharma to the world, to the whole of humanity. He said, that while "... other religions are preponderating religions of faith and profession, but the Sanatana Dharma is life itself; it is a thing that has not so much to be believed as lived.
- Sanatan Dharma is the essence of all religions.
- Sri Aurobindo's conception of spiritual nationalism was linked to his philosophy that rests on evolution of human life into the divine life. He elevated the demand for national freedom to a religious faith so that the masses could be awakened, an idea that was further developed by Gandhi in his mass movements.
- Sri Aurobindo's concept of nation was deeply influenced by Bankimchandra. He believed that the nation is not just a piece of land nor a mass of human beings. He glorified India as a Mother Goddess, and liberation of the motherland is the most urgent duty of her children for which they must be ready to sacrifice even their lives.
- According to Aurobindo's understanding, the 'nation' is a living entity-'shakti' composed of all the shaktis of all the millions of units that make up the nation. Thus, nationalism was not merely a political programme but a spiritual one.
- Therefore, Sri Aurobindo sought to move away from Swaraj (political freedom) towards independence (complete freedom).
- In Sri Aurobindo's vision, the modern and free Indian nation was not meant to be a colonial copy with an outer machinery of elaborate bureaucratic structures left over by the British and now-merely-to-be-filled by the Indians – though he recognised the necessity for an effective external organisation.
- He envisioned the rebirth of a nation which will be grounded in India's unique temperament shaped by her spiritual genius and conscious of her true mission. This new India would play a crucial role in creation of future society which would be a society of complex oneness, a world society in which present nations will be intrinsic parts of the whole.
- Despite these novel ideas, Sri Aurobindo's idea of nationalism was criticised as distracting attention of masses from real issues like poverty, economic exploitation, inequality. Further, his concept was overtly based on Hindu civilisational values making it hard to accommodate the diverse beliefs of pluralist India.



DMK leader and Tamil Nadu Minister Udhayanidhi Stalin's statement, saying Sanatan Dharma is against social justice and should hence be eradicated, has led to political controversy. He explained that the term "Sanatan" implies something eternal and unchangeable. He argued that this very characteristic has led to divisions in society based on caste, suggesting that "Sanatan Dharma" perpetuates social inequalities.

### The Roots of DMK in the Self-Respect Movement

- **The Self-Respect Movement:** The DMK, a prominent political party in Tamil Nadu, traces its ideological roots to the Self-Respect Movement initiated by EV Ramaswamy "Periyar" in the early 20th century. This movement was characterized by a staunch anti-caste and anti-religion stance and aimed to bring about significant social reforms.
- **Ideological Stance:** Periyar was a vocal advocate for social reforms, particularly in addressing the deeply entrenched caste-based inequalities in society. His ideology emphasized rationalism and a rejection of orthodox religious practices.
- **Formation of Dravidar Kazhagam (DK):** In 1938, the Justice Party, of which Periyar was a member, merged with the Self-Respect Movement to create Dravidar Kazhagam (DK). The DK was known for its anti-Brahmin, anti-Congress, and anti-Aryan stance. It even called for the establishment of an independent Dravida nation, although this demand eventually lost momentum.

### Periyar's Views on Hinduism and Caste

- **Periyar's Critique of Hinduism:** Periyar's criticism of Hindu religious practices was a central aspect of his ideology. He argued that Hinduism perpetuated caste-based discrimination and marginalization. He was particularly critical of practices that oppressed women and lower-caste individuals.
- **Linking Religion to Caste:** Periyar believed that the dominance of certain caste groups in Hindu society was closely tied to the existence of the religion itself. He saw religion as a tool of social power that privileged the Brahmins, perpetuating inequality.
- **Advocacy for Eradicating Religion:** One of Periyar's most radical propositions was the call for the eradication of religion altogether. He viewed religion as a hindrance to achieving true equality and liberty for women and lower castes.
- **Political Influence:** Periyar's ideology had a profound impact on the political landscape of Tamil Nadu. His views influenced leaders like M. Karunanidhi, who became prominent figures in the DMK. They continued to champion social justice and rationalism in their political careers.

### Definition and Etymology of Sanatan Dharma

- **Meaning and Translations:** Sanatan Dharma is a Sanskrit term that can be interpreted in various ways, such as "eternal religion," "eternal law," "unshakeable, venerable order," or "ancient and continuing guideline." These translations reflect the multifaceted nature of the concept, emphasizing its enduring and foundational aspects.
- **Roots in Sanskrit:** The term "Sanatan Dharma" has its linguistic roots in Sanskrit, an ancient Indian language. This highlights its deep connection to the cultural and philosophical heritage of India.
- **Bhagavad Gita Connection:** In the Bhagavad Gita, a revered text in Hinduism, the term "Sanatan Dharma" gained prominence. It is in this context that the concept of "Sanatan Dharma" is linked with the eternal nature of the soul and the enduring principles of life.

### Core Concepts of Sanatan Dharma

- **Eternal Soul and Rebirth:** A fundamental tenet of Sanatan Dharma is the belief in the eternal nature of the soul (Atman) and the concept of rebirth (reincarnation or samsara). It posits that the soul is immortal and undergoes a cycle of births and deaths until it achieves liberation (moksha).
- **Inclusion in Multiple Traditions:** Sanatan Dharma's core concepts are not limited to Hinduism but also extend to Jainism and Buddhism. These traditions share the belief in the eternal soul and the cycle of rebirth, making "Sanatan Dharma" a unifying concept among them.
- **Exclusion of Other Religions:** It's important to clarify that Sanatan Dharma is not applicable to religions like Judaism, Christianity, and Islam, which do not share the belief in reincarnation and the eternal soul. These religions have different theological perspectives and origins.

### Emergence of Sanatan Dharma as a Term

- **Late 19th-Century Prominence:** The term "Sanatan Dharma" gained prominence in the late 19th century. This shift in usage and significance can be attributed to various historical and cultural factors of that time.
- **Response to Reform Movements:** The late 19th century saw the emergence of reform movements led by missionaries and social reformers like the Brahmo Samaj and Arya Samaj. In response to these movements, "Sanatan Dharma" began to be used as a symbol of Hindu orthodoxy.

### Defenders of Sanatan Dharma

- **Prominent Figures:** During the late 19th century, figures like Pandit Shraddha Ram and Pandit Din Dayal Sharma played pivotal roles in defending traditional Hindu practices and beliefs. They advocated for the preservation of what they saw as the core values of Sanatan Dharma.

- Formation of Organizations: To safeguard and promote Sanatan Dharma, organizations such as "Sanatan Dharm Sabha" and "Bharat Dharma Mahamandal" were established. These organizations aimed to unite and mobilize supporters of orthodox Hinduism.

#### Use of "Sanatan-Dharmi" in Census

- Census Report of 1891: The term "sanatan-dharmi" found its way into historical documents, such as the Punjab Census Report of 1891. It was used to categorize individuals who adhered to orthodox Hindu practices and beliefs.
- Contrast with Arya Samaj: "Sanatan-dharmi" was often used in contrast to followers of the Arya Samaj, a reformist movement that advocated for changes in Hindu practices. This categorization underscored the divide between traditionalist and reformist Hindu groups during that period.

#### **Lessons from Bemetara: Bridging the malnutrition gap**

- Government has made efforts to ensure food security by implementing various schemes and programmes.
- Mid-day-meals in schools to provide nutritional meals to children and distributing monthly rations to people through a robust Public Distribution System.
- Ready-to-eat packets and hot meals are being served to mothers and children at Anganwadi Centres (AWCs), under Prime Minister's Overarching Scheme for Holistic Nourishment (POSHAN) Abhiyaan.
- Add-ons such as egg, banana, protein powders, peanut chikki and jaggery are being distributed under various State-specific schemes like Mukhyamantri Suposhan Yojana in Chhattisgarh.
- Despite government efforts, nutritional security remains unachieved goal.

#### Why is nutritional security still a distant dream?

- People lack knowledge of proper eating and feeding practices.
- Myths around food and increased accessibility to highly processed food have added to the problem of malnutrition.
- Nutrition counselling and creating awareness among people can be the answer to this problem.

### Concept of Nutrition Counselling:

- Under POSHAN Abhiyaan “Jan Andolan”, or social and behaviour change communication (SBCC), has been one of its main facet.
- Under Jan Andolan several activities like bicycle rallies, plantation of Poshan Vatikas, celebration of Poshan Maah, Poshan Pakhwaras and Godh Bharaais takes place to spread awareness among the people.
- Different States have held various awareness programmes under the SBCC.
- Even after so many efforts made by the government the concept of nutrition counselling has yet to be properly institutionalised and implemented uniformly across States
- According to the POSHAN Abhiyaan Progress Report, 2018, “A focused and coherent SBCC Action Plan is essential to take the work of POSHAN Abhiyaan forward”.
- There is a need for field staff to be properly trained in nutritional counselling and there is a need for it to be implemented, mandatorily and uniformly, by States.
- Case study of Bemetara
- Bemetara is district situated in the fertile plains of Chhattisgarh, it is unaffected by Naxalite activities and is agriculturally rich.
- The inhabitants of the districts are also relatively affluent.
- Even after so many positives the number of Severe Acute Malnourished (SAM) children in the district was as high as 3,299 in 2022 which is very similar to the situation in tribal-dominated and Naxal-affected districts such as Bastar.

### Reason behind number of SAM children being so high:

- The problem is not about access to food but lack of proper knowledge of when, how and what to eat.
- This is why nutrition counselling combined with robust monitoring was chosen as the way to address the problem of Malnutrition for this area.

### Potth Laika Abhiyaan (Healthy Child Mission)

- It is a nutrition counselling programme that is being implemented in 72 of the most affected AWCs in the Bemetara sub-division, receiving technical support from UNICEF, Chhattisgarh.
- Ground-level staff from the Health and Women and Child Development departments have been well trained on how to provide nutrition counselling in the region.
- Every Friday, the parents of the targeted SAM and Medium Acute Malnourished (MAM) children are counselled.

- Parents are taught in simple Chhattisgarhi language about the importance and the constituents of “Tiranga Bhojan” (a balanced diet), the need to wash hands regularly and many other tips in order to lead a healthy lifestyle.
- Many harmful dietary myths and superstitions are dismissed.
- Local leaders like sarpanchs, panchayat sachivs and religious heads have participated in the counselling sessions.
- Door-to-door visits to the houses of targeted children are done to monitor their progress.

#### Tiranga bhojan

- ‘Tiranga bhojan’ means the inclusion of food items of the three different colours in the daily diet to boost the health of children.
- Saffron represents proteins from pulses, lentils, and meat.
- White represents carbohydrates from boiled rice.
- Green represents vitamins and minerals from leafy vegetables.

#### Benefit:

- Providing meals requires elaborate budgeting and there is risk of leakages, whereas Poth Laika Abhiyaan's mission is a zero-cost mission, requiring few training sessions and regular monitoring.

#### Progress under the Scheme:

- 53.77% of targeted children were brought out of malnutrition by the Poth Laika Abhiyaan, in nine months.
- 61.5% of MAM children and 14.67% of SAM children have been brought out of malnutrition.
- All these were achieved just by providing nutrition counselling along with regular monitoring and evaluation.
- Poth Laika Abhiyaan results when compared with a random control group of 20 AWCs where this mission was not being implemented, only 30.6% children were taken out of malnutrition.
- That is, 33.8% MAM children and zero SAM children were taken out of malnutrition.
- Providing food to the poor needs to be supported with nutrition counselling and monitoring to truly accelerate the eradication of malnutrition. It is only when this simple but impactful strategy of nutrition counselling is followed both in letter and spirit, that India can move closer towards achieving the ambitious yet noble dream of a “Kuposhan Mukh Bharat”.

## The implications of the expansion of BRICS

The 15th BRICS summit in Johannesburg announced that the five-member grouping had invited six new members from West Asia; Egypt and Ethiopia from Africa, and Argentina from Latin America.

Significant positive aspects about the grouping

- Since 2009, BRICS has convened annual summits and is supported by numerous ministerial and expert meetings.
- It has established two significant institutions. First is the New Development Bank (NBD), which provides development assistance. Second is the Contingent Reserve Arrangement, designed to aid countries facing short-term balance-of-payments challenges.
- The NBD has already funded 96 projects with a total value of \$33 billion.

Main agenda of BRICS countries

- BRICS member countries have shared discontent with the Western-dominated international institutions that emerged after World War II. These include the World Bank, the International Monetary Fund, the United Nations and, the World Trade Organization.
- The United States has led the Western alliance in both political and economic spheres.
- BRICS challenges this Western-led world order by promoting economic and political cooperation among its member states,
- It is establishing institutions outside of Western control, and advocating strongly for comprehensive reforms to accommodate the interests of emerging economies.
- The Johannesburg Declaration explicitly states that the members “strategic partnership” aims to achieve “a more representative, fairer international order.”
- Expansion of BRICS makes the group more influential
- The recent expansion of BRICS’s membership collectively wields significant economic influence within the enlarged organization.
- With the proposed expansion, BRICS will represent 46% of the world’s population. Its share of global GDP will rise from 31.5% in PPP terms to 37%. It is surpassing the GDP share of the G-7, which stands at 30.7%.
- The five core BRICS members currently account for 23% of global exports and 19% of global imports. With the addition of new members, these figures will increase by 3.7% and 3%, respectively.
- The most significant impact will be on the energy sector. The five original BRICS members currently contribute to 20% of the world’s oil production. This share is set to increase to 42%.

### Geopolitical importance of BRICS expansion

- Countries from West Asia are already closely intertwined with BRICS members.
- China and India receive 35% of Saudi Arabia's oil production. Russia, a major oil supplier to China and India, is exploring Brazil as a market. Despite U.S. sanctions, Iran has considerably increased its oil production, and most of it going to China.
- Egypt and Ethiopia play essential roles in the strategically vital Horn of Africa and the Red Sea region. Argentina holds the position of being the second-largest economy in Latin America.
- The recent additions to BRICS, especially those from West Asia, align well with the group's political and economic framework.
- Since 2020, both Saudi Arabia and the UAE have pursued independent foreign policies, distancing themselves from U.S. influence.
- Saudi Arabia has pursued de-escalation. It has engaged in dialogue with various countries, including Turkey and Iran. It made China-brokered accord with Iran in March this year.
- The UAE has normalized relations with Iran and is expanding its maritime presence across the Gulf, the Gulf of Aden, the Red Sea, and the Horn of Africa.
- Iran's inclusion in BRICS is significant. It opens opportunities for enhanced regional economic cooperation and the revitalization of long-dormant north-south connectivity projects, including the Chabahar port.

### Major takeaways from Johannesburg Declaration

- The Johannesburg Declaration predominantly emphasizes intra-BRICS cooperation and collaboration with other developing nations.
- The member nations have agreed to promote the use of local currencies in trade and financial transactions between BRICS countries and other trade partners.
- The Declaration demonstrates shared viewpoints among its members on various political matters, such as the United Nations' significance, regional issues in West Asia, the conflict in Ukraine, and global terrorism.

## Can PRANAM reduce fertiliser subsidy bill?

Union Budget 2023–24 launched the PM-PRANAM to promote the balanced use of chemical and alternative fertilizers, generating awareness of regenerative agriculture (RA).

RA is an outcome-based food production system that nurtures and restores soil health, protects the climate and water resources and biodiversity, and enhances farms' productivity and profitability.

### PM PRANAM Scheme

- It stands for PM Programme for Restoration, Awareness, Nourishment, and Amelioration of Mother Earth.
- It aims to reduce the use of chemical fertilizers and promote the balanced use of alternative fertilizers .
- It will save the subsidy burden on chemical fertilizers, which is projected to increase to Rs 2.25 lakh crore in 2022-2023.
- It will make Indian agriculture more resilient to the changing climate.
- It will incentivise those states that use less chemical fertilizers than their average consumption in the last three years.
- The states will receive 50% of the subsidy savings as a grant, which they can use for asset creation, technological adoption, and awareness generation related to alternative fertilizers.
- It will involve the participation of farmers, panchayats, farmer producer organizations and self-help groups that are involved in the reduction of fertilizer use .
- It is in line with the government's focus on promoting green agriculture and sustainable agricultural practices with environmental concern.
- It will support the existing initiatives such as National Mission for Sustainable Agriculture (NMSA), National Initiative on Climate Resilient Agriculture (NICRA), and PM Krishi Sinchaayi Yojna (PMKSY).

### Issues with Fertilizer Usage in India

- **Imbalance in Fertilizer Use:** India has a recommended ratio of 4:2:1 for nitrogen (N), phosphorus (P), and potassium (K) fertilizers, but the actual ratio is much higher for N and lower for P and K. This leads to nutrient deficiencies, soil degradation, and lower crop yields.
- According to a report by NITI Aayog, the average NPK ratio in India was 8:3:1 in 2015-16, which is far from the recommended ratio of 4:2:1.
- **Excessive Use of Nitrogenous Fertilizers:** India is the third-largest producer and the second-largest consumer of urea, a nitrogenous fertilizer. However,



excessive use of urea has negative impacts on soil health, water quality, and greenhouse gas emissions. Urea also subsidizes the production of other fertilizers, which creates distortions in the fertilizer market.

- **Lack of Domestic Production and Dependence on Imports:** India has limited domestic resources of P and K fertilizers, and relies heavily on imports from other countries. This makes India vulnerable to fluctuations in global prices and availability of these fertilizers. Moreover, India has not invested significantly in expanding its domestic fertilizer production capacity since the 1990s.
- According to the annual report of the Department of Fertilizers, India has a domestic production capacity of 66 million metric tons of P&K fertilizers, which meets only 50% of the domestic demand.
- The rest is met through imports from countries like China, Russia, Morocco, Jordan, and Saudi Arabia.
- **Inefficient Distribution and Subsidy System:** India has a complex and costly system of subsidizing fertilizers to farmers, which involves multiple agencies, intermediaries, and leakages. The subsidy system also does not adequately incentivize farmers to use fertilizers efficiently or adopt organic or bio-fertilizers.
- The fertilizer subsidy has become a sticky item in the expenditure list of the Union Budget. The government has earmarked Rs 1.75 trillion for fertilizer subsidy in the 2023-24 Budget, above a trillion rupees for a fourth year in a row.
- The dependence on LNG for fertilizer production exposes India to high and volatile global gas prices, and a soaring fertilizer subsidy bill.
- The use of LNG in the fertilizer sector was as high as 63% of the total gas consumption in FY 2020-21.

#### Effects of Improper Utilization of Fertilizers

- **Environmental Pollution:** Excess use of fertilizers causes environmental pollution as their residual and unused amounts will become pollutants for air, water, and soil.
- **Eutrophication:** Excess use of fertilizers can lead to eutrophication in the water bodies, which is the excessive growth of algae and other aquatic plants that deplete the oxygen level and harm aquatic life.
- **Soil degradation:** Continuous use of nitrogenous fertilizer alone can reduce the soil fertility and cause deficiencies of other major and micronutrients. It can also affect the soil microflora and fauna that are essential for maintaining the soil quality.
- **Reduced Crop Quality:** Improper fertilizer application can result in the excessive growth of certain plant parts (e.g., leaves and stems) at the expense of reproductive structures (e.g., fruits and grains), leading to reduced crop quality and yield.

- **Groundwater Contamination:** Nitrate leaching from overused fertilizers can contaminate groundwater, posing health risks to people who rely on these sources for drinking water. Elevated nitrate levels in drinking water can lead to methemoglobinemia or "blue baby syndrome."
- **Health Concerns:** Pesticides and herbicides often used in conjunction with fertilizers can pose health risks to farmers and consumers when used improperly or excessively.
- **Economic Burden:** Excessive fertilizer use can be economically unsustainable for farmers, as it can increase input costs without corresponding increases in crop yields. This can lead to indebtedness among small and marginal farmers.
- **Greenhouse Gas Emissions:** The production and application of synthetic fertilizers contribute to greenhouse gas emissions, particularly nitrous oxide (N<sub>2</sub>O), which is a potent greenhouse gas that contributes to climate change.
- **Imbalance in Crop Nutrient Uptake:** Inappropriate fertilizer application can result in an imbalance of nutrients in the soil, which can affect the nutrient uptake by crops and may require corrective actions in subsequent growing seasons.

#### PM PRANAM Scheme help reforming the Fertilizer Regime

- **Reduction in Subsidy Bills:** PM Pranam can contribute to reducing the government's subsidy bills by promoting alternative or bio-fertilisers. The government aims to set up 10,000 Bio-Input Resource Centres, creating a national-level micro-fertiliser and pesticide manufacturing network.
- **By supporting the production and adoption of these bio-fertilisers, PM Pranam can gradually reduce the financial burden on the government in terms of chemical fertilizer subsidies.**
- **Fiscal Deficit Control:** Lowering subsidy bills through the promotion of PM Pranam can help in controlling India's fiscal deficit. Fiscal deficits can be a significant economic challenge, and reducing subsidies is one way to address this issue.
- **Gradual Phase-Out of Chemical Fertiliser Subsidies:** PM Pranam can serve as a catalyst for the gradual phase-out of subsidies on chemical fertilizers. By providing support and incentives for the adoption of alternative fertilizers, the government can reduce its financial commitment to chemical fertilizer subsidies.
- **Support for Farmer Fertiliser Cooperatives:** PM Pranam can help farmer fertilizer cooperatives scale up their production of biofertilizers. This support can lead to increased economies of scale and a more extensive distribution network for alternative fertilizers.
- **Incentivizing Sales and Distribution Networks:** It's important to work out pricing and margin strategies for biofertilizers to incentivize sales and distribution networks. PM Pranam can facilitate this by providing incentives to cooperatives and businesses involved in biofertilizer production and distribution.

- **Demonstration and Certification:** PM Pranam can support initiatives to demonstrate the effectiveness of alternative fertilizers on farmer fields. This is crucial for building trust and encouraging farmers to adopt these products. Certification of these bio-fertilizers can also ensure quality and help farmers or their organizations realize better prices for their produce.

#### Other Governments Initiatives

- **One Nation One Fertilizer (ONOF):** This scheme, also known as Pradhan Mantri Bhartiya Jan Urvarak Pariyojana (PMBJP), was launched in 2022 by the Ministry of Chemicals and Fertilizers. Under this scheme, all fertilizer manufacturers under the fertilizer subsidy scheme are required to use a single brand and logo for fertilizers. The brand name is Bharat and it covers all types of fertilizers, including urea, DAP, NPK, and MOP.
- The aim of this scheme is to standardize fertilizer brands across the country, clear up the confusion of farmers regarding the availability and quality of fertilizers, reduce the cost and increase the availability of fertilizers, and save freight subsidy by minimizing cross-country movement of fertilizers.
- **Direct Benefit Transfer (DBT):** This system was introduced in 2016 by the Department of Fertilizers to provide subsidy amount to farmers to purchase fertilizers. Under this system, the subsidy is transferred to the fertilizer companies after the sale is made to the farmers through point of sale (PoS) devices installed at retail outlets.
- The aim of this system is to ensure timely supply of fertilizers, prevent diversion and leakages of subsidy, promote balanced use of fertilizers, and create a transparent and accountable system for subsidy payments.
- **Nutrient Based Subsidy (NBS):** This scheme was launched in 2010 by the Department of Fertilizers to provide subsidy on nutrients rather than on products. Under this scheme, the subsidy rates for nutrients such as nitrogen (N), phosphorus (P), potassium (K), and sulphur (S) are fixed by the government in advance for each financial year. The manufacturers and importers are free to decide the retail price of their products based on the market conditions.
- The aim of this scheme is to encourage the production and consumption of complex fertilizers, promote balanced use of NPKS nutrients, reduce the subsidy burden on the government, and induce competition among fertilizer companies.
- **Neem Coated Urea (NCU):** This scheme was launched by the government in 2015 to promote the use of organic urea to preserve soil health and yield better crops. Under this scheme, farmers are only making use of neem coated organic urea to cut down savings by around 10%. The urea that is coated with neem tree seed oil is called neem coated urea.
- The government mandated all the indigenous and imported urea to be neem coated to make the urea slow release and difficult to use for non-agricultural purposes.

- The scheme aims to regulate the use of urea, enhance the availability of nitrogen to the crop, reduce the cost of fertilizer application, prevent wastage and diversion of subsidy, and decrease soil and water pollution caused by urea.

### **Global Crypto Regulation Challenges and Recommendations**

- Globally, countries have opted for different approaches in dealing with the contentious issue of cryptocurrencies.
- Some countries have brought in stringent regulatory frameworks, while others have opted for outright bans.
- Considering the borderless nature of cryptocurrencies, Finance Minister of India called for global collaboration for effective regulations.

How has India dealt with cryptocurrencies?

- In 2018, the RBI prohibited Indian banks from dealing with or facilitating cryptocurrency transactions.
- In 2020, the Supreme Court struck down the prohibitions as they were violative of freedom to carry on trade guaranteed by Article 19(1)(g) of the Constitution.
- In the Union budget 2022-23, a 30% tax was proposed on income from the transfer of digital assets, along with a 1% TDS (tax deduction at source) on such transactions.

Key Considerations for Regulating Crypto-Assets for Financial Stability

- **Comprehensive Policy and Regulatory Response:** It is needed to tackle the risks that crypto-assets pose to financial stability.
- **Challenges of Banning Cryptocurrencies:** The decision to ban cryptocurrencies is not an easy option, as it is difficult to enforce because a ban in one jurisdiction could simply lead to crypto activity moving to other friendlier jurisdictions.
- Such an approach may end up pushing cryptocurrency transactions outside a country's area of scrutiny, risking the financial integrity of the country.

- Benefits of Regulation and Supervision: Regulation and supervision of licenced or registered crypto-asset issuers and service providers could help plug the information gaps, making it easier to monitor cross-border activities.
- Implementation of FATF Standards: There need to implement the FATF anti-money laundering and counter-terrorist financing standards on cryptocurrencies and service providers.

FATF anti-money laundering and counter-terrorist financing standards:

- The FATF Recommendations set out a comprehensive and consistent framework of measures which countries should implement in order to combat money laundering and terrorist financing, as well as the financing of proliferation of weapons of mass destruction.
- The FATF Recommendations, set an international standard, which countries should implement through measures adapted to their particular circumstances.
- Crypto assets have been in existence for more than a decade and have displayed significant volatility. Alongside their volatility, crypto-asset activities have also grown in complexity. Considering the borderless nature of cryptocurrencies Banning or regulating it can be effective only after significant international collaboration on the evaluation of the risks and benefits.

### **End of old multilateralism and beginning of new order**

- Multilateralism is a situation in which several countries or organizations work together to achieve a common goal based on shared system of norms and values.
- Multilateralism is based on founding principles such as consultation, inclusion and solidarity.
- India's G20 Presidency theme 'Vasudhaiva Kutumbakam — One Earth, One Family, One Future' must deeply resonate with the worldview that the entire world is one family and thus it must emphasize principle of Multilateralism.

Global Background:

- Cold war: The end of the Cold War in the 1990s created favourable conditions for an intensive phase of multilateralism.

- Europe and Asia: Europe moved towards rapid regional integration and expansion under the European Union and ASEAN formed regional economic and political cooperation.
- China and Global Economy: China's economic integration started with World Trade Organization membership in 2001, and rapid move towards the world's second-largest economy.
- It established close ties with US and opened opportunities for cooperation on global issues like proliferation of weapons of mass destruction, climate change, and pandemics.
- Global Financial crisis (2008): It underlined the urgency to expand the G7 and brought middle powers to restore stability to the global economic order.

#### Factors of weakening old Multilateralism:

- War and Conflicts: The Russian occupation and annexation of Ukraine's Crimean Peninsula in 2014 and ongoing Russia- Ukraine war strained international relations and created divisions.
- Role of China: The expansionist policy, debt-trap strategy and territorial disputes with neighbouring countries like India, Japan, Philippines, and Vietnam led to regional tensions.
- Economic issues: The use of economic power for political and strategic gains eroded trust among nations that affected global economic scenario.

#### Rise of New Institutions:

- Quad: It involved the US, Japan, Australia, and India to counter unilateralism and territorial expansion.
- ASEAN: Its expansion led to a strong Indo-Pacific in terms of economy, security and partnership.
- AUKUS and Northeast Asia Trilateral Compact: It was to address regional challenges, raising questions about the centrality of ASEAN in shaping the regional order in Asia.
- China: It attempted to gain unilateral economic advantages, so US and Japan de-risked the interdependence with China which was built over the decades.

#### India:

- Political and economic changes post 1990s led to deep economic dependence on China and Russia pushed for promoting multipolar world that would counter American unilateralism.
- India's post-Cold War multilateralism unraveled as economic and security threats mounted from China.

- An expansive and positive US engagement with India led to the Indo-Pacific idea and revived the Quad with greater military-strategic cooperation by Australia, Japan, and US.

Features of India's new multilateralism:

- Clarity on Quad and ASEAN: India underlined that the Quad would complement ASEAN's efforts to promote regional stability through more bilateral and minilateral security cooperation to deter and limit unilateralism and territorial expansionism.
- Focus on re-globalisation: This is for more diversified, democratic and multiple centres of production to counter China's factories and political moves.
- Find collective solutions: The challenges of Ukraine-conflict, pandemic rehabilitation and advancement of global financial systems.
- Global South: India's new multilateralism is based on inclusion of Global south by building bridges between developing and developed countries.
- There would be emphasis on cooperation between North and South amidst the breakdown of relations between the East and West.
- India places great emphasis on a human-centric approach to progress. It is essential to emulate Gandhi's mission of serving the underprivileged, by addressing issues and promotion of strong, sustainable, inclusive, and balanced growth. The progress must be toward Sustainable Development Goals, the Green Development Pact for a Sustainable Future, and strengthening multilateral institutions for 21st century.

## Fukushima nuclear water release

Twelve years after the Fukushima nuclear meltdown, Japan is releasing the power plant's cooling water into the ocean. Japanese officials say it's safe, but experts are divided. It's hard to have a purely fact-based discussion about Japan's Fukushima water release plan.

Due to several scandals and a lack of transparency, trust appears to be low in both TEPCO, the company that operated the now-defunct Fukushima-Daiichi nuclear power plant, and the Japanese government, with its close ties to the atomic energy industry.

But the level of awareness about what's actually in the water is just as low. Here's an overview of the facts.

Fukushima: Why is the water being released into the Pacific Ocean?

Storage tanks holding the cooling water at the ruined facility are full.

Japan has had to cool the reactors at the nuclear power plant since they were destroyed during a catastrophic tsunami in 2011. It takes 170 tons of cooling water per day to keep them cool. In addition, rain and groundwater have been seeping into the site. There are 1,046 storage tanks holding 1,343 million cubic meters of water.

Once the water has been filtered, it is considered safe and sent through a one-kilometer (0.62 mile)-long tunnel before being released into the Pacific Ocean — a process that will take an estimated 30 years to complete. The radioactive waste, meanwhile, will remain on land.

Is Japan allowed to release filtered cooling water into the sea?

Both Japan's atomic agency and the International Atomic Energy Agency (IAEA) have approved the plan. The IAEA said Japan had met international safety standards and that "discharges of the treated water would have a negligible radiological impact to people and the environment." They said it had been common practice for nuclear power plants worldwide to release used cooling water into the ocean for decades routinely.

However, environmental and fishing experts, as well as neighboring states, have accused Japan of downplaying the level of radiation in the cooling water. They are concerned about far-reaching ocean contamination, potential environmental damage, a fall in fishing revenue and loss of reputation.



How will the water be prepared before it's released?

Before it's released into the ocean, the contaminated cooling water and groundwater will be sent through a filter system called the Advanced Liquid Processing System (ALPS). ALPS can filter 62 different radionuclides — radioactive elements — but can't filter out the radioactive isotope tritium.

So, TEPCO wants to dilute the water until the concentration of tritium is reduced to about 1,500 Becquerel per liter or less than a fortieth of the national safety standard. A becquerel (Bq) is a unit that measures the rate at which radioactive material emits radiation or how many atoms in the material decay in a given time. TEPCO says that if the levels of tritium remain too high after filtration, they will repeat the process before releasing the water.

How dangerous is tritium?

- Tritium is a form of hydrogen that occurs naturally in Earth's atmosphere. It is radioactive but far less dangerous than cesium-137 or strontium-90 — both of which are life-threatening. It emits a weak beta particle that can be stopped by a sheet of plastic or human skin.
- That's one reason Georg Steinhauser, a radioecologist at the Vienna University of Technology with expertise in the situation at Fukushima, has said that releasing the filtered water into the ocean is the best solution. Steinhauser collected samples from the ruined Fukushima-Daiichi nuclear power plant site in 2013 and was a guest professor at Fukushima University a year later.
- "If anyone's worried about tritium, they're uninformed. Tritium is not dangerous, neither for people nor the environment, if it's slowly released in diluted form," said Steinhauser. "It's a fraction of what is still in the ocean after the nuclear bomb tests. And very soon, it will be diluted to a point at which it is undetectable. So, there's no need for anyone to be scared."
- Burkhard Heuel-Fabianek, who heads the radiation protection department at Germany's Forschungszentrum Jülich, has told DW that Japan's water release plan was "radiological sound."
- Even if tritium gets into the body, the risks are low, said Heuel-Fabianek: "Since tritium is basically part of the water, the body sheds it relatively quickly. So, it lacks the biological effects that other elements have."
- It's a different story if strontium-90 gets into the human body: "Strontium is absorbed by the bones, and once it's in the crystalline structure of the bones, you can't get rid of it again," he said.

How the Pacific Ocean acts as a massive dilutant

- “There’s an old English saying that ‘the solution to pollution is dilution,’ but people don’t want to believe it,” said Steinhauser. “If you dilute something to a point at which it’s no longer dangerous, it is safe.”
- And once it’s safe for humans, it’s also safe for the environment, said Steinhauser. “Tritium does not accumulate — it’s not like mercury in tuna. Tritium is radioactive hydrogen in the form of a water molecule,” he added. “It doesn’t accumulate algae or plankton; it just gets diluted, more and more and more.”

Is tritium a distraction tactic?

- The environmental group Greenpeace has accused the Japanese government and TEPCO of distracting attention from the radiation levels in the water by focusing on tritium — other radionuclides will remain in the water even after it’s been filtered.
- “The Japanese government has done a very good job of focusing the attention of the media and the domestic audience on the tritium in the water and claiming that it poses no danger to the environment,” said Shaun Burnie, senior nuclear specialist for Greenpeace. “The contaminated water contains many radionuclides, which we know impact the environment and human health — including strontium-90,” said Burnie.
- Bernie told DW that leaked internal TEPCO documents show evidence that many radioactive elements, such as iodine, ruthenium, rhodium, antimony, tellurium, cobalt and strontium, will not be filtered to an undetectable level. In addition, said Greenpeace, the ALPS is not designed to filter out the radioactive element carbon-14.

What are the alternatives for dealing with the Fukushima cooling water?

- Environmental groups allege that the Japanese government and TEPCO have chosen the fastest and cheapest solution. They say there are alternatives, such as installing more storage tanks or allowing the cooling water to evaporate. Steinhauser said using additional tanks would be a bad idea, especially because of the high risk of earthquakes in the region.
- “If the tanks were to leak and the cooling water got into the groundwater, the cooling water could spread in the aquifer (Ed.: An aquifer is a layer of rock that holds water) and dilute in a relatively small amount of water,” said Steinhauser. “Releasing the cooling water into the ocean is the best and safest solution for the environment and humanity. Many have recommended this as the solution, including the International Atomic Energy Agency.”
- The other alternative idea of heating the tritium-contaminated cooling water and letting it evaporate is a known process. The safety threshold for tritium using that method is 5 Bq per liter.

However, many researchers consider the option problematic because the radioactive hydrogen released into the air is harder to control. The wind could carry the radioactive cloud to faraway places.

### **Facilitating frictionless credit**

The Reserve Bank of India has initiated a Pilot Project for 'Public Tech Platform for Frictionless Credit'.

- Public Tech Platform for Frictionless Credit was announced as part of the Statement on Developmental and Regulatory Policies by the Reserve Bank of India.
- Developed by: The Reserve Bank Innovation Hub (RBIH).
- Aim: To establish a single digital clearing house for credit-related information.
- Features: Open architecture, open Application Programming Interfaces (APIs) and standards.

#### Need

- Lack of Formal Credit Access: More than seven decades since independence, there is still a lack of formal credit penetration.
- Particularly among small and marginal farmers in the rural hinterland.
- Regional Disparities: In 2021, a National Bank for Agriculture and Rural Development economist observed that 'even among well-developed regions, small and marginal farmers were disadvantaged in terms of credit access'.
- Only a fifth of the more than 12.5 crore small and marginal farmers have access to institutional credit.
- Informal Borrowing: A large majority of rural borrowers avail loans from informal sources at a very high rate of interest.

#### Significance

- A Pilot Project: As part of an effort to validate the technology and its utility.
- Example: It would focus on products such as Kisan Credit Card loans of up to ₹1.6 lakh per borrower, loans to dairy farmers, credit-sans-collateral to MSMEs, and personal and home loans through participating banks.

- Large Credit Disbursal: It would help to accelerate the loan approval and disbursal process significantly.
- Digital Data Flow: It would facilitate the seamless flow of required digital information.
- Lenders would be able to access data on the borrowers and credit-related services from agencies.
- Including Agencies: Aadhaar e-KYC, land records in States where local governments have digitized such data (Tamil Nadu, Karnataka, Uttar Pradesh and Maharashtra included) and even milk pouring data from select dairy cooperatives.
- The digital platform, if successfully implemented, will make the lending process quick, smooth and inclusive, help in reducing costs, and redress the facing challenges to the delivery of formal.

### **Dengue vaccines in India**

- With the expanding geography of dengue infections — in India as well as the world — an increasing need has been felt for an effective vaccine that can protect against all four serotypes. Nearly half the population of the world lives at risk of the disease at present.
- The disease in India has spread from just eight states and union territories in 2001 to all states by 2022 — Ladakh was the last bastion from where two infections were reported last year. There have been 31,464 cases and 36 deaths due to dengue reported across the country till the end of July this year, as per the latest available data.
- There are several efforts ongoing within the country to develop an effective vaccine against the mosquito-borne disease that can lead to internal bleeding, circulatory shock, and death.

#### Vaccine in human trials

- At present, there are three vaccine candidates that are being tested in humans in India.
- First, a vaccine developed by Panacea Biotec based on live weakened versions of the four dengue serotypes developed by the National Institute of Allergy and Infectious Diseases in the United States. The US laboratory developed weakened versions of all four dengue virus serotypes — they deleted parts of the genetic code of DENV1, DENV3, and DENV4 serotypes of the virus to do so and then genetically engineered DENV2 backbone using parts from weakened DENV

4 on which the others were tacked on. These were grown in cell culture by Panacea Biotec to develop the vaccine.

- The company has already completed a phase I/II study in 100 healthy adults between 18 and 60 years of age. This showed that there were no severe adverse events and more than 75% of the participants developed antibodies against all four of the dengue serotypes.
- A larger phase III trial is likely by December this year after they scale up their manufacturing capability. The trial will be conducted across 20 sites in the country enrolling 10,335 healthy adults between the ages of 18 and 80 years.
- A second vaccine candidate was developed by the Serum Institute of India with the same weakened virus from the United States. A phase I trial with 60 healthy adults of 18 to 45 years has already been completed, showing the vaccine to be safe and well tolerated. After phase 2, the company with ICMR will conduct a large-scale study with the help of ICMR in children between the ages of 2 to 18 years.
- The same technology has also been used by Indian Immunologicals Limited to develop a vaccine that has started the phase I clinical trial in 90 persons between the ages of 18 and 50 years.

#### Vaccines in the early stages of development

- There are at least two indigenous vaccines against dengue under development in research institutes. Both have used similar ideas to come up with different types of vaccines.
- One of the main challenges of developing a dengue vaccine is antibody-dependent enhancement (ADE) — a person with low levels of antibodies against one serotype of dengue, may end up getting a more severe infection with another serotype of dengue. This was what led to controversy surrounding the first dengue vaccine to be approved. Only after a vaccination programme had been rolled out in the Philippines, it was found that the vaccine could actually increase the risk of severe disease in people who had not been infected before.
- To do away with this problem, both the Indian research teams selected a specific part of the envelop protein known to not cause ADE. The team from the International Centre for Genetic Engineering and Biotechnology (ICGEB) created a Virus-Like Particle using these parts of the virus. The vaccines were shown to offer almost 100% protection against all four serotypes. This has been tested in mice and monkeys but is yet to be tested in humans. The vaccine was developed in collaboration with Sun Pharmaceuticals.
- The other team from Tata Institute of Fundamental Research and Rajiv Gandhi Centre for Biotechnology among other institutes again used the same envelope parts of the four dengue virus along with another part called non-structural-1 and constructed a genetic sequence out of it. This resulted in a DNA vaccine with all four serotypes. Although DNA vaccines can be manufactured at lower safety levels, at a lesser cost, and can be stored even at room temperatures, they don't always produce a very good immune response. This is the reason

most DNA vaccine candidates failed until the success of the Zydus COVID-19 vaccine.

- The researchers are currently optimising the vaccine using nano-plasmids. The vaccine candidate has already been tested on mice.

### **Achieving the Food security in India**

- India may be the fastest-growing economy of the world, but it is also facing accelerating food price inflation.
- Food Price inflation is an increase in the price of food and related goods over a specific period of time.
- This rise in India first accelerated sharply in 2019 and increased in later years.
- The annual inflation (23%) exceeded the highest in the decade by 2023.
- The continuing high food-price inflation increased the hardship in consuming food of adequate nutritional value.
- India has a prevalence of 16.3% undernutrition (Global Food Security Index 2022).

State of Food Security and Nutrition in the World report:

It was a report released by the Food and Agriculture Organization (FAO) to estimate the proportion of population across countries unable to afford a healthy diet.

Key highlights of the report:

- Around 74% of the population in India (about 1 billion) could not afford a healthy diet in 2021.
- There is shrinking ability of households to finance their food requirement.
- For example, the price of food in Mumbai rose by 65%, as compared to average wage of a manual worker rose by 38% and that of a salaried worker by 28%.
- The implied reduction in purchasing power affects food consumption and leads to rise in prevalence of anaemia induced by nutrient deficiency (National Family Health Survey, 2019-21).
- Over 50% of adult women were estimated to be anaemic, suggesting that over half of India cannot afford a healthy diet.

- This is larger than the population of all other countries of the world, except China.
- The macroeconomic policy of Reserve Bank of India (RBI) failed to control inflation due to lack of supply side targeting of food inflation.

Significance of the Green Revolution:

- India engineered a successful Green Revolution in the 1960s, and tackled supply-side response by providing farmers with high-yielding seeds, cheap credit, and assured prices through procurement.
- But the rampant use of chemical fertilizer, fuelled by subsidy, caused degradation of soil, reliance on procurement prices rather than increase in productivity or farm income.
- It was focused on cereals rather than pulses, the main source of protein for most Indians.
- Though India was self-reliant in food production, but the cost of producing food and nutritional issues were not targeted.
- Procurement prices, cash transfers, Public Distribution System, and priority lending required from public sector banks are not sufficient.

Suggestions:

- Leasing: The ongoing fragmentation of small land holdings that lowers capacity for productivity could be tackled by mechanisms for leasing.
- Land use and irrigation: As agricultural yield is lower in India than in East Asia, irrigation must be extended to 100% of the net sown area, and restrictions on leasing of land must be ended.
- Research: Research and the re-institution of extension for public agricultural research institutes need to be energized to resume their sterling during the 1960s.
- Grassroot reach: The position of gram sevak who played a crucial role in the dissemination of best practices, must be revived.
- Role of States: They are responsible for spread of new technology and work closely with the central government by a spirit of cooperative federalism.
- Implementation: The initiatives should be dovetailed into a programme for the increase of protein production.
- Agricultural productivity must be enhanced rather than relying on food allocations to Public Distribution System from the central pool.
- A non-ideological approach would be needed at both Centre and States, along with reliance on private enterprise.
- The strategy for Green Revolution made the first dent in poverty in India. The current problem can be dealt with an approach consistent with ecological security to ensure that all Indians have permanent access to a healthy diet.

## Distress-Sharing Formula for Cauvery River

The idea of a distress-sharing formula has been under consideration since the interim ruling by the Cauvery Water Disputes Tribunal (CWDT) in June 1991.

- An attempt to have a distress-sharing formula was made in 2002-03 when the southwest monsoon yielded scant rain over a three-year block (2001-02 and 2003-04), with poor inflows to four reservoirs in upper-riparian Karnataka namely: Krishnaraja Sagar (KRS), Kabini, Hemavathy, and Harangi.
- Recent submissions by Tamil Nadu and Karnataka, as well as the Cauvery Water Management Authority's (CWMA) deliberations before the Supreme Court, highlight the critical need for a universally acceptable solution to this perennial issue.

Orders passed by judicial bodies

The judicial bodies (CWDT and Supreme Court) had referred to the principle of proportional sharing in times of distress.

CWDT order 2007:

The Tribunal had suggested that in the event of there being two consecutive bad years of rain, the monthly schedule of water release be relaxed and all the reservoirs in the entire basin operated in an integrated manner to minimise any harsh effect.

Area of divergence

Disagreement Over Distress Sharing Formula:

- Neither of the parties to the dispute nor the Authority has expressed anything against the concept of distress sharing.
- The divergence appears to be over what the elements of the proposed formula should be.
- Tamil Nadu takes into account the deficit in inflows to the four Karnataka reservoirs vis-à-vis the average flows in the last 30 years and the rainfall pattern in three groups of the Cauvery catchment.
- Catchment of the KRS and Kabini,
- Catchment upstream of Biligundulu on the inter-state border, and
- Catchment downstream of Biligundulu.

Karnataka's Concerns and Rights as an Upper Riparian State:

- Karnataka, is against considering only the deficit in inflows into its reservoirs and has been maintaining that the overall distress situation cannot be calculated till the end of January.



- It has been said that the outcome of the northeast monsoon (October-December) should also be taken into account with that of the southwest monsoon (June-September).
- As an upper riparian State that is dependent on the southwest monsoon for irrigation, drinking water and more, Karnataka is well within its rights to be concerned about meeting its requirements for the next eight months.
- It had even informed the Court of its difficulties in releasing water given the “severe drought situation” in the Cauvery and Krishna basins.

### Key Highlights of Cauvery Water Management Authority (CWMA) Meeting

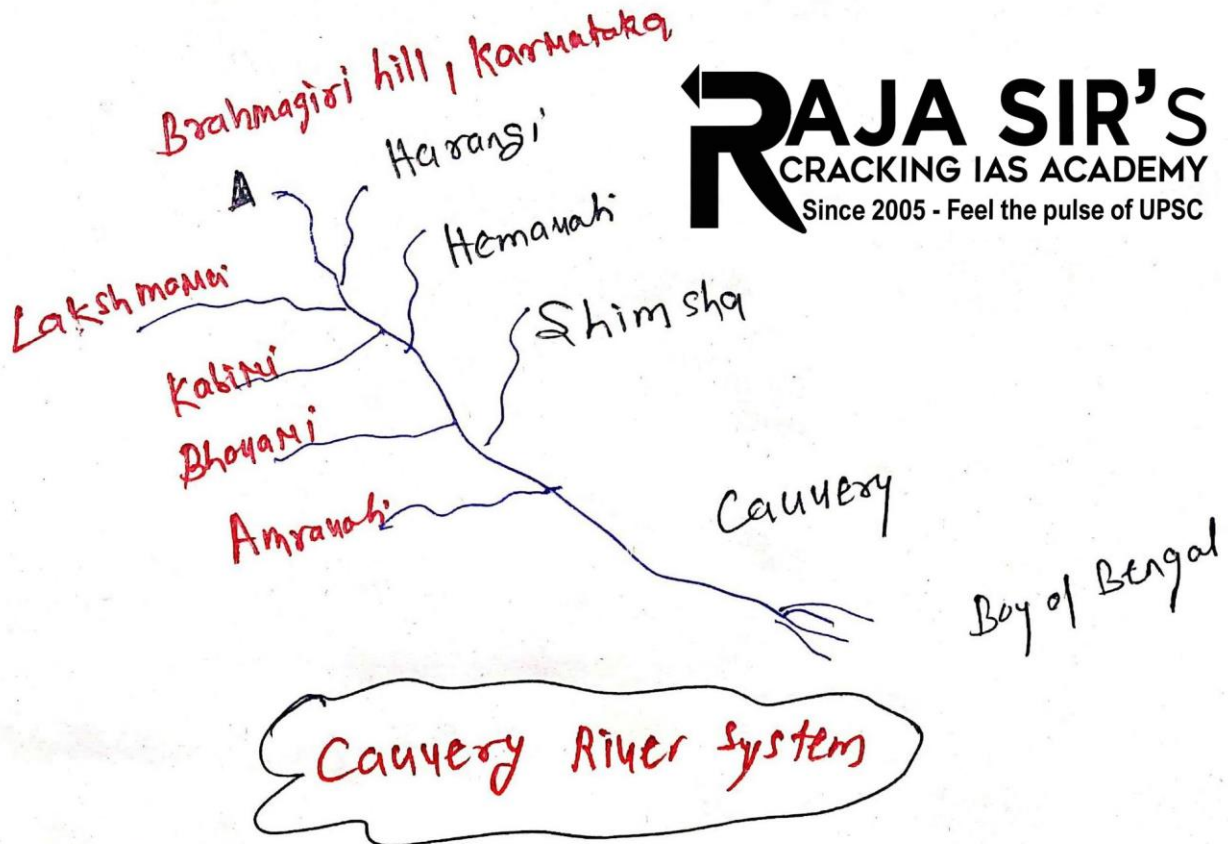
- The CWMA, deliberated on many factors that included the shortfall in inflows and rainfall, the monsoon forecast over the next fortnight, and inflows and outflows of four other reservoirs in the Cauvery basin.
- It was recorded that four Karnataka reservoirs had suffered a shortfall of 51.22% in their inflows, with the upper catchment of the Cauvery basin having had a more negative deficit in rainfall.
- The CWMA pointed out that the shortfall for Biligundulu, as compared to the stipulated flows in a normal year, was 62.4%.
- The Authority, endorsed the Cauvery Water Regulation Committee (CWRC) direction given to Karnataka to provide 5,000 cusecs for 15 days.
- The positions taken by Karnataka and Tamil Nadu may appear to be difficult to reconcile but this should not deter the Authority from trying to find a formula. Such an approach could and should have been used by the Authority after its inception in 2018. Unfortunately, nothing much was done in these five years.

The CWMA may not have shown its mettle so far, but it should now try and make a fresh beginning. To begin with, the Authority along with its assisting body, the CWRC, should make the proceedings of all its meetings held so far available to the public on a website. Putting out all the facts in the public domain will help the CWMA dispel misconceptions in both States about this issue given that the Cauvery has always been an emotive subject.

### Cauvery River

- The Cauvery River rises at Talakaveri on the Brahmagiri range near Cherangala village of Coorg district of Karnataka.
- It flows in a southeasterly direction through the states of Karnataka and Tamil Nadu and descends the Eastern Ghats in a series of great falls.
- Before emptying into the Bay of Bengal south of Cuddalore, Tamil Nadu, the river breaks into a large number of distributaries forming a wide delta called the “garden of southern India.”

- Left Bank tributaries: The Harangi, the Hemavati, the Shimsha, and the Arkavati.
- Right Bank tributaries: Lakshmantirtha, the Kabbani, the Suvarnavati, the Bhavani, the Noyil, and the Amaravati.



## India - a global leader in digital public goods

- India is pioneering the concept of digital public goods that enhance the ease, transparency, and speed with which individuals interact with each other.
- All the registered digital public goods deployed in India only 54% have been developed in India. (Analysis of the DPG Alliance)
- Aadhaar implementation, DigiLocker, UPI and subsidy transfer (JAM), etc.
- The rise of DPGs-driven DPIs has exponentially increased market-driven innovation in India.

### Digital Public Goods (DPGs):

- Digital public goods encompass software, data sets, AI models, standards, and content.
- These resources are considered free cultural works.
- They play a crucial role in sustainable national and international digital development

### Key Characteristics:

- Digital public goods are non-rivalrous, meaning their use by one entity does not diminish their availability to others.
- They are non-excludable, allowing unrestricted access to all.
- These resources offer benefits across various sectors and contribute to inclusive development.

### Examples and Impact:

- International organizations like UNICEF and UNDP are exploring the potential of Digital Public Goods to address digital inclusion challenges on a global scale.
- The eGov Foundation, founded by an architect of India's Aadhaar system, has made significant contributions to building Digital Public Goods.
- Example: Digital health initiatives like DIVOC, which issued millions of verifiable QR code-enabled vaccination certificates in India and extended its use to Sri Lanka and the Philippines.
- The impact of Digital Public Goods extends to areas such as digital commerce and education, with initiatives like the Open Network for digital commerce and Open Network for education & skilling transactions contributing to transformative trends.

### Digital Public Infrastructure (DPI):

- DPI refers to solutions and systems that enable the effective provision of essential society-wide functions and services in the public and private sectors.
- India's DPI include Unified Payments Interface (UPI), Aadhaar identification platform, CoWin platform for healthcare, Digilocker as well as indigenously built 4G and 5G stack.

#### Components of DPI:

- Networked open technology standards built for public interest,
- Enabling governance, and
- A community of innovative and competitive market players working to drive innovation, especially across public programmes.

#### Benefits of Digital Public Infrastructure (DPI):

- It is a critical enabler of digital transformation and helps to improve public service delivery at scale.
- It can help countries achieve their national priorities and accelerate the Sustainable Development Goals.
- It provides the means to recover from the COVID-19 pandemic and bridge the digital divide.

#### Advantages of the Digital Public Goods:

- Cheaper delivery of public services using technology
- Faster and more dynamic delivery of services using technology
- Transparency in the delivery of public services using technology as seen in the direct benefit transfer scheme.
- Digital health solutions played a crucial role in bridging the gap in healthcare delivery as systems moved online to accommodate contactless care.

#### Challenges of DPGs:

- Privacy issues and identity theft: All stakeholders on one network potentially give rise to threats relating to privacy violations, identity theft, and exclusion from essential public services.
- Data theft: Consolidation of data under a single network can lead to Data theft.
- Inadequate governance and security frameworks: Sensitive personal data might be used to perpetuate exclusionary biases.

- Internet speed and Penetration: Sub-optimal speed and penetration of internet in rural locations pose challenges for the deployment of DPGs at scale.
- Digital tools: Lack of awareness of digital tools and their value proposition in the formal sector could result in low adoption of DPGs.
- Compromised or unusable formatting of datasets: It could hinder the development of applications by developers.
- Lack of private funding and government incentives: It prevents developers from leveraging the technology infrastructure.
- Vendor lock-in, external dependency, lack of flexibility coupled with risks of discontinuation or unilateral modifiability have been leading to rising concerns.

### Digital Divide

- Despite these successes, there are still significant challenges to be addressed in promoting the use of digital public goods in India. One of the biggest challenges is the lack of digital infrastructure in rural areas. While digital technologies have been widely adopted in urban areas, many rural communities still lack access to basic digital services such as high-speed internet connectivity.
- This digital divide can further exacerbate existing inequalities and limit the potential impact of DPGs on empowerment. The government must hence first focus on strengthening digital connectivity in all areas.
- Another challenge is the lack of digital literacy and skills among many individuals, particularly those from marginalised communities. This can limit their ability to access and effectively use DPGs, further widening the digital divide. Addressing this challenge will require concerted efforts from the government, civil society organisations, and the private sector to promote digital literacy and skills development.

### Digital Public Goods Alliance

- It is a multi-stakeholder UN-endorsed initiative that facilitates the discovery and deployment of open-source technologies.
- It can bring together countries and organisations to create a thriving global ecosystem for DPGs and help to achieve sustainable development goals.
- It is currently co-hosted by the Norwegian Agency for Development Cooperation, UNDP, and UNICEF but It is not a “legal entity.”
- They have a “Digital Public Goods Standard” which is used to evaluate if tech tools are digital public goods or not.
- UNDP focuses on advancing DPGs4DPI to help countries shift from fragmented and solution-based approaches to holistic, whole-of-society ecosystems to create digitally empowered world.

In spite of India's tremendous track record in the usage of open-source systems, the overall domestic development ecosystem in the country needs sustained growth to

satiating growing demand. The digitalization path must lead to inclusive and indigenous developments. The government and private entities must work together to achieve a full-fledged digital India.

### **UPI QR Code-Central Bank Digital Currency interoperability**

With banks enabling the interoperability of Unified Payments Interface's (UPI) Quick Response (QR) code with their central bank digital currency (CBDC) or e₹ application, users of retail digital rupee will be able to make transactions by scanning any UPI QR at a merchant outlet. Merchants can also accept digital rupee payments through their existing UPI QR codes.

This integration of UPI and CBDC is part of the Reserve Bank of India's (RBI) ongoing pilot project on pushing the retail digital rupee (e₹-R).

So, what is interoperability?

Interoperability is the technical compatibility that enables a payment system to be used in conjunction with other payment systems, according to the RBI. Interoperability allows system providers and participants in different systems to undertake, clear and settle payment transactions across systems without participating in multiple systems. Interoperability between payment systems contributes to achieving adoption, co-existence, innovation, and efficiency for end users.

And what is UPI QR code-CBDC interoperability?

Interoperability of UPI with the digital rupee means all UPI QR codes are compatible with CBDC apps. Initially, when the pilot for the retail digital rupee was launched, the e₹-R users had to scan a specific QR code to undertake transactions. However, with the interoperability of the two, payments can be made using a single QR code. The digital rupee issued by the RBI, or the CBDC, is a tokenised digital version of the rupee. The e₹ is held in a digital wallet, which is linked to a customer's existing savings bank account. UPI is directly linked to a customer's account.

How will it benefit customers and merchants?

- The interoperability of UPI and CBDC will ensure seamless transactions between a customer and merchant without having the need to switch between multiple digital platforms.
- It will allow a digital rupee user to make payments for their daily needs, such as groceries and medicines, by scanning any UPI QR codes at any merchant outlet.
- Even merchants are not required to keep a separate QR code to accept the digital rupee payments. They can accept CBDC payments on their existing QR code.
- We will take advantage of the UPI network to increase transactions in CBDC. There will be one QR code, and you can scan the QR code using the CBDC app. If the merchant has a CBDC account, the payment will be settled in the CBDC wallet. If a merchant does not have a CBDC account, then there will be an option to make payment using UPI, RBI's Deputy Governor T Rabi Sankar said in July this year.

#### QR code

- A Quick Response (QR) code consists of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera. It contains information about the item to which it is attached, according to the National Payments Corporation of India (NPCI). QR code is an alternate contactless channel of payments. It allows merchants or businesses to accept payments from their customers directly into their bank accounts.

#### And how will interoperability help in increasing CBDC adoption?

- Currently, UPI is a widely used payment method, and the interoperability between it and the CBDC will propel the adoption of the digital rupee.
- At present, more than 70 mobile apps and over 50 million merchants accept UPI payments. In July, RBI Deputy Governor Sankar said there were 1.3 million customers and 0.3 million merchants using the retail digital rupee. The daily per-day e₹-R transactions in July were around 5,000-10,000.
- SBI said the seamless integration of CBDC with UPI will enhance the acceptance and utilization of digital currencies in everyday transactions. This integration will be a game changer for the digital currency ecosystem, it said.

#### How many banks have enabled UPI and CBDC interoperability?

A few banks, including State Bank of India, Bank of Baroda, Kotak Mahindra Bank, Yes Bank, Axis Bank, HDFC Bank and IDFC First Bank, have introduced UPI interoperability on their digital rupee application.

## Solar exploration

- In the wake of the Indian Space Research Organisation's successful launch of its inaugural solar mission, Aditya-L1, let's embark on a journey through key missions from space agencies worldwide, all dedicated to unravelling the enigmatic secrets of the Sun. US: National Aeronautics and Space Administration (NASA), the US space agency, launched the Parker Solar Probe in August 2018. In December 2021, Parker flew through the Sun's upper atmosphere, the corona, and sampled particles and magnetic fields there. This was the first time ever that a spacecraft touched the Sun, according to NASA.
- In February 2020, NASA joined hands with the European Space Agency (ESA) and launched The Solar Orbiter to collect data to find out how the Sun created and controlled the constantly changing space environment throughout the solar system.
- Other active solar missions by NASA are Advanced Composition Explorer launched in August, 1997; Solar Terrestrial Relations Observatory in October, 2006; Solar Dynamics Observatory in February, 2010; and Interface Region Imaging Spectrograph launched in June, 2013.
- Also, in December, 1995, NASA, ESA and JAXA (Japan Aerospace Exploration Agency) jointly launched the Solar and Heliospheric Observatory (SOHO).
- Japan: JAXA, Japan's space agency, launched its first solar observation satellite, Hinotori (ASTRO-A), in 1981. The objective was to study solar flares using hard X-rays, according to JAXA.
- JAXA's other solar exploratory missions are Yohkoh (SOLAR-A) launched in 1991; SOHO (along with NASA and ESA) in 1995; and Transient Region and Coronal Explorer (TRACE), along with NASA, in 1998.
- In 2006, Hinode (SOLAR-B) was launched, which was the successor to Yohkoh (SOLAR-A), the orbiting solar observatory. Japan launched it in collaboration with the US and the UK. The objective of Hinode, an observatory satellite, is to study the impact of the Sun on the Earth.
- Yohkoh's objective was to observe solar flares and the solar corona. It was the first satellite to track almost an entire 11-year solar activity cycle, according to JAXA's website.
- Europe: In October, 1990, the ESA launched Ulysses to study the environment of space above and below the poles of the Sun, giving scientists information about the variable effect the Sun has on the space surrounding it. Other than solar missions launched in collaboration with NASA and JAXA, the ESA launched Proba-2 in October, 2001.
- Proba-2 is the second of the Proba series, building on nearly eight years of successful Proba-1 experience, even as Proba-1 was not a solar exploratory mission. On-board Proba-2 were four experiments, two of them were solar observation experiments.
- Proba stands for Project for On-Board Autonomy. Upcoming solar missions of the ESA include Proba-3, scheduled for 2024 and Smile, scheduled for 2025.



- China: The Advanced Space-based Solar Observatory (ASO-S) was successfully launched by the National Space Science Center, Chinese Academy of Sciences (CAS), in October, 2022. The ASO-S mission is designed to reveal connections among the solar magnetic field, solar flares, and coronal mass ejections (CMEs), according to the Center's official website. Solar flares and CMEs are eruptive solar phenomena, thought to be driven by changes in the Sun's magnetic field.

### India's Food Inflation Challenge

- There was an increase in retail food prices in the monsoon season of 2023 in India for essential vegetables like tomatoes, onions and potatoes (TOP) to cereals like rice, wheat and tur dal.
- Urban India has a Consumer Food Price Index (CFPI) of 10.42%, compared to rural CFPI of 9.67%.
- The pulse prices rose faster in urban than in rural India, and rural inflation in spices and cereals exceeded the urban scenario.
- When inflation rises, consumers buy lesser due to decrease in purchasing power, that affects nutrition and food availability.
- Several crops like rice, maize, tur and urad are affected due to El Nino effect and alterations in monsoon pattern.
- It can lead to disruptions in Global supply chains and alter trade export- import balance.

#### Food Inflation

- Food inflation is the rise in price of food commodities that endangers food security, especially for developing countries.
- Causes: increase in production, labor and transportation costs, climate change, population, hoarding of food items, land exploitation etc.
- It is a significant component of poorer households' monthly expenses that has a direct bearing on political fortunes.
- It is measured as the average price rise in 12 sub-groups within the Consumer Price Index (CPI) basket.
- CPI is a macroeconomic indicator that measures the change in price level of goods consumed by retail consumers over a particular period of time.

Trends of food inflation in India:

- Price trends of major food items suggest that food inflation is widespread, and may not be as transitory as tomato prices.
- Food grains witnessed high inflation in recent months despite record output of 330 million tonnes in 2022-23 (Third Advanced Estimates by the Ministry of Agriculture).
- Factors: uneven distribution of monsoon, prevailing weak El Nino conditions are potential risks to crop production, which put pressure on food prices.
- When two of the sub-groups of non-alcoholic beverages and prepared meals, snacks, and sweets are excluded, Consumer Food Price Index (CFPI) is at 9.94%.
- Inflation rate of vegetables is highest at 26.14%, followed by spices (23.19%), pulses (13.04%), and Cereal (11.85%).
- The steady rise in the prices of pulses to about 13% by mid-2023 is the highest since 2021.
- Although total pulses production was higher (275 lakh tonnes in 2022-23), the output of tur declined by 18.7% and urad by 6%.
- Cereals and products registered double-digit inflation for a year, despite record production of rice (135.5 million tonnes) and wheat (112 million tonnes) in 2022-23.
- Sowing in kharif season indicated a fall in acreage under urad (13.8%), moong (8%) and tur (8%), indicating that inflation in pulses may gain momentum in future.
- Oils and fats showed a deflationary trend for the past 11 months, but it may reverse onset of festival season.
- Oilseeds' production increased, but 50% of domestic demand for edible oils is met through imports.

Steps to be taken:

- Augmenting Domestic supply: Supply of pulses through imports is limited so expansion of pulses production through adoption of yield-enhancing technology is needed.
- The dependence on imports may rise further, unless domestic production expands.
- Sustainable Agriculture: Pulses cultivation can lead to positive externalities including enriching soil fertility, 'more crop per drop', and short crop duration.
- It can be adequately incentivized in the short-term, while developing high yielding climate adaptive varieties in the long-term.
- Policy measures: As high food inflation affects food and nutritional security, especially for economically weaker sections, decisive policy measures lead to self-sufficiency in food production.
- Seed enhancement: With stagnant yields, increased weather aberrations and limited scope for expanding acreage, it is imperative to develop high-yield and

climate-resilient varieties and practices to meet rising demand and ensuring food security.

- Financial management: There must be enhanced funding for agricultural research and Development (R&D) to about 3% of agricultural GDP from the existing (less than 1%) to tackle falling crop yields, deteriorating soil fertility, loss of groundwater, etc.
- The National Adaptation Fund for Climate Change (NAFCC) decreased from ₹118 crore in 2015-16 to ₹34 crore in 2022-23.
- There is an urgent need to enhance agricultural R&D for climate-resilient practices, technologies, crop varieties and ensure self-sufficiency in food and nutritional security.

### **Expanding the Indian economy, the green way**

- As India develops its economy to meet the growing needs of its people, it will confront major challenges due to climate change consequences and the allied necessity to curb carbon emissions.
- The impact of global warming is becoming more severe, and there is an urgency to embrace practices that mitigate greenhouse gas (GHG) emissions.
- Establishing a vibrant carbon trading network is one of the solutions that are being adopted or considered to tackle the emergency.

What are carbon credits?

- Carbon credits can be considered like a temporary licence for an organisation to emit a specific quantity of CO<sub>2</sub> in a particular year.
- This mechanism allows a company with low or no emissions to sell credits in the market via a carbon trading framework or carbon exchange.
- This offsets the emissions of another company willing to pay for the credits.

What is the need for a carbon credit mechanism?

- With global temperatures and GHG emissions rising annually, there is an increased awareness amongst governments, investors, consumers and other stakeholders of their overall carbon footprint, and the need to control it.
- Decarbonisation avenues are very limited for some industrial companies and hard-to-abate segments such as cement, chemicals, iron and steel production and non-ferrous metals.

- Those avenues are also a costly proposition for them compared to transport, power generation and some other industries.
- These companies are some of the biggest contributors to universal GHG emissions, hence they are mandated to meet emission reduction goals, because of either local laws or their in-house policies.

How will carbon credits help?

- Carbon credits can assist companies in meeting sustainability targets.
- Companies can purchase credits or fund programmes that create carbon credits.

What are steps taken by Government?

- The Government is planning to set up the Indian Carbon Market (ICM) by establishing a national framework that will help in decarbonising the domestic economy by pricing GHG emissions via trading in carbon credit certificates.
- India already has an energy savings-linked market mechanism.
- However, carbon credit trading will give a fillip to energy transition due to its greater scope for covering the country's potential energy segments.

Draft Framework for the Indian Carbon Credit Scheme 2023:

- The draft framework for the Indian Carbon Credit Scheme 2023 was notified by the Union government.
- The Bureau of Energy Efficiency functioning under the Ministry of Power has been tasked to develop the Carbon Trading Scheme in collaboration with the Ministry of Environment, Forest & Climate Change.

Working of ICM:

- GHG emissions intensity targets and benchmarks would be developed in sync with the domestic emissions trajectory, according to the climate goals.
- Consequently, carbon credit trades will be aligned as per the performance vis-à-vis the sectoral trajectories.
- The draft notification has no provision for procedures, regulations or guidelines for the functioning of carbon markets.
- This responsibility will be vested with a National Steering Committee chaired by the Secretary, Ministry of Power.

International Implications

- It is essential to recognize that as carbon-related tariffs like CBAM (Carbon Border Adjustment Mechanism) begin to influence trade, businesses would need to factor in both national and international implications.
- Given the interdependencies and complexity of the trade, it is challenging to accurately predict and model the impact.
- Regulatory authorities must closely oversee the dynamics of the carbon credit market and devise systems to ascertain its smooth functioning on a global scale.

#### How will ICM help?

- ICM will help mobilise investments for the transition to a low-carbon ecosystem.
- It will help India lower the emissions intensity of its GDP by 45% by 2030 compared to the 2005 levels, thereby meeting its NDC (Nationally Determined Contribution) target related to its global climate commitments.
- It will help in decarbonising the commercial and industrial segments and assist in meeting the ambitious target of turning net zero by 2070 set by the government.
- It will offer flexibility to companies in hard-to-abate segments to augment their GHG emission efforts through carbon market credits.
- The mechanism could help attract finance and technology for sustainable projects that can generate carbon credits.
- It can be an effective channel in mobilising a major proportion of funds required for the low-carbon transition.

#### Impact of Introducing ICM

- The Centre's decision will create more awareness, change and innovation across hard-to-abate industries.
- Enterprises driven by incentives and penalties would begin embedding the environmental impact as a key parameter in their strategic decisions.
- This will encourage investments allowing the shifting of business and manufacturing towards practices with low carbon footprints.

As the country moves steadily towards a net-zero world, decarbonising industrial activity will be critical. It is here that industry leaders in carbon management solutions and clean energy transition can play a pivotal role in facilitating the transition towards a net-zero future by helping the nation switch from fossil fuel technologies to clean energy systems. As India tries to strike a balance between economic needs and environmental concerns, a vibrant carbon trading mechanism can be crucial in creating a more sustainable future.

### The complex path to biofuel sustainability

- India's average ethanol blending rate with petroleum is estimated at 11.5% in 2023.
- India has proposed a target of 20% blending of ethanol in petrol and 5% blending of biodiesel in diesel by 2030.
- India targets to reduce the country's carbon footprint by 30-35% by the year 2030.
- The production volume of biodiesel fuel in India was 185 million litres in 2022 and is aimed to increase to 200 million litres in 2023.

Biofuel: A Better Alternative of Electric Vehicles (EVs):

- For a transition to Electric Vehicles, existing internal combustion engine (ICE) vehicles and the supporting infrastructure need to be replaced entirely.
- It is a capital-intensive method.
- The required batteries and critical minerals used in EVs need to be imported.
- Mining of these critical minerals causes concerns to the environment.
- Biofuels can be used in existing ICE engines and infrastructure with little to no modifications (depending on the blending rates) and offer import independence.

Sustainable Biofuels:

- Biofuels are any fuel produced from biological matter or "biomass".
- Sustainable biofuels are produced from crop residues and other wastes, with low water and Greenhouse Gas (GHG) footprint.
- This can include agricultural and forestry crops and residues, organic by-products, and waste.
- Biofuels can help reduce emissions and contribute towards meeting Aotearoa New Zealand's climate targets.

Biofuel Production in India:

- The current daily production of biogas and compressed biogas in India is 1151 MT. (Ministry of New and Renewable Energy,)
- This could increase to 1750 MT per day by 2025.
- India has substantially increased its share of renewable energy in the overall energy mix, experiencing a Compound Annual Growth Rate (CAGR) of approximately 22% over the last six years.
- In this period, India has expanded its solar and wind energy sectors at CAGRs of 38% and 30%, respectively.

Sustainable Biomass Use:

limited low-carbon alternatives

- The Energy Transitions Commissions' report on 'Bioresources within a Net-Zero Emissions Economy', has recommended that biomass should be prioritised for use in sectors where there are limited low-carbon alternatives.
- There are four main types of low-carbon energy: wind, solar, hydro and nuclear power.
- Whereas petrol vehicles would probably not make the cut, long-haul aviation and road freight segments, where complete electrification may take longer to reach.
- According to the International Energy Agency (IEA), sustainable biofuel production needs to triple by 2030 to achieve net-zero emissions by 2050 globally.

Ethanol as a sustainable fuel

- Although first-generation (1G) ethanol is unlikely to fit the bill, second-generation (2G) ethanol could be counted as a sustainable fuel, especially if the production is decentralised.
- Decentralised biofuel production is achieved when crop residues do not have to be transported to a central manufacturing plant from a large distance.
- This might affect achieving economies of scale for the 2G plant.
- Balancing economies of scale with the energy needs (and costs) of biomass collection and transport across large distances is a major challenge.
- The Global Biofuels Alliance, launched during India's G20 presidency could help drive innovation and technology development in establishing an efficient biomass supply chain and smaller-scale decentralised biofuel production units.

Challenges:

- In India, biofuel is synonymous with 1G ethanol, which is primarily sourced from food crops.
- The policy target in India of achieving 20% ethanol blending with petrol (E20) by 2025-26 is expected to be met from sugar cane and foodgrains.
- Second-generation (2G) ethanol is unlikely to contribute to achieving this target due to challenges related to feedstock supply chain and scaling up.
- Achieving true sustainability is complex, especially with respect to biofuels.
- Therefore, strategies should be carefully examined in the context of the larger ecosystem to avoid unintended negative consequences.

Why is diverting the surplus crop produce towards energy not sustainable?

Global warming:

- India's crop yields have already stagnated, and global warming is expected to reduce yields.
- The same area under cultivation will produce less with time but will need to suffice for a growing population.
- Thus, to meet blending targets, India cannot depend on surplus crop production.

Groundwater depletion:

- The rates of groundwater depletion could triple during 2040-81 compared with the current rate.
- It is attributed to temperature rise and increase in crop water requirements.
- With such limited resources, food production should be prioritised over fuel.

Agriculture and GHG emissions:

- The agriculture sector is one of the hardest to abate in terms of direct GHG emissions.
- Thus, increasing GHG emissions from this sector for motor fuel production in order to decrease GHG emissions from the transport sector is an unnecessary balancing loop that would achieve little net benefit.

The Global Biofuel Alliance:

- It aims to serve as a catalytic platform, fostering global collaboration for the advancement and widespread adoption of biofuels and to promoting ethanol uptake.
- It is an initiative by India along with the leaders of Singapore, Bangladesh, Italy, USA, Brazil, Argentina, Mauritius and UAE on the sidelines of the G20 Summit in India.
- It intends to expedite the global uptake of biofuels by facilitating technology advancements, intensifying utilization of sustainable biofuels, shaping robust standard certification through the participation of a wide range of stakeholders.
- It will act as a central repository of knowledge and an expert hub.
- It can generate opportunities worth USD 500 billion in the next three years for G20 countries (Indian Biogas Association).



## Party symbol for Ladakh polls

The Supreme Court restored to the National Conference, its party symbol – the plough – after the Ladakh administration refused to allot the symbol to the party's candidates for the upcoming election to the Ladakh Autonomous Hill Development Council (LAHDC) in Kargil. The Ladakh UT had challenged the order of the High Court of J&K and Ladakh allotting the symbol to the NC, in the Supreme Court and the court had reserved its judgement in the case.

On 6 September 2023, a bench comprising Justices Vikram Nath and Ahsanuddin Amanullah pronounced its order and also imposed a cost of Rs 1 lakh on the Ladakh administration for filing the petition.

How did the matter of the symbol for NC candidates reach the courts?

With the announcement of the LAHDC polls for Kargil, the election commissioner for the UT of Ladakh refused to allot the symbol of the plough to the NC. In its arguments against reserving the plough symbol for the NC, the Ladakh administration said that no state party, including the NC, is a recognised party in Ladakh, and that the NC could therefore not claim its plough symbol in the UT.

However, the NC challenged this decision in the High Court of J&K and Ladakh and the courts ruled in their favour. The NC and Congress have a seat-sharing agreement for the upcoming election to 26 seats in the Hill Council. Polls for the council were slated for 10 September 2023 however the 6 September 2023 order by the Supreme Court is likely to push the election further.

Why is this election significant?

The hill council elections in Kargil are crucial since these are the first local polls in the region since Ladakh's split from J&K in August 2019. Following its reorganisation, Ladakh witnessed continued protests for the protection of its language and culture as well as land and jobs besides the region's inclusion under the Sixth Schedule of the Constitution.

The pushback against the centre has also brought unity among civil and religious groups in both districts, one with a majority Muslim population (Kargil) and the other with a majority Buddhist population (Leh).

What is the LAHDC?

The Ladakh Autonomous Hill Development Councils were constituted under the Ladakh Autonomous Hill Development Councils Act, 1997. For effective governance in

the districts comprising Ladakh – Leh and Kargil – two councils were constituted in 1995 (LAHDC, Leh) and 2003 (LAHDC, Kargil). The law was deemed to come into force from June 1995.

What are the powers of the LAHDC?

Powers to both councils include drafting development plans for the region, formulation of budgets for both districts, implementation of movement schemes, promotion of language and culture, public health, education, local road transport and its development among other concerns. Small-scale industries, non-conventional energy and tourism also form part of the 28 subjects under the LAHDC's ambit in governance in the Ladakh region. The Hill Councils also have the authority to levy and collect taxes and other fees in their jurisdiction.

What is the composition of the councils?

The Ladakh Autonomous Hill Development Council, Kargil and Leh comprise 30 councillors each. Out of which 26 councillors are elected while four are nominated. Among these, a Chairperson is elected who also serves as Chief Executive Councillor for the council.

The Chief Executive Councillor holds the rank and powers of a Cabinet Minister while four Executive Councillors possess the rank and status of Deputy Minister. The Deputy Commissioner of the district is designated as the Chief Executive Officer, LAHDC holds control over the overall district administration, execution of works and maintaining Law and Order.

How has political representation changed in Ladakh since Ladakh became a UT?

Apart from the Hill Councils, prior to August 2019, the Ladakh region elected two Members to the Legislative Assembly of J&K from Leh and Kargil and a single Member to Parliament. However, after the bifurcation of the former state, Ladakh became a UT without an assembly, thereby concentrating political authority in the Hill Councils and the lone MP. The Hill Councils have given shape to the political landscape in the region with many of the former MPs having served in the councils.

When are elections to the councils due?

The LAHDC-K elections were due on 10 September 2023. However, this is likely to get pushed owing to the court's order. There are 89 candidates in the fray for 26 constituencies in the council. This includes 17 from the BJP, four from the Aam Aadmi Party (AAP), 21 from the Congress, and 47 Independent candidates.

### **Largest indigenously developed N-plant unit**

- The third unit of the indigenously developed 700-megawatt electric (MWe) nuclear power reactor at the Kakrapar Atomic Power Project (KAPP3) in Gujarat has commenced operations at full capacity.
- Prime Minister Narendra Modi said on social media platform X, “India achieves another milestone. The largest indigenous 700 MWe Kakrapar Nuclear Power Plant Unit-3 in Gujarat starts operations at full capacity. Congratulations to our scientists and engineers.”
- This comes a little over three years since the unit achieved its ‘first criticality’ – a technical term that signifies the initiation of a controlled, but sustained nuclear fission reaction – in July 2020. On 30 June this year, the unit had started commercial operations.
- In India’s civilian nuclear programme, this is seen as a landmark event, given that KAPP-3 is the country’s first 700 MWe unit and the biggest indigenously developed variant of the Pressurised Heavy Water Reactor (PHWR). The PHWRs, which use natural uranium as fuel and heavy water as moderator, constitute the mainstay of India’s nuclear power fleet. Till now, the biggest reactor of indigenous design was the 540 MWe PHWR, two of which have been deployed in Tarapur, Maharashtra.
- For India, the operationalisation of its first 700MWe reactor is a significant scale up in technology, both in terms of the optimisation of its PHWR design — the new 700MWe unit addresses the excess thermal margins (thermal margin refers to the extent to which the operating temperature of the reactor is below its maximum operating temperature) — and also marks an improvement in the economies-of-scale, without significant design changes to the 540 MWe reactor.
- Four units of the 700MWe reactor are being constructed at Kakrapar (KAPP-3 and 4) and Rawatbhata (RAPS-7 and 8) site in Rajasthan currently. The 700MWe reactors are slated to be backbone of a new fleet of 12 reactors that the NDA government accorded administrative approval and financial sanction in 2017 and that are to be set up in fleet mode.
- As India works to ramp up its existing nuclear power capacity of 7,480 MWe to 22,480 MWe by 2031, the 700MWe capacity would constitute the biggest component of this expansion plan. Currently, nuclear power capacity constitutes around 2 per cent of the total installed capacity of 4,17,668 MW (May 31).
- Significantly, as India’s civilian nuclear sector gears up to its next frontier — building a 900 MWe Pressurised Water Reactors (PWRs) of indigenous design – the experience of executing the larger 700MWe reactor design would come in handy, especially with respect to the improved capability of making large-size pressure vessels, alongside India’s own isotope enrichment plants being developed to supply a part of the required enriched uranium fuel to power these new generation reactors over the next decade or so, according to DAE officials.
- The first ‘pour of concrete’ for laying the foundation of KAPP-3 happened in November 2010 and this unit was originally expected to be commissioned in 2015. State-owned Nuclear Power Corporation of India Ltd (NPCIL), which

operates the bulk of India's nuclear power fleet, had awarded the reactor building contract of both KAPP Unit 3 and 4 to Larsen & Toubro at an original contract value of Rs 844 crore. The original cost of two 700 MWe units was pegged at Rs 11,500 crore and the tariff per unit was originally calculated at Rs 2.80 per unit (kWh) at 2010 prices (roughly a cost of about Rs 8 crore per MWe). The costing is expected to have seen some escalation, given the project delays.

- The capital investment for these nuclear power projects is being funded with a debt-to-equity ratio of 70:30, with the equity part of NPCIL being funded from internal resources and through budgetary support.
- In terms of safety features, the PHWR technology scores high, with the biggest advantage of the PHWR design being the use of thin walled pressure tubes instead of large pressure vessels used in pressure vessel type reactors. This results in a distribution of pressure boundaries to a large number of small diameter pressure tubes and thereby lowers the severity of the consequence of an accidental rupture of the pressure boundary than in a pressure vessel type reactor.
- Additionally, the 700 MWe PHWR design has enhanced safety through dedicated 'Passive Decay Heat Removal System', which has the capability of removing decay heat (the heat released as a result of radioactive decay) from the reactor core without requiring any operator actions, on the lines of similar technology adopted for Generation III+ plants to negate the possibility of a Fukushima type accident that happened in Japan in 2011. The 700 MWe PHWR unit, like the one deployed in KAPP, is equipped with a steel-lined containment to reduce any leakages and a containment spray system to reduce the containment pressure in case of a loss of coolant accident.

## The Rise of the Indian Carbon Market

As India develops its economy to meet the growing needs of its people, the country will confront serious challenges due to climate change consequences and the allied necessity to curb carbon emissions.

With the impact of global warming becoming more severe, there is immense urgency to embrace practices that mitigate greenhouse gas (GHG) emissions.

A vibrant carbon trading network is among the numerous solutions that are being adopted or considered to tackle the emergency.

### Carbon Markets

- Carbon markets are essentially a tool for putting a price on carbon emissions—they establish trading systems where carbon credits or allowances can be bought and sold.
- A carbon credit is a kind of tradable permit that, per United Nations standards, equals one tonne of carbon dioxide removed, reduced, or sequestered from the atmosphere.
- Carbon allowances or caps, meanwhile, are determined by countries or governments according to their emission reduction targets.
- Carbon trading started formally in 1997 under the United Nations' Kyoto Protocol.
- Types: There are broadly two types of carbon markets that exist today, viz:
- Voluntary Markets: Those markets in which emitters buy carbon credits to offset the emission of one tonne of CO<sub>2</sub> or equivalent greenhouse gases.
- Such carbon credits are created by activities which reduce CO<sub>2</sub> from the air, such as afforestation.
- In a voluntary market, a corporation looking to compensate for its unavoidable GHG emissions purchases carbon credits from an entity engaged in projects that reduce, remove, capture, or avoid emissions.
- For Instance, in the aviation sector, airlines may purchase carbon credits to offset the carbon footprints of the flights they operate.
- In voluntary markets, credits are verified by private firms as per popular standards.
- Compliance Markets: They are set up by policies at the national, regional, and/or international level and are officially regulated.
- Today, compliance markets mostly operate under a principle called “cap-and-trade”, most popular in the European Union (EU).

### Status of the Carbon Market in India

- In India, the Centre is planning to set up the Indian Carbon Market (ICM) by establishing a national framework that will help in decarbonising the domestic economy.
- The draft framework for the Indian Carbon Credit Scheme 2023 was recently notified by the Union government.
- The Bureau of Energy Efficiency functioning under the Ministry of Power has been tasked to develop the Carbon Trading Scheme in tandem with the Ministry of Environment, Forest & Climate Change.

The ICM will have following benefits:

- It will help India lower the emissions intensity of its GDP by 45% by 2030 compared to the 2005 levels, thereby meeting its NDC target related to its global climate commitments.
- ICM would help in decarbonising the commercial and industrial segments (in line with India's net zero by 2070).
- It will give a fillip to energy transition due to its greater scope for covering the country's potential energy segments.
- GHG emissions intensity targets and benchmarks would then be developed in sync with the domestic emissions trajectory, according to the climate goals.
- Although the ICM would be regulated, it will offer flexibility to companies in hard-to-abate segments to augment their GHG emission efforts through carbon market credits. It will also create more awareness, change and innovation across hard-to-abate industries.
- It could help attract finance and technology for sustainable projects that can generate carbon credits.

Benefits of Carbon Markets

- **Financial Incentives:** Carbon markets establish a financial incentive system where entities are allotted emission limits and can trade emission permits. This encourages companies to reduce emissions below their limits and penalizes excess emissions.
- **Cost-Effective Reductions:** Carbon markets prioritize cost-effective emission reductions. Companies that can reduce emissions more easily and at a lower cost are incentivized to do so, leading to overall emission reductions at a lower economic cost.
- **Business Flexibility:** Carbon markets provide businesses with flexibility in choosing how to reduce emissions. They can invest in cleaner technologies, improve energy efficiency, or purchase carbon credits from emission reduction projects elsewhere, allowing for a diverse range of strategies.

- **Clean Tech Promotion:** These markets stimulate the development and adoption of cleaner technologies and practices. Companies are motivated to innovate and invest in technologies that reduce emissions to lower their compliance costs in the carbon market.
- **Support for Sustainability:** Carbon markets generate funds for sustainable projects that reduce emissions, such as renewable energy, afforestation, reforestation, and energy efficiency projects. These projects earn carbon credits that can be sold in the market, attracting investments.
- **Climate Goal Alignment:** Carbon markets can be tailored to align with a country's climate goals and international commitments, helping nations meet their emission reduction targets, such as those set in the Paris Agreement, by creating a mechanism for tracking and reducing emissions.
- **Transparency & Accountability:** Participation in carbon markets requires accurate measurement and reporting of emissions. This leads to greater transparency and accountability in tracking and reducing greenhouse gas emissions.
- **Revenue Generation:** Governments can generate revenue through carbon markets by auctioning emission permits or imposing carbon taxes. This revenue can be reinvested in sustainability initiatives or used for other public purposes. Additionally, companies can earn revenue by selling carbon credits.
- For instance, Tesla, the electric car maker, sold carbon credits to legacy car manufacturers to the tune of USD 518 million in just the first quarter of 2021.

### Challenges Before Carbon Markets

- **Double Counting of Emissions Reductions:** This occurs when the same emission reduction is claimed by more than one entity or under more than one system. This can undermine the environmental integrity and credibility of carbon markets.
- **Quality and Authenticity of Climate Projects:** Ensuring the credibility and genuineness of climate projects poses the challenge of determining their level of additionality, measurability, verifiability, permanence, and the prevention of emissions shifting.
- **Poor Market Transparency:** This relates to the ambiguity about the availability and accessibility of information on the supply and demand of carbon credits or offsets, as well as their prices, transactions, and impacts.
- **Greenwashing:** This is the practice of using carbon credits or offsets to create a false or misleading impression of environmental responsibility, without actually reducing emissions or changing business practices. This can erode public trust and divert resources from more effective climate actions.
- **Regulatory Uncertainty:** This involves the lack of clarity or stability of the policies and regulations that govern carbon markets, both at the national and international levels. This can create risks and barriers for market participants and investors.

- For instance, in India, there is a question of whether the Ministry of Power is the appropriate Ministry to regulate the carbon credits trading scheme or whether it should be the Ministry of Environment.

#### To Overcome the Challenges of Carbon Markets

- Developing a common taxonomy and terminology for carbon credits and offsets, as well as a consistent accounting framework to avoid double counting of emissions reductions.
- Establishing clear and credible quality criteria and verification mechanisms for climate projects that generate carbon credits or offsets, based on principles such as additionality, measurability, permanence and avoidance of leakage.
- Enhancing market transparency and disclosure by providing reliable and timely data and reporting on the supply and demand of carbon credits or offsets, as well as their prices, transactions and impacts.
- Preventing and penalizing Greenwashing by setting clear and enforceable rules and guidelines for making claims and communicating about carbon credits or offsets, as well as ensuring public awareness and scrutiny.
- Harmonizing and integrating different carbon market systems at the national, regional and international levels, as well as creating linkages and synergies with other policy instruments and initiatives.

As the country moves steadily towards a net-zero world, decarbonising industrial activity will be critical. It is here that industry leaders in carbon management solutions and clean energy transition can play a pivotal role in facilitating the transition towards a net-zero future by helping the nation switch from fossil fuel or legacy technologies to clean energy systems. As India tries to strike a delicate balance between economic needs and environmental concerns, a vibrant carbon trading mechanism can be crucial in creating a more sustainable future.



## **Creative industries can boost economies**

The arts, music, film, theater, festivals, literature, crafts and the stories they hold aren't just forms of entertainment; they represent our identities and lived experiences, drive employment and build understanding and empathy between people. The Prime Minister in his opening address to the G20 Culture Ministers' summit in Varanasi spoke of the value artists and craft workers contribute to the economic success of creative industries. And the G20 Leaders Declaration emphasizes how culture is a key driver of the SDGs.

### Creative Industries

- The creative industries are a group of economic activities that are based on original ideas. They include businesses that are centered around creativity, such as:
- Design, Music, Publishing, Architecture, Film and video, Crafts, Visual arts, Fashion, TV and radio, Yoga, Literature, Computer games, etc.
- The creative industries are also known as the cultural industries or the creative economy.
- It is also called the Orange Economy.

### Significance of Creative Industries

- Creative industries are a significant source of commercial and cultural value in India.
- They contribute to 1% of global GDP and are estimated to contribute about 8% of India's employment.
- Estimates suggest that India's creative economy accounts for an overall market size of about \$36.2 billion.
- In 2019, India's creative economy accounted for 121 billion of exports.
- In the pre-Covid period, India's creative industries contributed 2.5% to India's GDP.
- India is also among the top 10 countries stimulating global trade in creative goods and services, and is the world's largest producer of films (2022).

### Creative industries can help with:

1. Job creation
2. Economic growth
3. Tourism
4. Exports

5. Overall societal development
6. Sustainable human development

### Benefits of Creative Industries

- **Job Creation and Income Generation:**The creative industries are a significant source of jobs and income, particularly for young and talented individuals. According to a 2023 report by the Asian Development Bank, the creative industries contribute nearly 8% of India's employment.
- **Spillover Effects on the Wider Economy:**The creative industries generate important spillovers to various sectors of the economy, including innovation, tourism, education, and urban development. These industries drive innovation by promoting creativity, experimentation, and collaboration across different sectors and disciplines.
- **Tourism Boost:** The creative industries attract tourists and visitors who engage in cultural experiences, spending on cultural goods and services, accommodations, transportation, and other related activities. This influx of tourists contributes significantly to India's tourism industry and the broader economy.
- **Education and Skills Development:**Creative industries play a pivotal role in education and skills development. They provide learning opportunities and enhance cultural awareness and diversity. Creative educational programs nurture talent and offer pathways for skill development in various artistic and technical fields.
- **Urban Development:**Creative industries can revitalize urban areas by creating vibrant and attractive spaces for cultural and social interaction. Cultural hubs, theaters, galleries, and entertainment districts contribute to the overall livability of cities and can spur economic development in these areas.
- **Promotion of India's Heritage and Resources:**Creative industries serve as a platform to showcase India's rich and diverse culture, history, and traditions, both domestically and internationally. They also leverage India's abundant natural and human resources, such as biodiversity, craftsmanship, and entrepreneurship.
- **Global Branding and Soft Power:**By exporting creative goods and services, India can increase its brand value and influence consumer choices in the global market. The creative industries enhance India's soft power by facilitating cross-cultural exchange and knowledge sharing with other countries, strengthening diplomatic and cultural ties.

### Challenges before Creative Industries

- **Policy Neglect:**Creative industries often remain on the sidelines of national and state policies, lacking priority status. Poor coordination among relevant ministries exacerbates the issue.

- Infrastructure Deficiencies: Inadequate infrastructure, encompassing transportation, digital networks, and basic amenities, disrupts creative goods and services' production, distribution, and mobility for workers and consumers.
- Data Deficiency: A shortage of reliable data regarding the size, impact, and contribution of India's creative industries hampers sector development, policymaking, and recognition.
- Funding Struggles: Securing financial support is a challenge for creative industries, with limited, irregular public funding and risk-averse private Promote Creative Industries
- Leveraging the diversity and richness of India's cultural heritage and traditions to create unique and authentic products and services that appeal to both domestic and global markets.
- For example, developing new forms of storytelling, music, dance, art, design, and crafts that reflect the pluralism and dynamism of India's society and history.
- Promoting the use of digital technologies and platforms to enhance the accessibility, quality, and innovation of creative outputs.
- For example, using animation, visual effects, gaming, and immersive media to create engaging and interactive experiences for various audiences and sectors.
- Fostering a culture of collaboration and co-creation among different stakeholders in the creative economy, such as artists, entrepreneurs, researchers, educators, policymakers, and consumers.
- For example, establishing networks, hubs, and clusters that facilitate knowledge exchange, skill development, and resource sharing among creative practitioners and industries.
- Addressing the challenges and gaps in the creative economy, such as the lack of data, policy support, intellectual property protection, and financing.
- For example, conducting more research on the creative industries, developing more conducive policies, strengthening the enforcement and awareness of IP rights, and providing more access to funding and investment opportunities.

§ investment. Innovative financing mechanisms like crowdfunding and venture capital are underutilized.

§ Intellectual Property Vulnerability: The creative sector faces threats from piracy, counterfeiting, and IP rights infringement, both online and offline. Outdated legal frameworks and a lack of awareness hinder the protection and enforcement of creative rights.

Initiatives taken to Promote Creative Industries

§ The National Film Development Corporation (NFDC) is a public sector enterprise under the Ministry of Information and Broadcasting that aims to plan, promote, and organize an integrated and efficient development of the Indian film industry.

§ The National Institute of Design (NID) is an autonomous institution under the Ministry of Commerce and Industry that offers education, research, consultancy, and outreach services in various domains of design.

§ The Scheme for Promotion of Culture of Science (SPoCS) is a scheme under the Ministry of Culture that aims to foster a culture of science, technology, and innovation among the masses, especially the youth, through various activities such as science festivals, exhibitions, competitions, workshops, and camps.

§ The Scheme for Promotion of Indian Classical Music and Dance (SPIC MACAY) is a voluntary movement that organizes programmes of classical music and dance, folk arts, crafts, yoga, meditation, and cinema in schools, colleges, and institutions across the country to enrich the quality of formal education and increase awareness of the rich and diverse cultural heritage of India.

§ The International Cooperation (IC) Scheme is a scheme under the Ministry of Micro, Small and Medium Enterprises (MSME) that aims to enhance the competitiveness of MSMEs by providing financial assistance for participating in international exhibitions, trade fairs, buyer-seller meets, and other promotional events.

§ The UNESCO's Creative City Network is a program that helps cities to share best practices and develop partnerships involving public and private sectors as well as civil society to strengthen the creation, production, and distribution of cultural activities.

o Under this program, Mumbai has been designated as Creative City of Films and Hyderabad as a Creative City of Gastronomy.

· Earlier, Indian cities like Chennai and Varanasi have been included in UNESCO Cities of Music while Jaipur has been included in the City of Crafts and Folk Arts.

## Passing Of Women's Reservation Bill: A Powerful Stride Towards Gender Equality In India

The Constitution (One Hundred and Twenty-Eighth Amendment) Bill, 2023 has been unanimously passed from Lok Sabha and Rajya Sabha. The Bill seeks to reserve one-third of the total number of seats in Lok Sabha and state legislative assemblies for women.

### Key features of the Bill

- Reservation for Women in Lower House: The Bill provided for inserting Article 330A to the constitution, which borrows from the provisions of Article 330, which provides for reservation of seats to SCs/STs in the Lok Sabha.
- The Bill provided that reserved seats for women may be allotted by rotation to different constituencies in states or Union Territories.
- In the seats reserved for SCs/STs, the Bill sought to provide one-third of the seats to be reserved for women on rotational basis.
- Reservation for Women in State Legislative Assemblies: The Bill introduces Article 332A, which mandates the reservation of seats for women in every state Legislative Assembly. Additionally, one-third of the seats reserved for SCs and STs must be allocated for women, and one-third of the total seats filled through direct elections to the Legislative Assemblies shall also be reserved for women.
- Reservation for Women in NCT of Delhi ( New clause in 239AA): Article 239AA to the constitution grants special status to the Union Territory of Delhi as national capital with regards to its administrative and legislative functioning.
- Article 239AA(2)(b) was amended by the bill accordingly to add that the laws framed by parliament shall apply to the National Capital territory of Delhi.
- Commencement of Reservation (New article - 334A): The reservation will be effective after the census conducted after the commencement of this Bill has been published. Based on the census, delimitation will be undertaken to reserve seats for women.
- The reservation will be provided for a period of 15 years. However, it shall continue till such date as determined by a law made by Parliament.
- Rotation of Seats: Seats reserved for women will be rotated after each delimitation, as determined by a law made by Parliament.

### Genesis

- The issue of reservation for women in politics can be traced back to the Indian national movement. In 1931, in their letter to the British Prime Minister, submitting the official memorandum jointly issued on the status of women in the new Constitution by three women's bodies, leaders Begum Shah Nawaz and Sarojini Naidu.

- The National Perspective Plan for Women recommended in 1988 that reservation be provided to women right from the level of the panchayat to that of Parliament
- These recommendations paved the way for the historic enactment of the 73rd and 74th amendments to the Constitution which mandate all State governments to reserve one-third of the seats for women in Panchayati Raj Institutions and one-third of the offices of the chairperson at all levels of the Panchayati Raj Institutions, and in urban local bodies, respectively. Within these seats, one-third are reserved for Scheduled Caste/Scheduled Tribe
- The National Policy for the Empowerment of Women (2001) had stated that reservation will be considered in higher legislative bodies.
- In May 2013, the Ministry of Women and Child Development constituted a committee on the status of women, which recommended ensuring at least 50% reservation of seats for women in the Local bodies, State Legislative Assemblies, Parliament, Ministerial levels and all decision-making bodies of the government
- In 2015, the Report on the Status of Women in India noted that the representation of women in state assemblies and Parliament continues to be dismal. It recommended reserving at least 50% seats for women in local bodies, state legislative assemblies, Parliament, ministerial levels, and all decision-making bodies of the government.

## Arguments for the Bill

### Gender Equality:

- Women representation in politics is a vital step towards gender equality
- However, according to Global Gender Gap Report 2022, India ranks 48th out of 146 in Political Empowerment.
- Notwithstanding its rank, its score is quite low at 0.267. Some of the best-ranking countries in this category score much better. For instance, Iceland is ranked 1 with a score of 0.874 and Bangladesh is ranked 9 with a score of 0.546.
- Historical Underrepresentation:
  - The number of women MPs has increased from 5% in the first Lok Sabha to 15% in the 17th Lok Sabha; but the number continues to be quite low
  - A 2003 study about the effect of reservation for women in panchayats showed that women elected under the reservation policy invest more in the public goods closely linked to women's concerns.
  - The Standing Committee on Personnel, Public Grievances, Law and Justice (2009) had noted that reservation of seats for women in local bodies has enabled them to make meaningful contributions.

### Women's right to Self-representation and Self-determination :

- If a group is not represented proportionally in the political system, its ability to influence policy-making is limited. The Convention on the Elimination of All Forms of Discrimination Against Women provides that discrimination against women must be eliminated in political and public life
- The various surveys do indicate that women representatives from Panchayati Raj have worked commendable in the development and overall well-being of society in villages and many of them would definitely want to work on the larger scale, however, they face various challenges in the political structure prevalent in

#### Diverse Perspectives:

- A more diverse legislature that includes a significant number of women can bring a broader range of perspectives to the decision-making process. This diversity can lead to better policy formulation and governance.

#### Empowerment of Women:

- Women's reservation in politics empowers women at various levels. It not only encourages more women to participate in politics but also inspires women to take on leadership roles in other sectors.

#### Promotion of Women's Issues:

- Women in politics often prioritize and advocate for issues that directly affect women, such as gender-based violence, women's health, education, and economic empowerment. Their presence can lead to the prioritization of these issues in policy discussions.

#### Role Models:

- Women leaders in politics can serve as role models for young girls, encouraging them to aspire to leadership positions in various fields. Representation in politics can break stereotypes and inspire future generations.
- Indira Gandhi served as the first and only women Prime Minister of India from 1966 to 1977
- Sushma Swaraj was the second woman external affairs minister of India after Indira Gandhi.

#### Arguments against the Bill

- Women are not a homogeneous community like, say like, a caste group. Therefore, the same arguments made for caste-based reservations cannot be made for women.
- Reserving seats for women is opposed by some who claim that doing so violates the Constitution's guarantee of equality. If there is a reserve, they claim, women won't be competing on merit, which could decrease their status in society.

### Challenges regarding Implementation of this Bill

#### Issues related to Delimitation:

- The reservation shall come into effect only after delimitation is undertaken and delimitation will be undertaken only after the relevant figures of the next census are published.
- The date of the next census is entirely undetermined. So the delimitation is doubly indeterminate.

#### OBC Issue with the bill:

- The women's reservation bill, which reserves 33% of seats for women in the Lok Sabha and state assemblies, does not include a quota for women from the OBCs.
- Geeta Mukherjee Committee (1996) recommended extending women reservation to OBCs.
- Women's Representation be Effectively put into practice

#### Strengthen Independent Decision Making:

- Establish an independent monitoring system or committees that explicitly prohibits family members from influencing the decision making process of women representatives.
- It can be implemented by reducing the influence of patriarchal mindset.

#### Increasing Awareness and Education:

- Creating awareness among women about their rights and the importance of their participation in politics is essential. Educational programs and awareness campaigns can help to increase women's political participation.

#### Addressing Gender-based Violence and Harassment:



- Gender-based violence and harassment are major obstacles to women's participation in politics. Addressing these issues through policy and legal measures can create a safer and more supportive environment for women in politics.

Reforms in the Electoral Process:

- Reforms such as introducing proportional representation and preferential voting systems can help to increase women's representation in politics by ensuring that more women get elected.
- These are only a few approaches to increase the number of women in Indian politics. To effect long-lasting change, a multifaceted strategy addressing multiple challenges is required.

### **From Bharat that is India to Bharat vs India?**

"Bharat" is a historical and ideological name for India, while "India" is a constitutional and international name. The use of these names has become political due to the formation of an opposition alliance called INDIA (Indian National Developmental Inclusive Alliance).

Recently, the current government under Prime Minister Narendra Modi has used the term "President of Bharat" instead of "President of India" on an invitation card for the recent G-20 Summit. This shift in terminology has raised eyebrows and suggests a political dimension to the use of these names.

“Bharat” & “India”

- **Origins of the Names:**The words "India" and its variants, such as "Hind" in Arabic, have foreign origins. These names were historically used by outsiders to refer to the land south and east of the Indus or Sindhu River.
- **Historical Usage:**During Afghan and Mughal rule, the term "Hindustan" was often used to refer to the northern regions of the Indian subcontinent.
- **Later, European colonial powers, particularly the British, used "India" to describe not only the northern region but also the entire subcontinent. For them, it was primarily a geographical designation.**

- Indian Renaissance and Nationalism: The Indian Renaissance played a crucial role in shaping the consciousness that all the people in the Indian subcontinent constituted a single nation. Some promoters of this movement sought to find ancient roots for Indian nationalism and believed that using a name given by foreigners was unacceptable.
- They preferred the term "Bharat" and its variations in different languages.
- Name Controversy: The Muslim League, led by Muhammad Ali Jinnah, raised concerns over the use of the name "India" for the newly independent nation. They argued that "India" should be associated with the Hindu-majority regions, while the Muslim-majority areas should be recognized as a separate nation, Pakistan.
- This name dispute reflected the deep-seated religious and political divisions during the partition.
- Syncretic Word - "Hind": Figures like Netaji Subhas Chandra Bose advocated for a syncretic word, "Hind," which could be acceptable to a wide range of people, including those from different faiths.
- "Hind" is still in use today, and expressions like "Jai Hind" reflect its enduring significance in Indian culture.

#### How "Bharat" and "India" are Balanced?

- Adoption of the Constitution: The Indian Constitution was originally adopted by the Constituent Assembly in English. This underscores the historical and legal importance of the English version as the foundational text of the Constitution.
- Publication of a Hindi Translation: In addition to the English version, a Hindi translation of the Constitution was published in 1950. This translation was signed by the members of the Constituent Assembly, and it was done in accordance with a resolution passed by the Constituent Assembly.
- Official Status of Both Versions: The presence of both English and Hindi versions of the Constitution underscores their official status within the Indian legal framework.
- It highlights the importance of providing access to the Constitution in both of India's official languages, English and Hindi.
- Constitutional Amendments: The 58th Amendment to the Constitution in 1987 likely addressed issues related to the use of Hindi and English in official documents, legal proceedings, and government communications.
- The 58th Amendment gave the President the power to publish the official text of the Constitution in Hindi, which could also be used in legal proceedings.
- Article 1(1): Article 1(1) of the Constitution defines the name and character of the country. In the English version, it states "India, that is Bharat, shall be a Union of States," emphasizing "India" as the primary name.
- In the Hindi version, it reads "Bharat artharth India, rajyon ka sangh hoga," with "Bharat" given prominence.

- Examples of Names: Examples such as the "Gazette of India" in English and "Bharat ka Rajpatra" in Hindi are given to illustrate how this naming convention is applied to various official publications.
- The choice of names reflects the dual-language nature of India's official documents and publications.

### Current Scenario

- Use of "India" Internationally: India has consistently used the name "India" in all international and multilateral fora. This signifies that the country's international identity and recognition are associated with the name "India".
- This highlights the practicality and standardisation of using the English name "India" in global diplomacy and communication.
- Recent Example with Greece: The reference to the Joint Statement issued during the Prime Minister's visit to Greece serves as a contemporary example. The document is titled "India-Greece Joint Statement," emphasising the use of "India" in official bilateral relations.
- Dual-Language Approach: It is noted that India follows a dual-language approach in official documents and diplomatic contexts. Under the National emblem in letters of credence given by the President of India to Ambassadors-designate, the words "Rashtrapati" and "Bharat Gantantra" are written in Hindi, while the English equivalents, "President" and "Republic of India," are used underneath.
- This approach reflects India's commitment to multilingualism and its diverse linguistic heritage.
- Modern Usage: The use of both "Jai Hind" and "Jai Bharat" is noted in contemporary India, reflecting the coexistence of different cultural and linguistic traditions. For instance, in most of the major speeches, such as the Independence Day speech both expressions are used, signifying a recognition of the diverse historical and cultural threads that make up the fabric of the nation.
- In 2015, the Centre opposed a name change, stating that the issue had been extensively deliberated upon during the Constitution's drafting. The Supreme Court has twice rejected pleas to rename "India" to "Bharat", once in 2016 and then in 2020, reaffirming that "Bharat" and "India" both find mention in the Constitution.

Such a change could alienate parts of the country that prefer the name "India" to "Bharat." Public sentiment and regional preferences regarding the country's name are diverse and should be considered in any decision. Any departure from this tradition could have cultural and identity implications. The tradition of using "India" in English and "Bharat" in Hindi, reflecting India's linguistic diversity, is considered both wise and constitutionally correct. The question raised is whether changing this tradition to prioritise one term over the other should be a priority at this time when the country is

facing other challenges (Unemployment, Environmental Degradation, Poverty, Healthcare, Inequality, Gender Discrimination, etc.).

### Countries that Changed their Name

#### § Siam to Thailand (1939):

- o The country changed its name to assert its unity and identity against Western colonial influence in Southeast Asia. The new name, "Thailand," means "Land of the Free" and emphasises the country's independence and national pride.

#### § Zaire to the Democratic Republic of the Congo (1997):

- o The country changed its name to distance itself from the authoritarian rule of Mobutu Sese Seko (dictator who ruled for over 3 decades). The new name emphasised the return to a democratic system of governance.

#### § East Pakistan to Bangladesh (1971):

- o In 1971, East Pakistan became independent from West Pakistan after a violent war, forming the new country of Bangladesh. This marked the end of the Bangladesh Liberation War and represented the cultural, linguistic, and political distinctions between the two regions.

§ In 2022, Turkey changed its name to Türkiye, as the name signifies the best representation and expression of the Turkish people's culture, civilization and values.

## The global phosphorus problem

The global phosphorus problem is gaining attention. With limited phosphorus reserves, contamination issues, and disruptions in the fertilizer market, finding sustainable solutions has become a critical priority.

### Evolution of Fertilization and Contemporary Challenges Surrounding Phosphorus

#### Historical Evolution:

- The issue of fertilizing land has plagued agriculture since its inception. Early agricultural societies recognized that repeated cultivation and harvest cycles depleted essential nutrients from the soil, diminishing crop yields.
- Indigenous communities devised various fertilization methods, including using fish remnants and bird droppings (guano).
- However, significant advancements in chemistry during the 19th century led to the creation of synthetic fertilizers and the identification of vital elements like nitrogen, phosphorus, and potassium.
- These elements laid the foundation for modern chemical fertilizers and played a pivotal role in boosting agricultural productivity during the Green Revolution of the mid-20th century.
- In the present scenario, there exists a multifaceted challenge involving phosphorus, a crucial component of fertilizers.

#### Challenges Associated with Phosphorus:

##### Limited Reserves and Cadmium Contamination:

- Phosphorus is scarce and primarily found in specific geological formations. This is a major geopolitical concern.
- Morocco and the Western Sahara region possess the world's largest phosphorus reserves, but these reserves contain cadmium, a harmful heavy metal that can accumulate in the kidneys of animals and humans when consumed.
- The extraction and removal of cadmium from phosphorus resources are costly processes.
- Cadmium-laden fertilizers can contaminate crops, leading to potential health risks, such as heart disease.
- Failing to eliminate cadmium from phosphorus sources carries the potential for a public health crisis. Conversely, the removal of cadmium could result in higher fertilizer expenses, introducing a complex trade-off between safeguarding public health and maintaining agricultural affordability. The European Union has introduced legislation to regulate cadmium levels in fertilizers.

### Market Disruptions and Associated Concerns:

- Out of all the countries, only six have significant reserves of cadmium-free phosphorus.
- Among them, China imposed export restrictions in 2020, and several EU nations stopped purchasing from Russia.
- Consequently, there has been a surge in demand for safe phosphorus.
- This is one of the factors behind Sri Lanka's decision to ban synthetic fertilizer imports in 2021 and shift to organic farming.
- However, this transition led to a sudden decline in crop yields, triggering a political and economic crisis in the country.
- Phosphorus Overuse: Excessive fertilizer application leads to phosphorus runoff into water bodies. Excessive phosphorus promotes algal blooms, depleting oxygen in water bodies and causing fish deaths.
- Algal blooms can also be toxic to humans, leading to respiratory issues and other health problems.
- Energy Intensive Mining: Extracting and processing phosphate rock is energy-intensive, contributing to greenhouse gas emissions and environmental degradation.

### Potential Strategies for Managing Phosphorus Usage

- Smart Agriculture and Precision Fertilization: Implement precision agriculture techniques that utilize sensor networks, AI, and data analytics to optimize phosphorus use on farms. This ensures that crops receive the exact amount of phosphorus they need, reducing excess runoff into water bodies.
- Union Budget 2023–24 launched the PM-PRANAM scheme to promote the balanced use of chemical and alternative fertilizers, generating awareness of regenerative agriculture (RA).
- Phosphorus Recovery from Sewage and Waste: There is a need to develop advanced technologies for efficient phosphorus recovery from sewage and various waste streams.
- This could include using innovative filtration, precipitation, and ion-exchange processes to extract and recycle phosphorus for use in fertilizers or other applications.
- Example: Companies like EasyMining are retrofitting sewage treatment plants to recover high-quality phosphorus products.
- Circular Phosphorus Economy: There is a need to establish a circular economy for phosphorus, where products containing phosphorus are designed for easy recovery and recycling, reducing the need for mining and reducing environmental impact.

- Global Phosphorus Management Framework: There is a need to develop an international framework for phosphorus management, similar to global climate agreements. This would promote collaboration and coordinated efforts to address phosphorus concerns on a global scale.
- Phosphorus is a chemical element with the symbol "P" and atomic number 15. It is an essential element for life and has various important properties and applications.

#### § Chemical Properties:

- Phosphorus readily forms compounds with other elements, especially oxygen, forming various phosphates.
- It is highly reactive and can spontaneously combust in air, producing a white smoke.
- Phosphorus compounds are crucial in biology, as they are a fundamental component of DNA, RNA, and ATP (adenosine triphosphate).

#### § Natural Occurrence:

- Phosphorus is commonly found in the Earth's crust in the form of various phosphate minerals, such as apatite.

#### § Industrial Uses:

- Phosphorus compounds are used in the production of fertilizers, as they are necessary for plant growth.
- It is also used in detergents, where phosphate compounds help break down and remove stains.
- Phosphorus is utilized in the production of steel and other metallurgical processes.

#### § Phosphorus in India:

- India is deficient in Apatite (group of phosphate minerals) & Rock Phosphate availability.

o According to Indian Minerals Yearbook 2018, in case of apatite, the country is fully dependent upon imports, while the Rock Phosphate production is only from two states namely, Rajasthan and Madhya Pradesh.

· India is the world's largest importer of phosphorus, primarily sourcing it from West African deposits contaminated with cadmium.

· Paddy, a staple crop in India, is particularly prone to cadmium uptake, and Indian farmers extensively use fertilizers on paddy fields.

### **The Rising Discrepancies in Indian GDP Data**

- Recently, the Ministry of Finance has addressed concerns regarding the credibility of Indian GDP (Gross Domestic Product) data, particularly in light of a 7.8% increase in the first quarter of FY 2023-24.
- Several experts have pointed out discrepancy in India's GDP statistics, which present a positive image of economic growth on billboards, while underlying issues such as rising inequalities, job scarcity, and a decline in manufacturing jobs

What are the Concerns Raised with Respect to GDP Numbers?

Discrepancies in GDP Calculation:

- An analysis of the GDP expenditure components reveals a concerning trend where most elements have decreased as a percentage of GDP.
- This includes private consumption, government spending, valuables, and exports.
- Imports have slightly increased, while Gross Fixed Capital Formation (investment in assets) and Change in Stocks (inventory changes) have remained stable.
- Therefore, there is an unexplained gap in the GDP calculation, which raises questions about the accuracy of the reported economic data.

Dual GDP Calculation Methods:



India's GDP is calculated using two distinct methods: Economic activity (at factor cost) and Expenditure (at market prices).

The factor cost method assesses the performance of eight different industries.

The following eight industry sectors are considered in this cost:

- Agriculture, forestry, and fishing,
- Mining and quarrying,
- Manufacturing,
- Electricity, gas, water supply, and other utility services,
- Construction,
- Trade, hotels, transport, communication, and broadcasting,
- Financial, real estate, and professional services,
- Public administration, defense, and other services

The expenditure-based method indicates how different areas of the economy are performing, such as trade, investments, and personal consumption.

The differences between these methods may lead to variations in GDP figures.

Impact on Public Perception:

- Experts express concern that presenting an overly positive image of economic growth through GDP figures can mask the economic struggles and challenges faced by a significant portion of the population.
- This can impact public perception and policy decisions.
- Outdated Data Sets and Delayed Census:
  - One of the major concerns is the usage of outdated data sets in the calculation of GDP, which may not accurately reflect the current economic scenario.
  - Additionally, delays in conducting the census contribute to potential inaccuracies in economic assessments.
  - There are concerns that the methods employed may not effectively capture the complex and evolving economic landscape, leading to potentially skewed GDP figures.
- Allegations of Government Interference:
  - Allegations of government interference in the calculation and release of GDP figures have surfaced.
  - Experts worry that political motivations might influence the presentation of economic data, impacting its accuracy and reliability.

How Has the Government Addressed the Issues Raised by the Experts?

#### Credibility of Indian GDP Data:

- The Finance Ministry refuted doubts about the credibility of Indian GDP data, clarifying that it is not seasonally adjusted and is finalized three years later.
- This implies that relying solely on GDP indicators to assess underlying economic activity is misleading.

#### Need for Comprehensive Analysis:

- The Ministry urged critics to consider various growth indicators, such as Purchasing Managers' Indices, Bank Credit Growth, and consumption patterns, to form a well-rounded view of the economic activity.

#### Underestimation of Growth Numbers:

- The Ministry argued that India's growth numbers might actually underestimate the economic reality, citing the Index of Industrial Production (IIP) as an example where reported manufacturing growth is lower than what companies are indicating.

#### Nominal vs. Real GDP Growth:

- Addressing concerns about nominal GDP growth being lower than real GDP growth, the Ministry explained that India's GDP deflator, dominated by the Wholesale Price Index (WPI), is affected by various factors and will normalize in the coming months.

#### Income Approach for GDP Calculation:

- The Ministry highlighted that India consistently uses the Income Approach for calculating GDP growth and does not switch between approaches based on favorability, dismissing arguments that favor nominal GDP growth.

## G-20 diplomacy and a shifting world order

India scripted amazing success at the G-20 meeting in Delhi and, despite the odds, succeeded in producing a consensus Declaration worthy of an event of this magnitude. Securing an agreement on almost a hundred issues on the agenda, apart from that on the Russia-Ukraine war, was no mean achievement. All told, the G-20 outcomes seemed to mirror the hopes and the wishes of the wider global community.

From condemnation of terrorism to climate issues, from trebling of renewable energy capacity to matters such as lifestyle for sustainable development and reform of multilateral development banks, apart from highlighting India's contributions such as digital public infrastructure and Unified Payments Interface, the Declaration seemed to echo the prevailing mood in the G-20 of favoring compromise over conflict and fully endorsing Prime Minister Narendra's dictum of "One Earth, One Family, One Future".

### Key Outcomes of the G20 Summit

- African Union joined the G20 Organization and became a member from this year.
- New Delhi Leaders Declaration has been signed by the country heads as per which Inclusive Growth will be emphasized.
- India-Middle East-Europe Economic Corridor has been proposed and passed by the leaders of these countries.
- Global Biofuel Alliance has been created by the member countries which will emphasize the maximum use of Biofuel.
- Launch of One Future Alliance and Creation of a Global Digital Public Infrastructure Repository.
- The G20 leaders agreed to pursue tripling renewable energy capacity globally by 2030 and accepted the need to phase-down unabated coal power.

### India needs to be cautious about Chinese Perception

- Geo-Political and Security Issues: China's apprehension about the G-20's focus solely on economic cooperation and not on addressing geo-political and security concerns raises concerns for India. China's reservations suggest that it may interpret India's presidency and initiatives as attempts to sideline or challenge its influence in these areas. This could lead to friction in bilateral relations.
- Geo-Political Tool: China's implicit warning against the India-Middle East-Europe Economic Corridor Plan becoming a "geo-political tool" indicates its suspicion that India's economic initiatives could be used to counter its regional interests. This implies that India must tread carefully to avoid escalating tensions.

- **Western Perceptions:**China perceives the G-20 as a Western tool to impose its world view, which could lead to China viewing India's leadership in the G-20 with suspicion. India should be cautious not to be perceived as aligning too closely with Western interests to prevent further strain in Sino-Indian relations.
- **Hegemonic Ambitions:**China's status as a regional hegemon in Asia and its continued efforts to expand its influence pose a potential threat to India's security and interests. India must be cautious because it is a prime target in China's strategic calculations, and any misstep could escalate tensions.
- **Quad Membership:** India's membership in the Quad, a grouping seen as anti-China, adds another layer of complexity to Sino-Indian relations. China is likely to closely monitor India's actions within this alliance, and any provocative moves could lead to a deterioration in bilateral ties.
- **Global Uncertainties:**The global context is marked by multiple crises, including geopolitical competition, inflation, and conflicts like the one in Ukraine. India needs to be cautious because these uncertainties can spill over into its own neighborhood and affect its security and stability.

### Current Status of the World Order

- **Emerging Blocs:**There are two emerging blocs in the world order. One is led by Western countries, while the other is led by China and Russia. These two blocs are often referred to as "enduring rivals" and are engaged in a battle for global supremacy. This rivalry suggests a shift in the balance of power on the global stage.
- **Challenges to the Rules-Based Order:** The concept of a "rules-based world order" has been challenged, and it is no longer a universally accepted framework. Instead, the world is experiencing what some describe as an "emerging world disorder." This disorder is characterized by the resurgence of antagonistic blocs and a diminishing role for non-aligned nations.
- **NATO's Role:**The stalemate in the Ukraine conflict and concerns about Russian expansionism have prompted the U.S. to strengthen and expand NATO. This has led to the prospect of a U.S.-equipped territorial force in Ukraine and the inclusion of non-NATO allies in a U.S. -led alliance aimed at countering authoritarianism, primarily represented by Russia and China.
- **Evolution of G-20:** The role of the G-20 has evolved over the years. Initially, during the 2008-09 economic crisis, it played a crucial role in addressing economic issues and preventing a global economic downturn. However, in recent years, the G-20's focus has shifted more towards addressing global political conflicts rather than economic concerns.
- **Russia-China Strategic Alignment:**Russia and China have been deepening their strategic alignment, forming a closer partnership in various areas, including diplomacy and trade. This alignment has implications for global power dynamics and poses challenges to Western influence.
- **Global Influence:**China is actively challenging U.S. naval power in the Pacific Ocean, and Russia is seeking to expand its influence in Africa by supplying food

grains at subsidized prices to African states. This reflects a broader trend of major powers extending their reach and influence beyond their traditional spheres of control.

### NAM Policy lost its Relevance

- **Challenges to Non-Alignment:**The concept of non-alignment, which was historically associated with countries not aligning with major power blocs during the Cold War, is facing significant challenges.
- New alignments and alliances are making it increasingly difficult for countries to maintain their non-aligned status.
- These new alliances, such as BRICS, are themselves becoming more involved in global politics and security matters, which complicates the idea of non-alignment.
- **Shrinking Space for Non-Alignment:**The proliferation of security agreements and the emergence of multiple international relationships have significantly reduced the space for countries to pursue a truly non-aligned foreign policy.
- With the strengthening of rival camps, there are limited opportunities for nations to maintain neutrality and independence in global affairs.
- **Diminished Influence:** In the face of new alignments and power dynamics, countries like India may find it challenging to exert significant influence on global events.
- Despite participating in international forums like the G-20 and emphasizing the importance of the Global South, their ability to shape the course of world events may be limited.
- This implies a diminishing role for traditionally non-aligned nations in the international arena.

### India in Such a Situation

- **Diversify Alliances and Partnerships:**India can pursue a strategy of diversification by expanding its alliances and partnerships with a wide range of countries. This includes strengthening ties with both traditional allies and emerging powers. India has already taken steps in this direction by deepening relationships with countries like the United States, Russia, Japan, and countries in the European Union.
- **Active Diplomacy:**India can play an active role in international diplomacy, mediating conflicts, and contributing to global governance. Being a proactive participant in regional and international forums such as the United Nations, G-20, and BRICS can help India assert its influence on critical global issues.
- **Economic Integration:**Promote economic integration and trade alliances with multiple countries. India should focus on boosting economic ties with key partners in regions like Southeast Asia, Africa, and Latin America. Expanding

trade networks can enhance India's economic influence and geopolitical standing.

- **Maintain Strategic Autonomy:** While diversifying alliances, India should also maintain strategic autonomy and ensure that its decisions align with its national interests. Avoiding over-dependence on any single power or bloc is crucial to retaining flexibility in foreign policy.
- **Invest in Defense and Security:** Given the evolving security challenges in the region, India should continue to invest in its defense capabilities to safeguard its sovereignty and territorial integrity. Strengthening its military partnerships with like-minded nations can enhance its security posture.
- **Engage in Multilateralism:** Actively engage in multilateral institutions and forums to shape global norms and policies. India can advocate for reforms in institutions like the United Nations Security Council to ensure a more equitable representation of emerging powers.
- **Focus on Development and Connectivity:** India can pursue a development-centric foreign policy approach by investing in infrastructure projects, connectivity initiatives, and capacity-building programs in neighboring and strategically important regions. This can foster goodwill and strengthen regional influence.
- **Adaptability and Pragmatism:** India should remain adaptable and pragmatic in its foreign policy decisions, ready to respond to changing circumstances and opportunities as they arise.

The external affairs minister has clearly said, "This is a time for us to engage America, manage China, cultivate Europe, reassure Russia, bring Japan into play, draw neighbors in, extend the neighborhood and expand traditional constituencies of support."

## The crude truth of Brent

### Brent Crude

- Also referred as Brent blend, it is among the major oil benchmarks used for trading oil contracts, futures and derivatives.
- It is the most traded of all the oil benchmarks, and drilled mostly from the North Sea oilfields.
- This oil is sweet and light, easy to refine into diesel fuel and gasoline and its transportation.

### Impacts on Indian Economy

#### Consumer inflation:

- If rising crude prices are transmitted to retail fuel prices, then it will lead to higher inflation.
- It would have lesser effect on retail prices due to absorption by Oil Manufacturing Companies (OMCs) and government, but is above RBI's tolerance limit.
- Inflation increased to 5.5% than earlier 4.6% due to rise in food prices.

#### Rise in Dollar demand:

- Rise in oil prices leads to rupee depreciation as higher import bill increases demand for dollars and its value against the rupee.
- Strong dollar index and higher US treasury yields contributed to the rupee's weakness.

#### Excise duty cut:

- If rising oil prices are managed through excise duty cut, will hit government revenues (Fiscal deficit-33.9% in 2023).
- It puts pressure on government finances if it reduces excise duty on fuel.
- Central excise duty constitutes around 20% of the petrol price.
- Excise duty collection was 10% lower as compared to 2022-23.
- But windfall taxes can cover such revenue losses.
- Windfall tax: A higher tax rate levied by governments against certain industries that experience above-average profits in favourable economic conditions.

Wholesale inflation:

- Wholesale Price Index (WPI) deflation decreased in July- August, 2023, but it could revert to a y-o-y (year-over-year) inflation due to the surge in prices of fuel and power.

Current account deficit (CAD):

- Costlier crude will lead to higher forex outflow which may widen current account deficit.
- India imported 87.8% of its crude oil requirement in April-July 2023 that led to a rise in barrel price.

Foreign Institutional Investors (FIIs):

- Depreciating currency amid rising CAD will impact foreign inflows.
- FPIs turned net sellers after 6 months of positive inflows.
- Industrial fuels like naphtha, fuel oils, lube oils and natural gas will be hit.
- The profit margins of aviation, paints, tyres, cement, and chemicals will be negatively impacted.

Fall in OMC margins:

- OMCs' marketing margins will fall due to a continuing freeze in retail prices.
- Average marketing margins of three OMCs (Indian Oil, BPCL, HPCL) are expected to decline by 68.4% and 40.5% for diesel and petrol.
- Upstream oil producers like ONGC and Oil India could benefit due to an increase in oil realizations and Windfall taxes can cap gains.



## India-Middle East-Europe Corridor: The way to a new world order

- The G20 Summit, 2023 under India's presidency approached complex issues like climate change, underdevelopment, wealth concentration, poverty, falling democratic norms, and principles of peace.
- The G20 Summit, 2023 led to the inclusion of African Union in G-20, clean energy through a biofuel alliance, increasing aid for Asia-Africa, an economic corridor to connect India, West Asia, and Europe using rail and shipping link, and Delhi Declaration- joint statement of G20.
- The G20 forum represents 85% of global GDP and 75% of international trade, holding strategic importance for India post pandemic and emerge as a global leader.
- Israel's geographic location at the heart of Middle-East plays an important role in political, religious and economic prospects linking Asia and Europe.

### Significance of IMEC

- IMEC is a multimodal transportation corridor to trade goods to Europe from India via the United Arab Emirates-Saudi Arabia-Jordan-Israel.
- It offers a sound economic solution for the countries in West Asia, intending to diversify their economy.
- It is backed by U.S.A. along with the European Union (EU) to counter China's increasing footprint in West Asia through Belt and Road Initiative (BRI) and curtail ambitions of Russia and Iran.
- The US had conjoined India with the Pacific region and renamed Asia-Pacific as Indo-Pacific, and extended its westward reach by merging with the West Asian region and beyond.
- This marks a sphere of influence with India as the central point and presents an alternative to the idea of Eurasia which was popular over the last decade.
- India's G20 leaders' summit had an unprecedented Middle Eastern Presence'.
- It would increase efficiency (transit), reduce costs, enhance economic unity, generate jobs, and lower greenhouse gas emissions.
- It would be transformative for geopolitical scenario of future trade and relations.

### Role of Israel

- Israel was eager to be a part of connectivity politics of IMEC project and provide its skills and support, but did not mention India's idea for the initiative.
- Issues related to domestic policies and lack of attention to long- term foreign policy goals, puts Israel in a vulnerable position.
- The normalisation of ties with Saudi Arabia is a precondition for the materialization of this economic corridor.

- Although India invited most of the Middle Eastern countries including non-members, as guests in G20 key summit, but refrained an invitation to Israel as India's strategic partner.
- Nine non-member countries: Bangladesh, Egypt, Mauritius, Netherlands, Nigeria, Oman, Singapore, Spain, and the United Arab Emirates.
- Push for diplomatic normalisation
- Saudi Arabia attempted to end the diplomatic boycott of Israel by accepting it as a Muslim country, and help improve the relations with Pakistan, Indonesia and Malaysia.
- It demanded that Israel must commit to a two-state solution for well-being of the Palestinian people, even if the current occupation does not end.
- Saudi Arabia, Arab League, and the European Union joined forces with the Egypt and Jordan to launch a 'Peace Day Effort' to incentivize Israelis and Palestinian leaders for compromise during UN General Assembly.
- India aims to establish direct connection with the Arabian Gulf and Europe, to augment its policy of using connectivity as a strategy to capture opportunities for long-standing trade and geopolitical relations. Israel-Palestine peace is a challenging aim owing to rise of extremism on both sides. The India-Middle East-Europe Economic Corridor would await such a change.

### **Parliament Panel Findings on the New Education Policy, 2020**

#### Assessment of Report:

- **Implementation:** The report assesses the salient features of the NEP's implementation in the higher education sector and the progress made so far.
- **Number of Universities:** The Department of Higher Education, Ministry of Education has informed that there are a total of 1043 Universities in the country at present. Out of which 70% are governed under the State Acts, 18% are governed by the Central Government.
- **Enrolment:** It has further been informed that 94% of students are enrolled in State/private Institutions while 6% are enrolled in Central Institutions.
- **Progress on Gross Enrollment Ratio (GER):** There has been a gradual increase for all students and it has risen from 24.1% in 2016-17 to 27.3% in 2020-21. The GER for ST and SC students has also risen from 2016-17 to 2020-21. GER is calculated by dividing the number of students enrolled in higher education out of the total population in the relevant age group of 18-23 years.

### Status of Implementation:

- **Fruitful Progress:** Through various appreciable measures like PM Schools for Rising India (PM SHRI), e-VIDHYA, NIPUN Bharat etc. the implementation of the NEP 2020 is progressing on course with its vision to transform the higher education system to be more inclusive, flexible, and aligned with global standards.
- **Best Practices– Jammu and Kashmir (J&K):** The UT of J&K is one of the first in the country to implement NEP 2020 from the academic session 2022 in all the Higher Education Institutions.
- **Focus on Creativity:** NEP 2020 places thrust on developing a student's 'Creative Potential' based on higher-order cognitive capacities and cultivating innovation and creativity in learners through industry-institution linkages and collaborative programs.
- **Internationalization of Education:** Freedom being given to Indian universities to set up campuses in other countries and initiate start-up incubation centers and from among the top 100 universities in the world will be facilitated to operate in India.
- **Implementation of the Multi Entry and Multiple Exit (MEME) options** within the framework of the National Education Policy (NEP) is a vital component of NEP 2020, offering students greater flexibility and choice in their educational pathways.

### Issues Associated with NEP:

- **Accessibility:** Limited access to higher education in socio-economically disadvantaged areas due to financial barriers, geographical constraints and stereotype threat faced by students of marginalized sections etc.
- **Multiple Entry And Multiple Exit (MEME):** According to the report, while the MEME looked like a flexible system, which was being operated by Western educational institutions effectively, it might not work well in the country.
- **Linguistic Issue:** Most of the HEIs primarily use English as a medium of instruction and there is a lack of HEIs that teach in local languages.
- **Lack of Funding:** Public investment in the Education sector needs to reach 6% of GDP at the earliest.
- According to the Economic Survey 2022-23, total education outlay added up to 2.9% of the GDP.

### The Path Ahead:

- **Fulfillment of Goals:** By 2030, every district in the country should have at least one multidisciplinary HEI and that the GER in higher education, including vocational education, should be increased to 50% by 2035.
- **Research and Innovation:** There is steady progress in the field of higher education and specific impetus is required to be assigned to factors like anusandhan (research), that can help the country's ranking in patent filing.
- **Effective Funding:** Higher Education Financing Agency (HEFA) needs to diversify its funding sources beyond government allocations and explore partnerships with private sector organizations, philanthropic foundations, and international financial institutions.
- **Digitisation of Education:** The creation of a National Educational Technology Forum (NETF) can go a long way in expansion of digital infrastructure to make the country a Global Knowledge Hub.
- **Ensuring Smooth Operation of MSME:** Develop comprehensive guidelines including specific eligibility criteria, credit transfer mechanisms, and providing a clear roadmap for students pursuing different exit points.
- **Implementation of a standardized Credit Accumulation and Transfer (CAT) system** allows students to earn and transfer credits seamlessly across institutions.

### **Tobacco warnings Norms for OTT**

- Tobacco use causes debilitating diseases such as cancer, lung disease, cardiovascular issues, and stroke, claiming a staggering 1.35 million lives annually in India.
- It burdens the nation's economy, amounting to more than 1% of Gross Domestic Product (Global Adult Tobacco Survey India, 2016-17).
- The issues of smoking warnings for films and TV shows led to alarming visuals of cancers, and a sponge being squeezed representing tar accumulation in smokers' lungs.
- A link has often been drawn between the health impact of smoking and how tobacco products are shown to the public.

Role of Anti-smoking warnings:

- The adequate information on health damages caused by smoking and relevant warnings should be communicated clearly to discourage people from smoking.

- Direct Role: Packaging of tobacco products, graphic warnings on its packets, etc.
- Indirect Role: Films and television have a huge influence on people, especially younger audiences.

Factors leading to tobacco control:

Increasing awareness on health aspects:

- Civil society efforts, growing global support for tobacco control, and the World Health Organisation (WHO) in developing policies for effective action, etc. contributed to national consensus on tobacco control.

Legal and Judicial Provisions:

- Cinematograph Act, 1952: Prohibited the “glamorization” of tobacco and smoking in movies.
- Cable Television Networks Amendment Act, 2000: Banned tobacco and alcohol advertising on cable TV.
- Cigarettes (Regulation of Production, Supply and Distribution) Act, 1975: Mandated specific statutory health warnings on cigarette packs.
- COPTA Act, 2003: Prohibited the sale of tobacco products in an area within 100 yards of any educational institution.
- COPTA stands for Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution).
- Cigarettes and other Tobacco Products (Packaging and Labeling) Rules, 2008: It prohibited smoking in public places and pictorial health warnings covering 85% of the principal display areas of tobacco products.
- It defined ‘Public areas’ and included certain exceptions.
- Judicial verdicts: *Murli S. Deora v. Union of India* (2001): Supreme Court recognized the issue of smoking in public places and its ill effects on passive smokers.
- It prohibited smoking in public places since 2001.

Role of Over-the-Top (OTT) platforms:

- OTT platforms are accessible content organizations over the internet for users using various devices anytime, either without any cost or after paying a subscription fee to a service provider.
- OTT is a nonlinear model which has become the most used entertainment medium in recent times.

- India has nearly 170 million OTT Platform customers and a viewership of 658 million in 2022.
- Young adults aged 18-24 spend nearly 39 minutes daily on these platforms.
- This is because of progress in innovation, internet services and favored utilization of small screens, phones, laptops, and tablets.
- Online games, video conferencing services, and OTT platforms and online meeting platforms experienced a boom during COVID-19 pandemic.
- Onscreen smoking often appears glamorous, inadvertently influencing children, young adults, and professionals to view tobacco use and vaping as fantastic habits.

Background of rules for entertainment industry:

- COPTA Act, 2003 stated that no individual or a character in cinema and television programmes shall display tobacco products or their use.
- The films and shows produced before the notification must add a health warning as a prominent scroll at the bottom of the screen, in scenes featuring smoking.
- But this ban led tobacco companies to take the indirect advertisement route of showing cigarettes in films that cater to massive audiences in India.
- Some filmmakers and actors argued that it violated their fundamental right to freedom of speech and expression (Article 19 (1)) and the Censor Board should be given the responsibility to check the glorification of such acts.
- Delhi High court (2009) and Supreme Court ruled that Right to health and life (Article 21) cannot be subservient to the rights of individuals conducting a business or profession for personal gains.
- OTT executives raised concerns that the rules could force editing of millions of hours of existing content, diminish customers' experience, and impinge on creators' freedom of expression.

Rules for entertainment industry:

- In 2011, a Health Ministry notification identified new rules on the topic, after consultations and taking into account the views of the I&B Ministry to make them more practical and implementable.
- Films and shows made prior to these rules were to have anti-tobacco health spots or messages screened at the beginning and middle of the television programme.
- These messages would be made available to the Central Board of Film Certification (CBFC) by the Health Ministry.

Elements of Cigarettes and other Tobacco Products rules, 2023:

- A strong “editorial justification” explaining the necessity of the display of the tobacco products or their use in the film, given to the CBFC.
- Anti-tobacco health spots (minimum 30 seconds) at the beginning and middle of the films and TV programmes.
- An “anti-tobacco health warning as a prominent static message” was to be displayed at the bottom of the television screen when tobacco products were shown on screen.
- An audio-visual disclaimer on the ill effects of tobacco use (at least 20 seconds) in the beginning and middle of the film and TV programme.
- In case of non-compliance by theatre owners of broadcast organisations, a punishment including the suspension of their licenses can be awarded.

#### Challenges on Implementation:

- In the National Consultation on Tobacco-Free Films Policy (2017), the Ministry of Health and Family Welfare released a study conducted by a public health-focused organisation, with support from WHO India.
- It stated that 99% of movies with tobacco imagery implemented at least one element of the film rules while 27% implemented all three elements and only a few films obliged all elements.
- COTPA’s implementation lacked regards like restrictions on the sale of cigarettes near educational institutions.
- A 2020 study found that 85% of the surveyed schools violated Section 4 (on public smoking restrictions) and 69% violated Section 6b (prohibition of the sale of tobacco products near educational institutions).
- Existing library of content, foreign content, and inclusion of health spots in the middle of the content are not followed properly.
- Platforms can consider an appropriate health warning to be displayed when users log in.
- Our collective moral duty is to educate the public about tobacco's hazards. India can become a global exemplar in tobacco control efforts by regulating OTT platforms as meticulously as films and TV. This is a defining moment where we put human well-being first and embrace a future free from the shackles of tobacco addiction. Society can build a healthier, tobacco-free India that leads the world by example.

## Evaluating The Mediation Bill, 2023

- The Mediation Act encourages the process of mediation by institutionalising mediation centres, and registering mediators for resolving commercial disputes.
- India had 464 Alternative Dispute Resolution (ADR) centres (397 functional), 570 mediation centres, and 16,565 mediators.
- About 53,000 cases were settled through mediation in 2021-22. (National Legal Services Authority)

### Alternative Dispute Resolution (ADR):

- Alternative Dispute Resolution (ADR) refers to the mechanisms that enable disputing parties to resolve their differences, without the intervention of courts.
- It is significant in India considering delays in Indian court proceedings and high cost of litigation.
- In India, modes of ADR include arbitration, negotiation, mediation, and Lok Adalats.
- Mediation is a voluntary process (not obligatory) in which parties try to settle disputes with the assistance of an independent third person (the mediator).
- They are largely focussed on arbitration or conciliation of disputes under the Arbitration and Conciliation Act, 1996 (A&C Act).

### The Mediation Act, 2023:

- The Mediation Act aims to promote and facilitate the process of mediation between the parties in commercial disputes to encourage ADR.
- It will encourage parties to take steps to resolve their dispute through pre-litigation mediation before approaching a court.
- It seeks to codify, institutionalise and promote mediation, by establishing the Mediation Council of India, recognising mediation service providers, and registration of mediators.
- It bridges mediation and arbitration of commercial disputes, thus reducing the burden on the courts.
- Courts and relevant institutions also maintain a panel of mediators.
- For dispute settlement, India encourages courts to refer the disputing parties to ADR procedures.
- It will not completely remove the role of courts. In exceptional cases, a party may reach a court before the commencement or during the continuation of mediation.

### What is Mediation?



- Mediation is the effort between conflicting parties to solve their differences and make compromises to resolve business disputes.
- It is a confidential process and must be completed within 180 days.
- It may be extended by 180 days by the parties.
- A party may withdraw from mediation after two sessions.
- Court-annexed mediation must be conducted as per the rules framed by the Supreme Court or High Courts.
- It will require the mediation to be conducted by a neutral and expert mediator.
- The mediator puts forth workable solutions that can be agreeable to both parties.
- Mediation in India may be:
  - Court referred (Under the Code of Civil Procedure, 1908),
  - Private (Under a contract having a mediation clause), or
  - Under a specific statute (such as the Commercial Courts Act, 2015, the Consumer Protection Act, 2019, or the Companies Act, 2013)

#### Benefits of Mediation:

- Reduce the filing of non-serious claims before courts.
- Mitigate the risk of deterioration of the parties' relationship due to a publicly fought dispute.
- Flexible and confidential process.
- Faster and cost-effective.
- Lesser burden of cases on courts.
- Encourages the parties to focus more on their commercial dealings than their disputes.

#### What is arbitration?

- Arbitration is an alternate method of litigation for settling disputes without either party going to court.
- It involves a neutral third party who receives evidence, hears the arguments, and passes an order known as an award.
- The award is final, impartial, and has to be enforced under the Code of Civil Procedure, 1908.
- In India, arbitration is backed by the Arbitration and Conciliation Act, 1996 which was amended by the Arbitration and Conciliation (Amendment) Act, 2015.
- The Act mandates arbitration proceedings to be completed within twelve months and can be extended further by six months.

Mediation and Arbitration:

Similarities:

- These are two different methods of dispute settlement that are broadly placed under alternate dispute resolution (ADR) methods.
- Both involve out-of-court settlements to avoid unnecessary litigation and receive quick settlement.

Differences:

- Mediation is when a neutral third party aims to assist the parties in arriving at a mutually agreeable solution whereas arbitration is like litigation outside the court and which results in an award like an order.
- Mediation is not binding on the parties whereas arbitration is.
- Mediation is more collaborative, and arbitration is more adversarial.
- The mediation process is more informal than arbitration.
- The outcome in mediation is controlled by the parties whereas in arbitration it is controlled by the arbitrator.
- In mediation, the dispute may or may not be resolved whereas in arbitration it is always settled in either party's favour.

Mediation Council of India:

- It will register mediators, provide effective mediation, and recognise mediation service providers and institutes.
- It is a neutral third party.
- It makes the process a time-bound mechanism which saves time and money of parties.

Mediation Service Providers:

- They are synonymous with arbitration institutions.
- They provide the services, facilities, secretarial assistance, and infrastructure for the efficient conduct of mediation under the A&C Act.

The Mediation Act is a welcome step towards transforming the landscape of dispute resolution by effective and efficient ways to resolve conflicts voluntarily and without any form of adjudication. It can foster a culture of ADR in India.

## Children, a key yet missed demographic in AI regulation

India is gearing up to host global AI summits, highlighting the strategic importance of AI for the Indian Economy. India is scheduled to host two significant meetings focused on Artificial Intelligence (AI) in the later months of the year 2023. The first of these gatherings is set to take place in October 2023, marking the world's inaugural global AI summit. Following this, in December 2023, India will assume the leadership of the Global Partnership on Artificial Intelligence (GPAI). But with this technological advancement comes the pressing need for robust regulation. Children and adolescents, in particular, are vulnerable to various risks associated with AI, and India's existing data protection laws may fall short in addressing these challenges.

### AI Regulation

AI regulation refers to the rules, laws, and guidelines established by governments and regulatory bodies to govern the development, deployment, and use of artificial intelligence technologies. The primary aim of AI regulation is to ensure that AI systems are developed and used in ways that are safe, ethical, and beneficial to society while mitigating potential risks and harms. AI regulation can cover a wide range of aspects, including:

- **Safety and Reliability:** Regulations may require AI developers to adhere to safety standards to prevent accidents or malfunctions caused by AI systems. This is particularly important in critical domains like autonomous vehicles or medical diagnostics.
- **Ethical Considerations:** Some AI applications, especially in critical areas like healthcare or finance, may be required to have human oversight to ensure that AI decisions are in line with human values and ethics.
- **Data Privacy:** Many AI systems rely on large amounts of data. Regulations like the European Union's General Data Protection Regulation (GDPR) set standards for how personal data should be handled and protected in AI applications.
- **Transparency and Accountability:** Some regulations may require AI developers to provide transparency into their algorithms, making it easier to understand how AI systems make decisions..
- **Export Controls:** Governments may regulate the export of AI technologies to prevent sensitive AI capabilities from falling into the wrong hands.
- **Compliance and Certification:** AI developers may need to comply with specific certification requirements to ensure their AI systems meet regulatory standards.
- **International Cooperation:** Given the global nature of AI, there is also a growing need for international cooperation on AI regulation to avoid conflicts and ensure consistent standards.

## AI Regulatory Laws Around the World

- **European Union (EU):**The EU is working on the draft Artificial Intelligence Act, aiming to regulate AI comprehensively. This legislation is expected to address various aspects of AI, including risk classification, data subject rights, governance, liability, and sanctions.
- **Brazil:**Brazil is in the process of developing its first AI regulation. The proposed regulation focuses on guaranteeing the rights of individuals affected by AI systems, classifying the level of risk, and implementing governance measures for AI operators. It has parallels with the EU's draft AI Act.
- **China:**China has been actively regulating AI, with specific provisions for algorithmic recommendation systems and deep synthesis technologies. China's Cyberspace Administration is also considering measures to ensure the safety and accuracy of AI-generated content.
- **Japan:**Japan has adopted a set of social principles and guidelines for AI developers and companies. While these measures are not legally binding, they reflect the government's commitment to responsible AI development.
- **Canada:**Canada has introduced the Digital Charter Implementation Act 2022, which includes the Artificial Intelligence and Data Act (AIDA). AIDA aims to regulate the trade in AI systems and address potential harms and biases associated with high-performance AI.
- **United States:**The U.S. has released non-binding guidelines and recommendations for AI risk management. The White House has also published a Blueprint for the Development, Use, and Deployment of Automated Systems.
- **India:**India is considering the establishment of a supervisory authority for AI regulation. Working papers suggest the government's intention to introduce principles for responsible AI and coordination across various AI sectors.
- Given the sheer volume of data that India can generate, it has an opportunity to set a policy example for the Global South. Observers and practitioners will track India's approach to regulation and how it balances AI's developmental potential against its collateral risks.
- One area where India can assume leadership is how regulators address children and adolescents who are a critical (yet less understood) demographic in this context.
- **Need for Robust AI Regulation for Child Safety**

### Regulating AI for overall Safety:

- Regulations should focus on aligning incentives to tackle addiction, mental health issues, and overall safety concerns.
- There are risks of data-hungry AI services deploying deceptive practices to exploit impressionable youth.
- **Body Image and Cyber Threats:**

- AI-driven distortions of physical appearance can lead to body image issues among young people.
- AI's role in spreading misinformation, radicalization, cyberbullying and sexual harassment is potentially significant.
- Impact of Family's Online Activity:
- Parents sharing their children's photos online can expose adolescents to risks.

#### Deep Fake Vulnerabilities:

- AI-powered deep fakes can target young individuals, including morphed explicit content distribution.
- Intersectional Identities and Bias:
- There is a diverse landscape of gender, caste, tribal identity, religion, and linguistic heritage in India.
- There could be potential transposition of real-world biases into digital spaces, impacting marginalized communities.
- Reevaluating Data Protection Laws:
- The current data protection framework in India lacks effectiveness in protecting children's interests.
- The ban on tracking children's data by default can limit the benefits of personalization.
- India to Protect Young Citizens while preserving the Benefits of AI

#### Drawing from UNICEF's Guidance:

- UNICEF's guidance, based on the UN Convention on the Rights of the Child, emphasizes nine requirements for child-centric AI.
- This guidance can be used to create a digital environment that promotes children's well-being, fairness, safety, transparency, and accountability.
- Embracing Best Practices :
- The Californian Act serves as a template, advocating for transparency in default privacy settings and assessing potential harm to children from algorithms and data collection.
- Establishment of institutions like Australia's Online Safety Youth Advisory Council can be considered.

#### Age-Appropriate Design Code for AI:

- Indian authorities should encourage research to collect evidence regarding the impact of AI on Indian children and adolescents.

- Gathered evidence can be set as a foundation for developing an Indian Age-Appropriate Design Code for AI.
- Role of the Digital India Act (DIA):
- The upcoming Digital India Act (DIA) should enhance protection for children interacting with AI.
- It should promote safer platform operations and user interface designs.

#### Child-Friendly AI Products and Services :

- AI-driven platforms should ensure to offer age-appropriate content and services that enhance education, entertainment, and overall well-being.
- Robust parental control features that allow parents to monitor and limit their children's online activities should be implemented.

#### Digital Feedback Channels:

- Child-friendly online feedback channels where children can share their AI-related experiences and concerns should be developed.
- Interactive tools like surveys and forums should be used to gather inputs.
- Spreading the Message:
- Public awareness campaigns should highlight the importance of children's participation in shaping AI's future.
- Influencers and role models may be involved to amplify the message.

In the era of rapidly advancing AI, Indian regulation must prioritize the interests and safety of its young citizens. Incorporating global best practices, fostering dialogue with children, and developing adaptable regulations are essential steps toward ensuring a secure and beneficial digital environment for India's youth.