Simultaneous Elections -A procedural reform that demands broader understanding.

Launch of Chandrayaan-3

PM's visit to France and Tri-Services Perform at Bastille Day
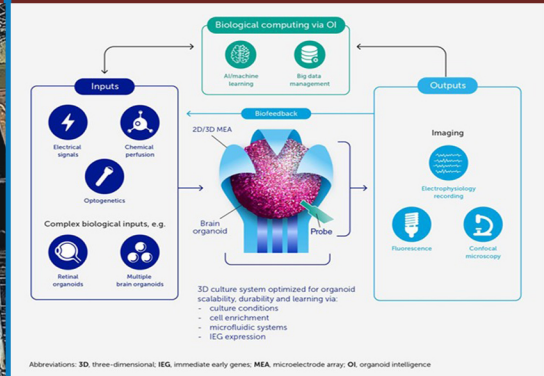
India joins US led Artemis Accord

Flash floods in Himachal Pradesh

Uniform Civil Code

Manipur Unrest

BIO-COMPUTERS

Director's Message

Dear Aspirants,

India's Northeastern region is a mosaic of diverse communities, religions, and cultures. However, since gaining independence from British colonial rule in 1947, this region has grappled with persistent separatist insurgencies. The administrative disarray left by the British in the Northeastern States, particularly their neglect of integrating the hill areas of Assam, sowed the seeds of discontent that continue to fuel separatist movements. Among these States, Manipur stands as a key flashpoint, nestled between Bangladesh, China, and Myanmar, marred by tensions between various ethnic groups. The recent clashes between the Meitei and Kuki communities lay bare the complexities of Manipur's ethnic strife which drew the attention of the entire nation towards the fragility of this region.

Manipur is home to two prominent ethnic groups, the Meitei and the Kuki, who have a long history of coexistence marked by sporadic conflicts. The Meitei people predominantly inhabit the Imphal valley and have ancestral ties to Manipur, Myanmar, and surrounding regions. While the majority of Meiteis practice Hinduism, a minority follow the Sanamahi religion. On the other hand, the Kuki community, mostly Christian, is scattered across the northeastern states of India, with roots tracing back to Myanmar. They predominantly reside in the hilly regions surrounding the Imphal valley.

Recent tensions between these two communities have been exacerbated, in part, by the perceived bias of the Meitei-controlled State government. Accusations of discriminatory policies favoring Meiteis have led to unrest among the Kukis. Examples include forced evictions that threatened Kuki land security and allegations of portraying Kukis as illegal immigrants.

The tipping point came with a Court ruling in March 2023 that granted "Scheduled Tribe status" to the majority Meitei population. This status provides them with economic benefits, quotas in government jobs, and educational privileges akin to those enjoyed by the minority Kuki population. Furthermore, the ruling permitted Meiteis to purchase land in the hilly areas, where the Kuki community predominates. This decision ignited protests, led primarily by Kuki student groups. These peaceful demonstrations soon spiralled into violence, resulting in a stark ethnic divide within the State. The valley was controlled by Meiteis, while Kukis held sway in the hills. A buffer zone emerged between these two communities, where clashes continued to escalate.

The ongoing violence has rekindled the Kuki community's long-standing demand for a separate State. Kuki groups argue that they can no longer live safely under the perceived oppression of a Meitei-dominated State. They have made it unequivocally clear that they will persist in their struggle until their plea for a separate State is addressed. In contrast, the Meitei community and the State government vehemently oppose the creation of a separate Kuki State, raising concerns about the territorial integrity of Manipur.

While the recent violence in Manipur is undeniably severe, it is not an isolated incident in India's Northeast. The region has witnessed a recurring pattern of ethnic violence, with powerful interests exploiting the identities of different communities to further their agendas. Any efforts toward peace and reconciliation in this region must confront the historical weaponization of colonial fault lines. Decades after India's independence, little has been done to foster understanding and empathy among diverse communities regarding each other's history, culture, and traditions.

To resolve the crisis in Manipur, it is imperative to adopt a multi-pronged approach that addresses both the immediate conflict and the deep rooted issues by initiating a comprehensive dialogue involving representatives from both the Meitei and Kuki communities, as well as civil society organizations. Independent mediators should facilitate discussions to build trust and work toward a peaceful resolution. Promote cultural exchange programs and initiatives that allow the Meitei and Kuki communities to learn about each other's history, traditions, and way of life. This can help break down stereotypes and foster mutual understanding. Develop a fair and transparent system for land and resource allocation in Manipur. This should address the concerns of both communities, ensuring that no one feels marginalized or threatened. Invest in economic development programs in Manipur, with a focus on the hill areas. This can create employment opportunities and improve the standard of living for all residents, reducing the appeal of separatist movements. Further, review and amend policies and laws that have historically favored one community over the other. Ensuring equal rights and opportunities for all residents is crucial for long-term peace and stability. Last but not the least, launch educational initiatives that promote tolerance, diversity, and unity among Manipur's various ethnic groups. Encouraging a sense of belonging to a shared Manipuri identity can help bridge divides.

In conclusion, the ongoing tensions between the Meitei and Kuki communities in Manipur are a stark reminder of the complexities and challenges faced by India's northeastern states. Addressing these issues requires a multifaceted approach that combines immediate conflict resolution efforts with long-term strategies aimed at fostering unity and understanding among diverse communities. Manipur's situation is a microcosm of the broader issues facing India's Northeast, and finding a

peaceful resolution in this State could serve as a model for the region as a whole. Only through dialogue, empathy, and comprehensive reforms can lasting peace and stability be achieved in this troubled part of India.

Best wishes,

Yours sincerely,

K Rajendra Kumar IPS (Retd)

TABLE OF CONTENT

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1. NATIONAL

1.1 Uniform Civil Code

- The Uniform Civil Code refers to a **common code of civil law** spanning the areas of marriage, adoption, inheritance and succession. In India, civil law is segmentally divided as certain sections are subjected to common constitutional law while other sections have been granted the right to practice customary and religious law in the civil sphere. By contrast, India has a common criminal code.

- On 20 June, the 22nd Law Commission issued a notice inviting the views of public and recognised religious organisations on the Uniform Civil Code (UCC) within 30 days.

- Prime Minister Narendra Modi supported the Law Commission's initiative on the ground that a country cannot progress if its citizens are subjected to different sets of laws. Further, he said when different rules apply to different members within a family, there cannot be equality and justice.

- Article 44 of the Indian Constitution holds "The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India".

- Political parties and sections of civil society **opposed to the UCC** argue the Indian Constitution allows wide diversity for the practice of religious and cultural laws in the civil sphere. Articles 25, 26 and 371 are often cited to make the argument.

- Article 25 guarantees freedom of conscience and free profession, practice and propagation of religion. However, sub-clause (1) of Article 25 holds freedom of conscience and right to religion is "subject to public order, morality and health".

- Article 371 grants some special powers and provisions to specific states – Arunachal Pradesh (371 H), Assam (371 B), Manipur (371 C), Mizoram (371 G), Sikkim (371 F), Nagaland (371 A). The fifth Schedule of the Indian Constitution lists schedule areas, while the sixth Schedule lists tribal areas. The rights of special local government and application of customary laws of people residing within schedule and tribal areas have been conferred under this article.

- Conflicting interpretations of these Constitutional provisions are likely to generate legal and social debates regarding the exact form of the UCC.

- However, Article 44 clearly sets out to the State the duty of enacting a UCC, and therefore, the right of the State to work towards that direction is beyond the scope of legal challenge.

- Since 1947, no Government has sought to exercise the duty prescribed in Article 44 due to political convenience and contingency.

1.2 Dismissal of State Minister by Governor's order in Tamil Nadu

- Income Tax department (IT) and the Enforcement Directorate (ED) raided Tamil Nadu Minister of Electricity, Prohibition and Excise Senthil Balaji in May and June. Following the raid by ED, he was arrested on 14 June under sections of the Prevention of Money Laundering Act (PMLA).

- On the day of his arrest, Senthil Balaji collapsed in front of cameras and was taken to a hospital, where he underwent a beating heart coronary artery bypass.

- On 29 June, Tamil Nadu Governor RN Ravi dismissed Senthil Balaji with immediate effect. A press release issued by the Raj Bhavan state, "Minister V Senthil Balaji is facing serious criminal proceedings in a number of cases of corruption including taking cash for jobs and money laundering. Abusing his position as a Minister, he has been influencing the investigation and obstructing the due process of law and justice. He is in judicial custody in a criminal case being investigated by the Enforcement Directorate. Some criminal cases against him under the Prevention of Corruption Act and the Indian Penal Codes are being investigated by the State Police. Under these circumstances, Governor has dismissed him from the Council of Ministers with immediate effect."

- The Governor's role in the State administrative machinery is laid down in Articles 163 and 164. 163 (1) holds "Council of Ministers must aid and advise the Governor". 163 (2) holds "Governor can act in his/her discretion in certain matters as permitted by the Constitution". 164 (1) holds "The Chief Minister shall be appointed by the Governor and the other Ministers shall be appointed by the Governor on the advice of the Chief Minister, and *the Ministers shall hold office during the pleasure of the Governor*".

- Article 164 (1) applies the Doctrine of Governor's Pleasure. The Punchhi Committee report of 2007 had upheld the Governor's right to sanction prosecution of ministers against the advice of the State government, but on the other hand recommended deletion of the Doctrine of Pleasure and the right of a State legislature to impeach the Governor.

- Ruling party of Tamil Nadu DMK criticised the Governor's decision, calling it unprecedented and questioned whether the Governor was acting independently or as an agent of the Central Government.

- The Governor retracted two of his decisions – 1. Refusal to reallocate portfolio of Senthil Balaji; 2. Placing Senthil Balaji's dismissal on hold, supposedly after Union Home Minister Amit Shah advised him to consult the Attorney General regarding the constitutionality of his action.

- Before joining DMK, Senthil Balaji was a member of the AIADM, the main rival party of the DMK. After allegations of corruption against him, then leader of opposition and current CM MK Stalin had demanded the sacking of Senthil Balaji.

- In December 2022, following a row between Kerala Governor Arif Mohammad Khan and the Kerala State government over university appointments, the Governor had written to CM Pinarayi Vijayan that Minister Balagopal had "ceased to enjoy his pleasure" for derogatory statements about the Governor on a public platform and urged the CM to take appropriate action. However, the CM rejected the Governor's demand.

1.3 Manipur Unrest

- The ethnic unrest in Manipur has **partially subsided** over the course of July with fewer violent incidents reported in the month of July.

- However, video footage showing two women belonging to the Kuki community being paraded naked by a Meitei mob began circulating on social media in the last week of July. The **aggravated sexual assault** incident allegedly took place on 4 May but failed to elicit a serious response from the state government and police forces. The Zero FIR was filed on 18 May and transferred to the concerned police station in June. However, things started progressing only after the video surfaced in public, with the state government responding with four arrests.

- The release and circulation of the video shocked the national conscience and provoked disbelief and anger from all over the country. Political circles, civil society and the media questioned the competence and intention of the state government for failing to take cognizance of such a heinous crime.

- The Supreme Court has taken suo moto cognizance of the contents of the video. **Chief Justice DY Chandrachud called the assault "unprecedented"** and asked the Central Government to classify the more than 6000 registered FIRs since violence broke out on 3 **May into the following categories:**

1) Break up of cases
2) Zero FIRs
3) Transferred to police station that has jurisdiction
4) Number of arrests so far
5) Status of legal aid to arrested accused
6) Number of Section 164 statements recorded so far. The Court also drew a distinction between the Nirbhaya case of 2012 and the Manipur sexual assault on the ground that while the former was "an isolated incident", the evidence in Manipur suggests "systematic violence".

- The Monsoon Session of the Parliament has been negatively affected due to the uproar caused by the release of the sexual assault footage. In the Rajya Sabha, members belonging to **opposition parties are seeking invocation of Rule 267** of the Rules of Procedure and Conduct of Business in the Council of States which allows suspension of rules and listed business of the day to debate an issue of importance. With regard to 'suspension of business', Rule 267 states, "any Member, may, with the consent of the Chairman, move that any rule may be suspended in its application to a motion related to the business listed before the council of that day and if the

motion is carried, the rule in question shall be suspended for the time being." More than 70 notices to invoke Rule 267 has been submitted by opposition members; however, the Chairman has rejected them. Rule 267 has been invoked **11 times** since 1990. The last instance when Rule 267 was invoked came in **2016,** when then Vice-President and ex-officio chairman of the Rajya Sabha Hamid Ansari allowed a debate on demonetisation.

- The **Government insists it is ready to hold a discussion under Rule 176** rather than Rule 267. Debates under Rule 176 can span up to **two and a half hours.** It does not require suspending the business of the day and other rules. Any member of the House who has intimated the Chairman can take part in the discussion, though interventions have to be short followed by replies from concerned Ministers.

- A **No Confidence Motion** has been brought by a conjunction of opposition parties against the Narendra Modi-led government on the ground that the Prime Minister, by making brief comments *outside* the Houses and failing to address either House of the Parliament, has stopped enjoying the confidence of the legislature. The Motion was filed on **26 July** and admitted by the Speaker of the House, thereby necessitating that the time and date be fixed before the lapse of 10 days from the day of acceptance. The Government's response has cited **Article 75 (3)** which states the Council of Ministers is collectively responsible, implying *any* Minister can address the issue and the Prime Minister is not obligated to make an appearance and speak.

1.4 Launch of Chandrayaan 3

- India's third lunar space exploration mission was **launched on 14 July** from the Satish Dhawan Space Centre located in Sriharikota, Andhra Pradesh. It is expected to complete its voyage by landing on the surface of the moon on 23 August 2023.

- Chandrayaan 3 differs from the previous missions as it **does not contain an orbiter**. It consists of a lander named *Vikram* and a rover named *Pragyan*. The lander is equipped with a **Laser Doppler Velocimeter (LDV)** that measures the velocity of transparent and semi-transparent fluid flows. The rover has a range of 500 metres. It is equipped with cameras, spectrometer and a drill. Its lifespan is of one lunar day, which approximates to 14 earth days. The propulsion engine will carry it until it enters the 100-km radius of the lunar orbit.

- ISRO has specified **three objectives** for Chandrayaan-3: 1) Successful soft landing on the moon 2) Testing the rover's mobility on the moon 3) In-site observation and examination of lunar materials.

- Upcoming ISRO missions include India's first human space programme **Gaganyaan**, the solar research mission **Aditya-L1**, the Mars exploration project **Mangalyaan** and the Venus exploration project **Shukrayaan**.

1.5 Semicon India Summit 2023

- The second edition of the Semicon India Summit was held from 28-30 July in Gandhinagar, Gujarat.

- The theme for Semicon India 2023 was "**Charkha to Chips**", signifying a deep and underlying continuity of the ethos of service from the days of Mahatma Gandhi when the charkha or spinning-wheel became a symbol of social service to the contemporary era of chips and semiconductors when technology is being widely seen as a force for positive human and social transformation.

- Senior officials of frontline players in the semi-conductor trade ecosystem such as **Micron Technology** and **NXP Semiconductor** attended Semicon India Summit. Micron Technology announced its Assembling, Packaging, Marking and Testing (APMT) unit in India will become operational by late 2024.

- Semiconductors are used in high-end electronic devices like mobile phones and computers. Due to their importance to high and frontline technology, semi-conductors are considered to be the driving force behind the **4th Industrial Revolution**. Gallium arsenide, germanium and silicon are some of the more commonly used semi-conductors.

- Due to the importance of semi-conductors in the emerging critical fields of quantum computing, artificial intelligence, robotics and Internet of Things, semi-conductors have been branded as '**the new oil**', an analogy highlighting their critical importance by comparing it to the most important energy resource that shaped the previous two centuries. Competition over manufacture, supply and consumption of semi-conductors is presently recognised as a significant axis of the emerging multi-polar international system.

1.6 National Quantum Mission

Why in the news?

- The Union Cabinet, chaired by the Hon'ble Prime Minister Shri Narendra Modi, today approved the National Quantum Mission (NQM) at a total cost of Rs.6003.65 crore from 2023-24 to 2030-31.

Aim:

- To seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology (QT).

Key Features:

- The new mission targets developing intermediate scale quantum computers with 50-1000 physical qubits in 8 years in various platforms like superconducting and photonic technology.

- Satellite based secure quantum communications between ground stations over a range of 2000 kilometers within India, long distance secure quantum communications with other countries, inter-city quantum key distribution over 2000 km.

- The mission will help develop magnetometers with high sensitivity in atomic systems and

Atomic Clocks for precision timing, communications and navigation.

- It will support design and synthesis of quantum materials such as superconductors, novel semiconductor structures and topological materials for fabrication of quantum devices.

- Single photon sources/detectors, entangled photon sources will also be developed for quantum communications, sensing and metrological applications.

- Four Thematic Hubs (T-Hubs) will be set up in top academic and National R&D institutes on the domains - Quantum Computing, Quantum Communication, Quantum Sensing & Metrology and Quantum Materials & Devices. The hubs which will focus on generation of new knowledge through basic and applied research as well as promote R&D in areas that are mandated to them.

Expected Benefits of the Mission:

- NQM can take the technology development ecosystem in the country to a globally competitive level.

- The mission would greatly benefit communication, health, financial and energy sectors as well as drug design, and space applications.

- It will provide a huge boost to National priorities like digital India, Make in India, Skill India and Stand-up India, Start-up India, Self-reliant India and Sustainable Development Goals (SDG).

- This will accelerate QT led economic growth, nurture the ecosystem in the country and make India one of the leading nations in the development of Quantum Technologies & Applications (QTA).

1.7 Dark patterns

Why in news:

- The Centre has asked e-commerce companies to not use "dark patterns" on their platforms that may deceive customers or manipulate their choices. The government has set up a 17-member task force to prepare guidelines to protect consumers.

What is dark Pattern?

- Dark patterns, also known as deceptive patterns, is the term used to describe the ways in which websites or apps make their users do things that the users do not intend to do or would not otherwise do, as well as to discourage user behaviour that is not beneficial for the companies.

- The Consumer Affairs Ministry has identified nine types of dark patterns being used by e-commerce companies. Most of these are also listed on deceptive design.

- **False urgency:** Creates a sense of urgency or scarcity to pressure consumers into making a purchase or taking an action;

- **Basket sneaking:** Dark patterns are used to add additional products or services to the shopping cart without the user's consent;

- **Confirm shaming:** Uses guilt to make consumers adhere; criticises or attacks consumers for not conforming to a particular belief or viewpoint;

- **Forced action:** Pushes consumers into taking an action they may not want to take, such as signing up for a service in order to access content;

- **Nagging:** Persistent criticism, complaints, and requests for action;

- **Subscription traps:** Easy to sign up for a service but difficult to quit or cancel; option is hidden or requires multiple steps;

- **Bait & switch:** Advertising a certain product/ service but delivering another, often of lower quality;

- **Hidden costs:** Hiding additional costs until consumers are already committed to making a purchase;

- **Disguised ads:** Designed to look like content, such as news articles or user-generated content.

What are other governments doing?
- The United States and the United Kingdom have passed legislation to curb dark patterns.

- In March 2021, California passed amendments to the California Consumer Privacy Act, banning dark patterns.

National Sickle Cell Anaemia Elimination Program
- The National Sickle Cell Anaemia Elimination Program, introduced in the Union Budget 2023, focuses on addressing the significant health challenges posed by sickle cell disease, particularly among tribal populations of the country.

About the disease:
- Sickle cell disease (SCD) is a chronic single gene disorder causing a debilitating systemic syndrome characterized by chronic anemia, acute painful episodes, organ infarction and chronic organ damage and by a significant reduction in life expectancy.
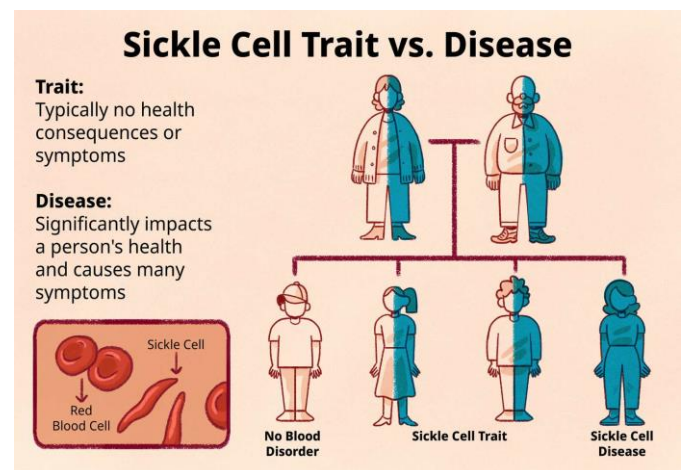
The Mission:
- Implemented in 17 high-focus states across the country, this program aims to improve the care and prospects of all sickle cell disease patients while reducing the prevalence of the disease.

- The 17 states are- Gujarat, Maharashtra, Rajasthan, Madhya Pradesh, Jharkhand, Chhattisgarh, West Bengal, Odisha, Tamil Nadu, Telangana, Andhra Pradesh, Karnataka, Assam, Uttar Pradesh, Kerala, Bihar, and Uttarakhand.

- The program is executed in a mission mode as part of the National Health Mission (NHM), aims to eliminate sickle cell genetic

transmission by the year 2047, showing a long-term commitment to eradicating the disease.

- Over a period of three years, spanning from the fiscal year 2023-24 to 2025-26, the program targets screening approximately 7.0 crore people.

- This ambitious goal highlights the program's dedication to reaching a large portion of the population, promoting early diagnosis and intervention.

1.8 <u>Simultaneous Elections- A Procedural reform that lacks substantive depth</u>

- Human beings have the ability to think, think in an organized manner, and further communicate among themselves through highly evolved language systems. As the popular historian Yuval Noah Harari in his book **Sapiens** writes, it is this ability of human beings that differentiates them from other species on the earth. Democracy as a political innovation believes in this ability to make conversations, co-operate, and co-ordinate among themselves for the overall well-being of the society. The earliest forms of Democracies were Direct democracies, where people used to come together, meet, and make collective decisions for the common good. However, with the increasing populations and the size of political associations, the emergence of centralized structures like the State, Direct democracies have become an impossibility. This necessitated the emergence of indirect democracies where people select their representatives who in turn will make collective decisions on behalf of the entire political population. **The election** is an institutional means to select those representatives, where people vote for their candidates if they wish them to become representatives. Coming to the Indian political system, India is a Parliamentary Democracy, with a Federal spirit. People would vote to elect their representatives for State legislative Assemblies at the level of State and for the House of Commons (Loksabha) at the level of Centre. **Simultaneous Elections** imply elections to the Loksabha and all the state assemblies across India will be held together, with voting possibly taking place around the same time.

- Also popularly known in the public discourse as - **"One Nation-One Election"**- Simultaneous elections are expected to give the potential benefits of cutting down on our public expenditure to manage elections, and address the disruption in governance, and normal public life. A committee under former President Ramnath Kovind is also constituted to look into the issue, how this might be implemented, and what kind of constitutional changes might be required to make it a legal reality. However, there are concerns raised over the **operational flexibility**, undue impact on the voting behaviors of people where the provincial local issues may get subordinated to the grand narratives and National issues, negative impact on the federal spirit, and legal-constitutional limitations. In the following essay, there will be a brief discussion of these issues and will dwell on the likely impact of Simultaneous elections on Indian Polity.

Simultaneous Elections- Not new to the Indian Polity

- At the time of Independence, the first election to Loksabha and the state assemblies were conducted simultaneously, Lok Sabha and state legislatures went to polls together in 1952 and 1957, with the Congress initially comfortably placed all over the country. The synchronized cycle was first broken in Kerala, in July 1959, when the Centre invoked Article 356 of the Constitution to dismiss the ministry headed by E M S Namboodiripad of the Communist Party, which had assumed power after elections in April 1957. This was followed by state elections in February 1960. As the Congress's popularity declined, it suffered major setbacks in several states —Bihar, UP, Rajasthan, Punjab, West Bengal, Orissa, Madras and Kerala — in the 1967 elections. Consequently, Samyukta Vidhayak Dal governments, comprising Bharatiya Kranti Dal, SSP, PSP, Swatantra Party, Jana Sangh, and Congress defectors, came to power. Defections and counter-defections ultimately led to the dissolution of Assemblies, which separated the poll cycles of many states from the center. At present, Assembly elections in Andhra Pradesh, , Odisha, Arunachal Pradesh, and Sikkim are held together with Lok Sabha polls.

The Present disconnected cycle- A mini General Election every year

- It is argued that massive expenditures are incurred in conducting separate elections for each State Assembly. The Election Commission of India has spent around 8000 crores to conduct elections for over a period of 5 years.

Adding to that Political parties and individual leaders are investing huge amounts, making elections an essentially costly affair. The election economy of the 2019 General election alone was estimated to be around 60,000 crores. It is a cause of worry because it sets in the cycle of corruption and black money, affecting the overall health of democracy.

- Frequent elections are also blamed for disruptions in governance as well as public life. During elections "Model Code of Conduct" would be enforced to regulate candidates and the political parties to ensure free and fair elections. During its enforcement, governance, and developmental activities would more or less remain suspended for months together. Phrases like **"Policy paralysis", and "Governance downtime"** are used to refer to this period as there is a restriction on the announcement of financial grants, laying down of foundation stones, and making government schemes for a prolonged period of time. Disruption in public life is also another concern as people are supposed to vote in one or the other election from local body elections to the Loksabha General election. According to the **Law Commission of India(LCI)** report, "If elections are held together more people are expected to turn out for voting".

- Another important concern that is often raised is the wastage of human resources, as elections involve lakhs of human labour hours. Most of the human resources are sourced from administrative bureaucracy, especially **"Teacher bureaucracy"** and the security

forces. This while being a burden, would also impact their performance and efficiency in achieving their own respective mandate.

The flip side of "One Nation- One Election"

- While all the potential benefits are being said, it is important to dwell on the reasons why a Simultaneous election is a great idea, and the present debate on Simultaneous elections is misplaced to take us any closer to the ideals of **"Substantive Democracy".** India follows the parliamentary form of government, which means the government would remain in power only when it enjoys the confidence of the legislature. Thus based on political imperatives of the times, any legislature is prone to dissolution owing to the lack of majority support to rule. This would obviously delink the tenures of various state assemblies and Loksabha. The frequency of elections is an irrefutable fact in a Parliamentary Democracy.

- India is also a Federal polity. In India States don't derive their existence from the Central Government or Parliament but from the Constitution itself. So it would be questionable in the first place to tie up tenures merely to avoid the burden of conducting multiple elections. Many Legal- Constitutional questions are also raised over the possibility of simultaneous elections. Law Commission also stated that it isn't feasible in the existing constitutional framework. **Article 85(2)(b)** states that the President can dissolve Loksabha, and the Governor has a similar mandate under **Article 174(2)(b)**. Article 352- which facilitates the extension of the tenure of Loksabha and 356

which facilitates the imposition of the president's rule would also act as a hindrance in pulling off the feat of Simultaneous elections in the long term.

Federalism- not a mere administrative convenience but a philosophy of accommodation

- Federalism isn't just about organizing the political units, but it provides an agency to the diversity of Indian politics and society. Different states and cultures across the country may have varied aspirations and they are expressed through the diverse nature of our polity. If both the National General Elections and State elections are conducted together, it is highly possible that the provincial-local issues are subdued to the grander national-level narratives. State elections are supposed to be fought on State-level issues and the Parliament elections are for national-level issues. But the danger of these **"Blurred distinctions- blurred attributions"** due to "One Election", will be a hurdle for people to fix the **Accountability** of their representatives, which is one of the foundations of any successful democracy. According to a report by IDFC institute if elections are held together- "On an average, there is 77 percent chance that Indian voter will vote for the same party for both the State and Centre".

- The frequency in elections needn't be even seen as a burden as it would also mean political parties continuously reaching out to people, which helps in fostering **"Continuos accountability".**This would help curtail the autocratic tendency of any one particular party

or leader. In fact, It is the extreme competitiveness displayed by the political parties, with its cabinet ministers coming for local body election campaigns which is problematic and the question to ponder over. The nature of political campaigning is increasingly getting Presidentialized, around one person, one party eventually leading to an idea like One election.

- Other than the above philosophical deviations from Parliamentary democracy, Federalism to Constitutionalism, the idea of "One election" has the issue of **Operational inflexibility** and it would be a **logistical nightmare** to conduct election for the entire Nation at a go, including the State assemblies. The questionable financial viability, where the Election Commission spends around 10,000 crores for five years, amounting to RS 27 per voter per year, needn't be considered a massive burden for the World's largest electoral democracy which is set to become the third-largest world economy in some years.

Simultaneous elections- Not a substantive electoral reform

- Elections are generally considered the procedural aspects of a democracy to ensure people's representation. However, we should move beyond the procedural questions to address substantive questions like the participation of people in government, ensuring accountability and transparency of elected leaders to foster the philosophy of **"Constitutionalism"**. In India, we don't have way outs like the **"Right to Recall"**, like they

are available in some advanced democracies, but bringing in reform like Simultaneous elections may have a possibility of making elections procedurally weak by hindering the quality of representation in the first place. However, it is much appreciable that the issue of Simultaneous elections has brought back the debates around Elections to public discourse.

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2. INTERNATIONAL RELATIONS

2.1 India-Australia bilateral relations: 8th Defence Policy Talks

- The 8th India-Australia Defence Policy Talks (DPT) was held at Canberra, Australia's capital, on 24 and 25 July. The talks were chaired by India's Special Secretary in Ministry of Defence Nivedita Shukla Verma and Australia's Acting Deputy Secretary in Department of Defence Steven Moore.

- A '2+2 Mechanism' is maintained at the Ministerial level by the two countries to oversee key sectors of cooperation.

- In 2020, India and Australia signed a Comprehensive Strategic Partnership. At the 8th round of the talks, review of the cooperation measures was undertaken and new initiatives to strengthen the Partnership were discussed.

- India is making a pitch about the potential of its defence industrial complex as a plank of strategic cooperation with Australia and its armed forces. The focus of the talks lay in co-development and co-production of defence equipment, particularly in the shipbuilding, repairs and maintenance sectors.

- In August, Australia is scheduled to host the Malabar exercises in which the US, Japan and India will participate. The exercises will thus bring together the four QUAD nations.

- India and Australia are part of the QUAD. They share the strategic vision of an open, free and inclusive Pacific maritime region. Though not explicitly stated, the strategic objective of the QUAD is widely believed to be an attempt to counter China's hegemonic claims in the region.

2.2 India-Japan Relations: Foreign Ministers' Strategic Dialogue

- During his visit to India, Japan's Foreign Minister Hayashi Yosimasha held a Foreign Ministers' Strategic Dialogue with his Indian counterpart Dr S. Jaishankar on July 27. The meeting lasted for 150 minutes.

- In the backdrop of the emergence of the Asia-Pacific region as the most sensitive geopolitical region, defence and security have emerged as the most significant sectors of cooperation between India and Japan.

- Cooperation in the fields of defence and security take place primarily in such sectors as equipment production and defence exchanges.

- The Foreign Ministers said India and Japan would continue to work together on international platforms such as G7 and G20. Currently, Japan holds the G7 presidency while India holds the G20 presidency.

- The Foreign Ministers also affirmed that economic cooperation between India and Japan spanning both public and private sectors is set to grow, with a target of investments and loans amounting to 5 trillion yen flowing from Japan to India. Japanese FM Hayashi requested cooperation from the Indian government in easing the investment environment and the establishment of a Joint Credit Mechanism (JCM).

- Some other important projects in the area of India-Japan cooperation are the high-speed rail project and advanced cooperation for the development of north-eastern India.

2.3 India-Africa Ties: Focus on Developing Strategic Roadmap, says prominent thinktank report

- Vivekananda International Foundation's (VIF) Africa Expert Group (AEG) presented a report highlighting key challenges facing India in strengthening its relations with African countries and ways to overcome them.

- The report is titled **India-Africa Partnership: Achievements, Challenges and Roadmap 2030**.

- The report highlights the developing trend towards regional integration in Africa, though several countries such as Burkina Faso, Niger and Mali experienced military coups and other countries such as Ethiopia and Sudan continue to struggle with high levels of ethnic hostility, ethnic conflict, insurgency and terrorism. It also notes the growing importance being accorded to African countries by powerful countries such as the US, China, Japan, UAE and Turkiye which are looking at African countries as burgeoning markets and sources for energy and minerals.

- In its analysis of India's policy on Africa, the report notes the lack of a clear and coherent strategy pursued by India with regard to Africa. Africa continues to be a minor player in Indian strategic thinking, signalled by the absence of a secretart of African affairs in the Ministry of External Affairs. In contrast, China has sought

to develop robust relations with African countries in the past two decades and is presently the African continent's biggest economic partner. Additionally, China has invested heavily in the African infrastructure and development sectors, earning it recognition as 'infrastructure developer', 'resource provider' and 'financier'.

- In terms of recommendations, the report advocates the restoration and strengthening of leaders' summits such as the India-Africa Forum Summit which has not been held since 2015. It also recommends an annual strategic dialogue between the chairperson of the African Union and India's External Affairs Minister. Internationally, leveraging India's position in the G20 can help building consensus on the African Union's entry into the G20. The growth of insurgency, terrorism and hybrid security challenges in Africa (it is the continent with highest casualty rates due to terrorist violence) can offer India the opportunity to develop specific capabilities relating to counter-terrorism, cyber security and emerging technologies in African countries.

2.4 China's Law on Foreign Relations

- On June 28, China's National People's Congress adopted a Law on Foreign Relations. The new law came into effect on 1 July.

- The main objective of the Law on Foreign Relations is to "safeguard China's sovereignty, national security and development interests." It is envisioned as a major step to plug the gaps in the legal system which the National People's

Congress had earlier conceded suffered from certain deficiencies.

- Key initiatives launched by Xi Jinping such as the Belt and Road Initiative (BRI), the Global Development Initiative (GDI) and the Global Security Initiative (GSI) have been included under the purview of the act.

- The law declares China's right to counter hostile foreign measures directed at constraining or endangering China's national security and sovereignty. Particularly with regard to Western sanctions, the law provides China "the right to take measures to counter or take restrictive measures against acts that endanger its sovereignty, national security and development interests in violation of international law or fundamental norms governing international relations." The new law adds to the existing Law on Countering Sanctions. Together, they virtually make it illegal for foreign companies operating within China to comply with sanctions imposed by Western or other foreign governments.

- The CPC has an official doctrine called the 'Three Warfares' that focus on media, psychological and legal warfare as non-kinetic strategies to advance China's international ambitions. The Three Warfares are inspired by the classical Chinese war strategist Sun Tzu's idea of winning a war without fighting. Along with Laws on Countering Sanctions and Border Laws, the Law on Foreign Relations seeks to mobilise legal warfare. The National Security Law imposed on Hong Kong in 2020 provides another example of legal warfare.

- Experts on China opine that the law seeks to provide legal legitimacy to the foreign policies of Xi Jinping, the General Secretary of the CPC, and provide legal instruments to punish opponents of Xi's policies.

2.5 Myanmar: Emergency Extended, Elections Postponed

- The ruling National Defence and Security Council (NDSC) announced on 31 July that the state of emergency in Myanmar has been extended by six months as more time is required to prepare for elections.

- The elections were originally scheduled to be held in August 2023. The decision to extend the emergency and postpone elections is being seen as inability on the part of the military to establish sufficient order and conduct violence-free elections. Myanmar has numerous ethnic-based armed organisations (EAOs), some of which are opposed to military rule while others ally with the military. The country has been mired in civil war for several decades due to lack of integration between the different ethnicities into a common national identity.

- The state of emergency was declared following a coup on 1 February 2021, when soldiers arrested premier Aung San Suu Kyi and top government officials and members of the ruling National League for Democracy (NLD) party.

- The NDSC that took power stated the military coup was necessitated due to fraudulent electoral practices in the national elections conducted in November 2020 when Suu Kyi's NLD won a landslide victory against the Union

Solidarity and Development Party that was supported by the military.

- According to the international organisation Assistance Association for Political Prisoners, 3857 people have been killed by Myanmar's security forces since the NDSC took power on 1 February 2021. The two-and-half-year old civil war has been marked by widespread abuses, violations of human rights, arbitrary imprisonments and creation of waves refugees.

- Myanmar's ruling military council has not found international support. The influential regional grouping Association of South East Asian Nations (ASEAN) has been prominent in boycotting diplomatic relations with the military rulers and has made the adoption of a 'five-point' agenda on the part of the ruling military council as the minimum condition for talks. In addition, Myanmar faces international sanctions from Western countries, stalling imports and exports and creating a major economic crisis.

- From India's perspective, political instability and civil war in Myanmar negatively impacts the security situation in the sensitive north-eastern frontier of India. Some 30,000 illegal immigrants fleeing the war in Myanmar are reportedly spread in the two states bordering Myanmar – Mizoram and Manipur. It is widely speculated that the ongoing political instability and wave of communal violence in Manipur has connections with the war in Myanmar. In addition, Myanmar is a major narcotics producing country and the increase of narcotics trafficking in India's north-eastern region has been linked with the entry of illegal immigrants.

- Chinese political and economic support is a major source of resources for the ruling military council in Myanmar as it faces international isolation. China seeks to increase its strategic depth by propping up Myanmar's military regime. Cognisant of the dangers of alienating the government of the day in Myanmar completely, India too has maintained a posture of neutrality towards the military regime, occasionally seeking its help to rein in north-eastern militants. Additionally, India has made significant infrastructure investments in Myanmar and views the country as the gateway to South-East Asia. Thus, the approach of countries in Myanmar's proximity can be said to differ substantially from the approach of geographically distant countries.

2.6 PM's visit to France and Tri-Services perform at Bastille Day

- The Bastille Day is the equivalent of France's national day. It was the date on which a mob stormed the Bastille Palace and caused the fall of the French monarchy in 1789, ushering in the **French Revolution**. 2023 marks the 234th anniversary of the French Revolution.

- The French Revolution is noted for its slogan of **liberty, equality and fraternity**. Its democratic ethos, pro-people and anti-elitist orientation carved out a special place in the annals of revolution. Subsequent democratic movements all over the world have looked up to and taken inspiration from the French Revolution, including the Indian independence movement.

The words liberty, equality and fraternity found a place in India's democratic constitution.

- A tri-services contingent took part in the Bastille Day celebrations in which PM Modi was the chief guest, marking the first time when Indian forces had participated in France's national day celebrations. The event is being interpreted as a sign of the growing proximity between France and India.

- In an interview to a French channel, PM Modi highlighted the need for restructuring the global political and economic architecture in order to achieve better outcomes in the future. He also pitched India's role as that of a bridge between the Global North and the Global South.

- Further, PM Modi also highlighted the need for a comprehensive review of the UN Security Council and India's inclusion in it as the paramount global security platform could not fulfil its role satisfactorily without the involvement of the world's largest democracy.

- PM Modi met the Indian diaspora residing in France during his visit.

- India and France have emerged as close allies, with France supporting India's membership bid to the UN Security Council, the French company Dassault supplying India with world-class fighter jets and submarines and France currently positioned as the 11th largest foreign direct investment (FDI) supplier to India as of July 2023.

- The three pillars of the Indo-French bilateral relationship are considered to be (1) mutual non-interference in internal affairs (2) strategic autonomy and (3) refusal to pull the other into the one's alliances and coalitions.

2.7 Suspension of Black Sea Grain Initiative

- The **Initiative on Safe Transportation of Grain and Foodstuffs from Ukrainian Ports**, popularly called the Black Sea Grain Initiative, was an agreement between Russia, Ukraine, Turkey and the United Nations to facilitate the safe export of grains from the Black Sea ports in Ukraine.

- Ukraine is a major grain supplier for the global market. According to a report by the UN Food and Agriculture Organisation, before the war Ukraine was providing 45 million tonnes of grain to the global market. Apart from wheat, corn and sunflower oil are major items of export from Ukraine.

- By mid-July 2023, more than 1000 ships carrying in excess of 33 million tonnes of grain and other food products had completed successful voyages to 45 countries.

- After a year of the agreement's functioning, Russia withdrew from the Initiative after its demands to remove obstacles on the exports of Russian grain and fertiliser were not met with positive responses.

- From February 2022 when the Russian invasion of Ukraine began to April 2022, a massive breakdown of maritime supply chains ensued, causing a sharp upward turn in global wheat prices and a threat of famine in low-income countries, particularly in the Middle East and Africa.

- The 2022 food crises referred to shortages in supply wheat and other foodgrains, and soaring food costs due to the Russia-Ukraine war. The low-income countries of Africa, Asia and Latin America have been disproportionately affected by the food crises.

- Turkey hosted discussions between Russia, Ukraine and the United Nations for the resumption of maritime grain supplies. The agreement signed in July 2022 created procedures for the safe export of grains from Black Sea ports. A joint cooperation and inspection centre was established in Turkey. It is located at the National Defence University in the outskirts of Istanbul. UN provided secretariat services.

- Russia suspended participation in the agreement following drone attacks on Russian ships in the Black Sea, but resumed after mediation.

2.8 Coup in Niger

- On 26 July, Nigerien president Mohamed Bazoum was deposed from power by a coup orchestrated by the army. Presidential guard commander Abdourahamane Tchiani proclaimed himself as the head of the new government led by the armed forces.

- Niger has a long history of coups. The coup of 2023 is the fifth coup since the country gained independence in 1960, with the most recent taking place in 2010. Several coup attempts were made in the recent past, as late as 2021.

- The Nigerien coup was preceded by coups in Guinea, Mali, Sudan and Burkina Faso, giving rise to the term '**Coup Belt**' to refer to the portion of central and west Africa where these countries are located.

- Analysts cited inflation, falling standards of living and perceptions of government incompetence as the primary reasons for the coup. In addition, palace intrigue might have provided the immediate cause as rumours were rife about deposed president Mohamed Bazoum's intentions to replace Abdourahamane Tchiani, precipitating a desperate power struggle for hegemony in the internal power structures of the country.

- Niger suffers from chronic poverty. The country has consistently ranked as one of the bottom states in the Human Development Index.

- Jihadi terrorist groups such as al-Qaeda and Boko Haram frequently cross over from their bases in Mali into Niger, posing an acute threat to the country's security and political stability. Disagreements over actions to contain the Jihadi terrorist threat and the lack of coherent policy have contributed to perceptions of government incompetence. After the coup, military junta leader Abdourahamane Tchiani claimed the decision to overthrow Mohamed Bazoum was precipitated by his inability to provide effective leadership to counter the rising jihadist threat.

- Western countries have made substantial investments in Niger. The US gave millions in aid, posted more than 1000 soldiers and operated intelligence and drone bases. In

addition, France operated its largest anti-jihadist campaign in the Sahel region.

- Rising anti-French sentiments are perceived to have played a role in the coup, facilitated by the growing influence of Russia on the army and the government. Mohamded Bazoum was identified as a pro-Western leader, while Abdourahamane Tchiani is known for Russian inclinations.

- The Wagner Group, an irregular force suited for contemporary unconventional warfare, has played an active role in Niger for several years.

2.9 ASEAN Foreign Ministers' Summit

- The 56th Association of South East Asian Nations (ASEAN) Foreign Ministers' Meeting was held in Jakarta, Indonesia, on 11-12 July.

- Indian Foreign Minister Dr. S Jaishankar attended the meeting.

- The joint communiqué issued by the meeting stressed on the need to fulfil past commitments and identified key new areas of cooperation.

- Timor-Leste's inclusion in the ASEAN was an important agenda of the meeting. Timor-Leste was given 'Observer' status in November 2022. If admitted, it will become the 11th member-state in the ASEAN. The criteria-based roadmap of the 2022 foreign ministers' meeting had called for "ASEAN Member States and external partners to fully support Timor-Leste to achieve the milestones through the provision of capacity building assistance." In 2011, Timor-Leste's bid to become an ASEAN member was impeded by the fragility of its state, poor infrastructure and inadequate development of human resources.

- The meeting also devoted considerable discussions on the political situation in Myanmar. It reaffirmed the ASEAN's **Five-Point Consensus** as the foundation for all future talks and any possibility for diplomatic re-engagement with Myanmar. With reference to the displaced Rohingya people, the communiqué called for "facilitating the voluntary return of displaced persons in a safe, secure and dignified manner." The Rohingya displacement issue has become a bone of contention between ASEAN member-states and Myanmar as many displaced Rohingya refugees are scattered throughout the ASEAN member-state countries, posing complex security, demographic, economic and political risks to those countries. ASEAN has sought to pressurise Myanmar to facilitate the return of displaced Rohingyas to Myanmar, whereas political will in Myanmar to take any such step has been virtually absent.

- The visit of Thai foreign Minister Don Pramudwinai to Myanmar emerged as another dispute in the meeting. After his visit, Pramudwinai claimed imprisoned ex-Prime Minister Aung San Suu Kyi appeared to be in "good health", which was generally seen as an approval of the military government's treatment of her. Foreign ministers of the other ASEAN member-states issued sharp criticisms of the Pramudwinai's visit and demanded that ASEAN maintain a unified position on Myanmar.

- The media reported that foreign ministers have come to a consensus on concluding a pact that will lay down a code of conduct on the South China Sea. According to reports, a timeline of three years has been proposed to formalise the ASEAN-China Declaration on Conduct of Parties, which was an informal agreement signed in 2002. Disputes in the South China Sea have progressively widened to include a number of countries, and is considered to form a test case for the rules-based international order and the UN Convention on the Law of the Seas (UNCLOS).

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3. INDIAN ECONOMY

3.1 Three-day G-20 Agriculture Working Group meeting begins with enthusiasm in Hyderabad

- Brainstorming by G-20 countries on Agricultural priority sectors.

- India's full commitment towards food security and nutrition - Union Agriculture Minister.

- The 3-day meeting of the Agriculture Ministers under the Agriculture Working Group (AWG) of the G-20 held in Hyderabad. More than 200 delegates from member countries, invited countries and international organizations are participating in the meeting. Union Agriculture and Farmers Welfare Minister Shri Narendra Singh Tomar in a press conference said that agriculture priority sectors are being discussed in the meeting. These areas form the basis of this year's Agriculture Working Group. Shri Tomar said that India has full commitment towards food security and nutrition, policies have been made accordingly and its successful implementation is also being ensured.

- The priority areas of the Agriculture Working Group are-(a) Food security and nutrition with a focus on improving social protection systems to promote agro-diversification and enhance food security. (b) second, sustainable agriculture and financing green and climate resilient agriculture with a climate smart approach focused on climate resilient technologies and farming system models for sustainable agricultural production.(c) Third, strengthening infrastructure for small and marginal farmers, women and youth, sharing technology and investment and through increasing economic opportunities inclusive agricultural value chains and food systems to enhance the resilience and efficiency of value chains (d) Fourth, digitalization for agricultural transformation with emphasis on standardized agricultural data platforms as digital public goods and leveraging new-emerging digital technologies to transform the agri-food sector. These are being discussed in different sessions of the meeting.

- The first side event was based on 'Managing Agribusiness for Profit, People and Planet.'

- The second side event revolved around the topic 'Connecting the Digitally Disconnected: Harnessing the Power of Digital Technologies in Agriculture.'

3.2 Consumers to pay less for edible oils with reduction in Basic Import Duty on Refined Soyabean oil and Refined Sunflower Oil by 5%

- Basic Import Duty on Refined Soyabean oil and Refined Sunflower Oil reduced from 17.5% to 12.5%.

- Move to augment earlier measures taken by Government to reduce the prices of Edible Oils in the domestic market.

- In order to ensure availability of edible oil to consumers at affordable prices, the Central Government has reduced the Basic Import Duty on Edible Oils. An order to this effect was issued by the Department of Food and Public Distribution vide Notification No. 39/2023 -

Customs, dated 14th June, 2023 wherein the Basic Import Duty on Refined Soyabean Oil and Refined Sunflower Oil has been reduced from 17.5% to 12.5% with effect from today. This will remain in force till 31st March, 2024.

- The decision is expected to augment the earlier measures taken by the Government to reduce the prices of Edible Oils in the domestic market. The Basic Import Duty is an important factor which impacts the landed cost of Edible Oils which in turn affects the domestic prices. Reduction in Import Duty on Refined Sunflower Oil and Refined Soyabean Oil will benefit the consumers, as it will help in easing the domestic retail prices.

- The Import Duties on Refined Soyabean Oil and Refined Sunflower Oil were last reduced from 32.5% to 17.5% in October, 2021. This was done as during the year 2021, the international prices were very high, which was getting reflected in the domestic prices as well.

- The Department of Food and Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution is closely monitoring the prices of Edible Oil in the country and ensuring its adequate availability to consumers.

- India depends on imports for its 75 percent of edible oil needs.

3.3 Sovereign Gold Bond Scheme 2023-24 (Series I) – Issue Price

- The Government of India in consultation with the Reserve Bank of India has decided to allow discount of Rs 50 (Rupees Fifty only) per gram from the issue price to those investors who apply online and the payment is made through digital mode. For such investors the issue price of Gold Bond will be Rs 5,876 (Rupees Five Thousand Eight Hundred Seventy Six only) per gram of gold.

- Sovereign Gold Bond Scheme was launched by Govt. in November 2015, under Gold Monetisation Scheme. Under the scheme, the issues are made open for subscription in tranches by RBI in consultation with GOI. RBI Notifies the terms and conditions for the scheme from time to time. The subscription for SGB will be open as per following calendar. The rate of SGB will be declare by RBI before every new tranche by issuing a Press Release.

- As per RBI instructions "Every application must be accompanied by the 'PAN Number' issued by the Income Tax Department to the investor(s)'' as the PAN number of the first/ sole applicant is mandatory.

Features:

- To be issued by Reserve Bank India on behalf of the Government of India.

- The Bonds will be restricted for sale to resident Indian entities including individuals (in his capacity as individual, or on behalf of minor child, or jointly with any other individual), HUFs, Trusts, Universities and Charitable Institutions.

- Know-your-customer (KYC) norms will be the same as that for purchase of physical gold.

- KYC documents such as Voter ID, Aadhaar card/PAN or TAN /Passport will be required.

- The Bonds will be denominated in multiples of gram(s) of gold with a basic unit of 1 gram.

- The tenor of the Bond will be for a period of 8 years with exit option in 5th, 6th and 7th year, to be exercised on the interest payment dates.

- Minimum permissible investment will be 1 gram of gold.

- The maximum limit of subscribed shall be 4 KG for individual, 4 Kg for HUF and 20 Kg for trusts and similar entities per fiscal year (April-March) notified by the Government from time to time. A self-declaration to this effect will be obtained. The annual ceiling will include bonds subscribed under different tranches during initial issuance by Government and those purchase from the Secondary Market.

- The interest on Gold Bonds shall be taxable as per the provision of Income Tax Act, 1961 (43 of 1961). The capital gains tax arising on redemption of SGB to an individual has been exempted. The indexation benefits will be provided to long term capital gains arising to any person on transfer of bond.

3.4 Gross Direct Tax collections for Financial Year (FY) 2023-24 register a growth of 12.73%

- Net Direct Tax collections for the FY 2023-24 grown at over 11.18%.

- Advance Tax collections for the FY 2023-24 stand at Rs. 1,16,776 crore as on 17.06.2023, showing a growth of 13.70%.

- Refunds aggregating to Rs. 39,578 crore issued in the current fiscal

- The figures of Direct Tax collections for the Financial Year 2023-24, as on 17.06.2023 show that net collections are at Rs. 3,79,760 crore, compared to Rs. 3,41,568 crore in the corresponding period of the preceding Financial Year i.e. FY 2022-23, representing an increase of 11.18%.

- The Net Direct Tax collection of Rs. 3,79,760 crore (as on 17.06.2023) include Corporation Tax (CIT) at Rs. 1,56,949 crore (net of refund) and Personal Income Tax (PIT) including Securities Transaction Tax(STT) at Rs. 2,22,196 crore (net of refund).

- The Gross collection of Direct Taxes (before adjusting for refunds) for the FY 2023-24 stands at Rs. 4,19,338 crore as compared to Rs. 3,71,982 crore in the corresponding period of the preceding financial year, registering a growth of 12.73% over collections of FY 2022-23.

- The Gross collection of Rs. 4,19,338 crore includes Corporation Tax (CIT) at Rs. 1,87,311 crore and Personal Income Tax (PIT) including Securities Transaction Tax(STT) at Rs. 2,31,391 crore. Minor head wise collection comprises Advance Tax of Rs. 1,16,776 crore; Tax Deducted at Source of Rs. 2,71,849 crore; Self-Assessment Tax of Rs. 18,128 crore; Regular Assessment Tax of Rs. 9,977 crore; and Tax under other minor heads of Rs. 2,607 crore.

- The Advance Tax collections for the first quarter of the FY 2023-24 stand at Rs. 1,16,776

crore as on 17.06.2023, against Advance Tax collections of Rs. 1,02,707 crore for the corresponding period of the immediately preceding Financial Year i.e. 2022-23, showing a growth of 13.70%. The Advance Tax collection of Rs. 1,16,776 crore as on 17.06.2023 comprises Corporation Tax (CIT) at Rs. 92,784 crore and Personal Income Tax (PIT) at Rs. 23,991 crore.

- Refunds amounting to Rs. 39,578 crore have also been issued in the FY 2023-24 till 17.06.2023, as against refunds of Rs. 30,414 crore issued during the corresponding period in the preceding Financial Year 2022-23, showing a growth of 30.13%.

3.5 **The removal of additional retaliatory duties for import of US apples will not result in any negative impact on domestic apple producers**

- MFN duty of 50% continues to be applicable on US apples as only additional 20% duty to be removed.

- Apples from the US to compete on level playing field with other countries.

- Resolution of dispute to restore market access for Indian steel and aluminum exports to the US

- With the decision of resolution of six outstanding World Trade Organisation (WTO) disputes between US and India through mutually agreed solutions as jointly communicated during the official state visit of the Prime Minister to the USA, India will remove additional duties on eight US products, including apples, leading to restoration of

market access for Indian steel and aluminum exports to the US.

- The decision will not result in any negative impact on domestic apple producers and will result in competition in premium market segment ensuring better quality at better prices for consumers.

- After removal of this duty, the apples from the US would compete on level playing field with other countries.

- The decision will ensure that only premium quality apples could be imported for which there exists a specific market segment and specific demand.

- An additional 20% duty was imposed on US apples in 2019 in response to USA's measure to increase tariffs on certain steel and aluminum products. There is no reduction on Most Favoured Nation (MFN) duty on apples which is still applicable on all imported apples including on USA at 50%.

- The import of apples from the world has been stable in the range of US$ 239 – 305 million (except in 2021-22 when it was US$ 385 million) in the last five financial years since application of these additional duties on US apples. The import of apples from USA has decreased from US$ 145 million (127,908 Ton) in FY 2018-19 to only US$ 5.27 million (4,486 Ton) in FY 2022-23.

- The market share of the US apples was taken by other countries due to imposition of additional retaliatory duty on US apples. This is reflected as the import of apples from countries other

than the US increased from US$ 160 million in FY 2018-19 to US$ 290 million in FY 2022-23. Turkey, Italy, Chile, Iran and New Zealand are other top exporters to India of apples which took the market share of the US.

- Further on 8 May 2023, DGFT vide notification 5/ 2023 made amendment in import policy for Apples under ITC (HS) 08081000 by applying MIP (Minimum Import Price) of Rs 50 per Kg for all countries except Bhutan. Therefore, this MIP will also be applicable on apples from US as well as other countries (excluding Bhutan), thus preventing any flooding and protecting domestic growers from predatory pricing.

- After application of additional duty on US apples, its share in premium market segment was taken by countries like Turkey, Brazil, New Zealand, Italy, etc. as mentioned above

3.6 Centre approves Rs. 56,415 crore to 16 States for Capital Investment under 'Special Assistance to States for Capital Investment 2023-24' Scheme for giving timely boost to capital spending by States

- Capital investment projects in diverse sectors have been approved including health, education, irrigation, water supply, power, roads, bridges and railways. Funds for meeting the State share of Jal Jeevan Mission and *Pradhan Mantri Gram Sadak Yojana* have also been provided to the States under this scheme to enhance pace of the projects in these sectors.

- In view of a higher multiplier effect of capital expenditure and in order to provide boost to capital spending by States, the scheme 'Special

Assistance to States for Capital Investment 2023-24' was announced in the Union Budget 2023-24. Under the scheme, special assistance is being provided to the State Governments in the form of 50-year interest free loan up to an overall sum of Rs. 1.3 lakh crore during the financial year 2023-24.

- The scheme has eight parts, Part-I being the largest with allocation of Rs. 1 lakh crore. This amount has been allocated amongst States in proportion to their share of central taxes & duties as per the award of the 15th Finance Commission. Other parts of the scheme are either linked to reforms or are for sector specific projects.

- In Part–II of the scheme, an amount of Rs. 3,000 crore has been set aside for providing incentives to States for scrapping of State Government vehicles and ambulances, waiver of liabilities on old vehicles, providing tax concessions to individuals for scrapping of old vehicles and setting up of automated vehicle testing facilities. Part–III & IV of the scheme aim at providing incentives to States for reforms in Urban Planning and Urban Finance. An amount of Rs. 15,000 crore is earmarked for Urban Planning Reforms, while additional Rs. 5,000 crore is for incentivising the States for making Urban Local Bodies creditworthy and improving their finances.

- The scheme also aims at increasing the housing stock for the police personnel and their families within the police stations in urban areas. An amount of Rs. 2,000 crore is earmarked for this purpose under Part-V of the scheme. Another

objective of the Scheme is to promote national integration, carry forward the concept of "Make in India" and promote the concept of "One District, One Product (ODOP)" through construction of Unity Mall in each State. An amount of Rs. 5,000 crore has been set aside for this purpose under the Part-VI of the scheme.

- Part-VII of the Scheme, with an allocation of Rs. 5,000 crore is for providing financial assistance to States for setting up libraries with digital infrastructure at Panchayat and Ward level for children and adolescents.

- A similar scheme entitled 'Special Assistance to States for Capital Investment for 2022-23' was also executed by the Ministry of Finance in the last financial year. Under the scheme, Capital Investment proposals of Rs. 95,147.19 crore were approved and an amount of Rs. 81,195.35 crore was released to the States in the last financial year.

- The scheme for financial assistance to States for capital investment/expenditure, first instituted by the Ministry of Finance in 2020-21 in the wake of COVID-19 Pandemic have given a very timely boost to capital spending by States. The flexibility and simplicity of the scheme design has earned liberal praise from Chief Ministers and Finance Ministers of States in successive pre-budget consultations.

3.7 Government revises the Crop Residue Management guidelines enabling efficient ex-situ management of paddy straw generated in the States of Punjab, Haryana, UP and Delhi

- The Government has revised the Crop Residue Management guidelines enabling efficient ex-situ management of paddy straw generated in the States of Punjab, Haryana, UP and Delhi.

- As per the revised guidelines, techno-commercial pilot projects for Paddy Straw Supply Chain will be established under the bilateral agreement between the Beneficiary/Aggregator (Farmers, rural entrepreneurs, Cooperative Societies of Farmers, Farmers Producer Organizations (FPOs) and Panchayats) and Industries utilizing the paddy straw.

- Govt. shall provide financial assistance on the capital cost of machinery and equipment. The required working capital may be financed either by the Industry and Beneficiary jointly or utilizing the Agriculture Infrastructure Fund (AIF), NABARD Financial or Financing from the Financial Institutions by the beneficiary. The land for storage of the collected paddy straw will be arranged and prepared by the beneficiary as may be guided by the end use industry.

- Project proposal based financial assistance will be extended for machines and equipments such as Higher HP Tractor, Cutters, Tedder, Medium to Large Balers, Rakers, Loaders, Grabbers and Telehandlers which are essentially required for establishment of paddy straw supply chain.

- State Governments shall approve these projects through project sanctioning committee.

- Government (jointly by Central and State Governments) will provide financial support of @ 65% of the project cost, Industry as primary promoter of the project will contribute 25% and will act as the Primary consumer of the feedstock collected and Farmer or group of Farmers or Rural Entrepreneurs or Cooperative Societies of Farmers or Farmers Producer Organizations (FPOs), or Panchayats will be the direct Beneficiary of the project and will contribute the balance 10%.

The Outcomes of the above interventions are:

- The initiative will supplement the efforts of paddy straw management through in-situ options

- During the three-year tenure of the interventions, 1.5 million metric tonnes of surplus paddy straw are expected to be collected which would otherwise have been burnt in fields.

- About 333 biomass collection depots of capacity 4500 MT will be built in the States of Punjab, Haryana, Uttar Pradesh and Madhya Pradesh.

- Air pollution caused by stubble burning will be considerably reduced.

- It would generate employment opportunities of about 9,00,000 man days.

- The interventions will encourage a robust supply chain management of paddy straw which shall further help in making paddy straw

available for various end uses i.e., power generation, heat generation, bio- CNG, etc. by Power/bio-CNG/bio-ethanol producers

- Establishment of supply chain would result in new investments in Biomass to biofuel and energy sectors.

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4. GEOGRAPHY AND ENVIRONMENT

5.1 Demand for Critical Minerals Across the Globe

About News:

- China has imposed restrictions on the export of important metals like Gallium and Germanium (Critical Minerals)

- Recently, for **clean energy technologies and transitions toward a sustainable future,** the demand for **critical minerals** has increased recently. **They are important in** solar panels**,** wind turbines**, and other clean energy devices.**

Difference between Critical and Rare Earth minerals:

Critical minerals	Rare earth minerals
A critical mineral is a metallic or non-metallic element that is essential for the functioning of our modern technologies, economies or national security and there is a risk that its supply chains could be disrupted.	Rare earth minerals comprises 17 elements which are classified as light RE elements (LREE) and heavy RE elements (HREE).

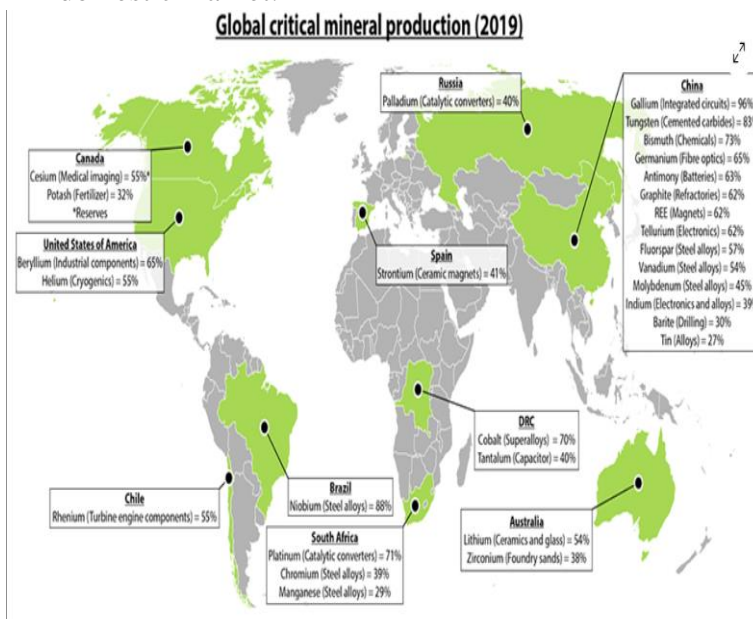|			
1. Antimony	15. Nickel	iv. Neodymium	20. Rhenium
2. Beryllium	16. PGE	v. Promethium	21. Selenium
3. Bismuth	i. Platinum	vi. Samarium	22. Silicon
4. Cadmium	ii. Palladium	vii. Europium	23. Strontium
5. Cobalt	iii. Rhodium	viii. Gadolinium	24. Tantalum
6. Copper	iv. Ruthenium	ix. Terbium	25. Tellurium
7. Gallium	v. Iridium	x. Dysprosium	26. Tin
8. Germanium	vi. Osmium	xi. Holmium	27. Titanium
9. Graphite	17. Phosphorous	xii. Erbium	28. Tungsten
10. Hafnium	18. Potash	xiii. Thulium	29. Vanadium
11. Indium	19. REE	xiv. Ytterbium	30. Zirconium
12. Lithium	i. Lanthanum	xv. Lutetium	
13. Molybdenum	ii. Cerium	xvi. Scandium	
14. Niobium	iii. Praseodymium	xvii. Yttrium	

About Critical Minerals:

- Critical minerals are those minerals that are essential for economic development and national security.

- The lack of availability of these minerals or concentration of extraction or processing in a few geographical locations may lead to supply chain vulnerabilities and even disruption of supplies.

Status of Critical Minerals in India:

- Only about 10-20% of India's critical mineral has been explored.

- Ministry of Mines has identified around 30 critical minerals for India.

- Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum,

Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.

- India has set up KABIL or the Khanij Bidesh India Limited, a joint venture of three public sector companies, to ensure a consistent supply of critical and strategic minerals to the Indian domestic market.

Global critical mineral production (2019)

Current Scenario for Critical Minerals around the Globe:

- The United States (US), Canada, the European Union (EU), and Australia along with Indonesia, Namibia, and Zimbabwe are resources rich countries.

- According to the International Energy Agency (IEA), the market for energy transition minerals reached $320 billion in 2022 and is expected to continue growing rapidly.

Efforts at Global level :

- New policies to diversify their mineral supplies.

- The United States (US), Canada, like Indonesia, Namibia, and Zimbabwe the European Union (EU), and Australia have enacted regulatory legislation**, while resource-rich nations** have imposed restrictions on the export of unprocessed mineral ores.

- US-China trade war **and the** Russia-Ukraine war **conflicts have** led to sanctions and disruptions in established trade patterns.

- Resource nationalism**, where countries** prioritise their own resources and impose restrictions on exports like Vietnam,China etc.

Challenges Related to Critical Minerals in India

- India is currently facing both global and domestic challenges in ensuring reliable supply chains for critical minerals.

On International front:

- **Covid-19 Impact:** significant risk of a slowdown in the extraction, processing, and exports of critical minerals during Covid-19.

- **Russia-Ukraine War:** Russia is a major producer of nickel, palladium, titanium sponge metal, and the rare earth element scandium.

- War has disturbed the global supply chains.

- Ukraine is a significant producer of titanium and has reserves of lithium, cobalt, graphite, and rare earth elements.

- Impact of China-Russia Partnership and Disparity in International Initiatives:

- The evolving balance of power between countries and continents poses a risk to critical mineral supply chains, primarily due to the strategic partnership between China and Russia.

India and International countries alliance in Critical Mineral

Mineral Security Partnership (MSP)

- Recently, India became a part of the coveted critical minerals club — the Mineral Security Partnership (MSP) — headed by the United States.

- MSP is a strategic grouping of 13 member states including Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea, Sweden, the United Kingdom, US, the European Union, Italy and now India. It aims to catalyse public and private investment in critical mineral supply chains globally.

- India is already a member of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, which supports the advancement of good mining governance.

- the G7 and G20 member countries, including US, UK, EU, Canada and Australia have declared their critical minerals lists

Critical Minerals Investment Partnership

- India and Australia have already signed the Critical Minerals Investment Partnership.

Sustainable Critical Minerals Alliance.

- Canada and other G7 members have created the Sustainable Critical Minerals Alliance to push the mining industry worldwide to be more environmentally sustainable, socially inclusive and responsible.

Strategies to Mitigate Challenges Regarding Critical Minerals:

Diversifying Sources of Supply:

- Currently, the reliance on a limited number of countries for these minerals poses risks to the supply chain. By diversifying the sources, countries and industries can reduce vulnerability to disruptions in supply caused by geopolitical factors, trade restrictions, or other uncertainties.

- Ensuring Clean and Responsible Sourcing: Ensuring that the volumes of critical minerals required for energy transitions can be supplied from clean and responsible sources. Mining and refining processes can have environmental and social impacts, including issues such as pollution, habitat destruction, and human rights concerns.

- It is important to promote sustainable and responsible practices throughout the critical minerals value chain to minimise these impacts and ensure a sustainable energy transition.

Way Forward

- Ensuring Resource Availability: Addressing the resource aspect is crucial. It is necessary to assess the availability and accessibility of critical materials required for clean energy technologies. This includes evaluating the domestic reserves of critical minerals and exploring opportunities for their sustainable extraction or sourcing from diverse international markets.

- Additionally, there should be strategies to ensure a steady supply of these materials,

mitigating risks associated with potential disruptions in global supply chains.

- Financial Considerations: The transition to clean energy often necessitates significant investments in infrastructure development, research and development, and policy support. There is a need for financing mechanisms, incentives, and funding models that can attract both public and private investments.

- Identifying avenues for international collaborations and exploring innovative financing options will also be vital in mobilising the required capital for a successful energy transition.

- **Technology as the Key Driver:**

- Technology plays a critical role in achieving our energy goals. It is required for the world to focus on fostering domestic technological capabilities, promoting research and development, and fostering innovation in clean energy technologies.

- There is a need for technology transfer, collaborations with academia and industry, and the creation of an ecosystem that supports the development, adoption, and scaling up of innovative clean energy solutions.

5.2 Flash Floods in Himachal Pradesh

About News:

- The 2023 Monsoon rain in Himachal Pradesh has brought severe Flash Floods in many regions causing unprecedented loss of lives and assets.

About Flash Flood:

- It is sudden surges in water levels generally during an intense spell of rain or mismanagement of infrastructure like dam.

- These are localised events of short duration with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.

- The flood situation worsens in the presence of choked drainage lines or encroachments obstructing the natural flow of water.

- Flash Floods can also occur due to Dam or Levee Breaks, and/or Mudslides (Debris Flow).
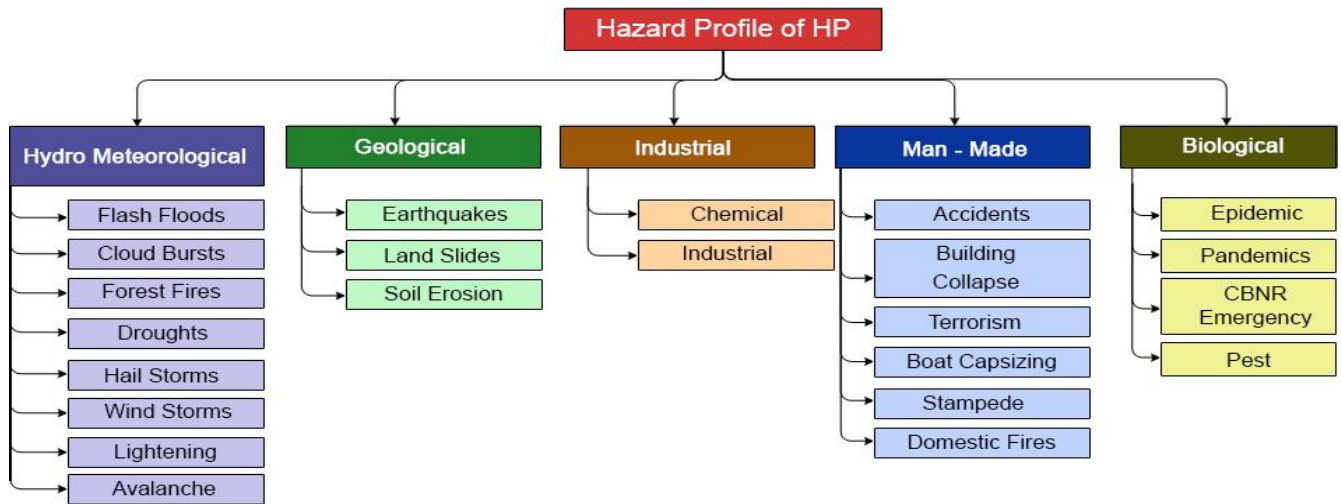
Factors responsible for Flash flood in Himachal Pradesh (HP):

1) Himachal Pradesh is Himalayan state which is ecologically and metrologically sensitive zone.

- The IPCC (Intergovernmental Panel on Climate Change) 6 report has clearly stated that the Himalayas and coastal regions of India will be the hardest hit by climate change.

2) In 2023, the precipitation in HP so far has been attributed to the combined effect of the South-West Monsoon with Western Disturbances.

3) Himachal adopted the principle of Liberalization-Privatisation and globalisation model:

- It led to fiscal reforms, self-reliance, however increased exploitation of natural resources, causing ecological impacts.

Impact:

- Himachal Pradesh alone, according to state authorities, reported a monetary loss of Rs.

Hazard Profile of HP

Hydro Meteorological	Geological	Industrial	Man - Made	Biological
Flash Floods	Earthquakes	Chemical	Accidents	Epidemic
Cloud Bursts	Land Slides	Industrial	Building Collapse	Pandemics
Forest Fires	Soil Erosion		Terrorism	CBNR Emergency
Droughts			Boat Capsizing	Pest
Hail Storms			Stampede	
Wind Storms			Domestic Fires	
Lightening				
Avalanche				

4) Tourism and infrastructure development:

- Tourism-driven Road expansion has led to four-lane and two-lane road transformations, bypassing essential geological studies.

- Vertical cutting roads of mountains during road construction has resulted in landslides and damage to existing roads during even normal rainfall, exacerbating destruction during heavy rain or floods.

5) Concretization:

- It reducing the land's water absorption capacity, and contributing to flash floods during rainfall.

- Uncontrolled construction of the Hydropower Projects has turned mountain rivers into mere streams

6) Changes in Crop Patterns:

- The shift to cash crop and horticulture economies over traditional cereal farming, which have implications for transportation to markets within short timeframes, since they are perishable in nature.

785.51 crore and the death of at least 72 people.

Government Initiatives to Tackle Flash Floods:

1) National Disaster Management Authority
2) National Flood Risk Mitigation Project.
3) National Flood Managmet Program

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5. SCIENCE & TECHNOLOGY

5.1 India joins US led Aretemis Accord

- **CONTEXT:** Recently, India's Prime Minister announced India's decision to join the Artemis Accords during the visit to the United States. India became the 27th signatory to the American-led Artemis Accords.

About Artemis Accords:

- NASA, in coordination with the U.S. Department of State, established the Artemis Accords in 2020 together with seven other founding member nations.

- The other founding members were Australia, Canada, Italy, Japan, Luxembourg, UAE, and the UK.

- The Artemis Accords reinforce and implement key obligations in the Outer Space Treaty 1967.

- It aims for setting common principles to govern civil exploration and use of outer space, the moon, Mars, comets, and asteroids, for peaceful purposes.

> **Artemis programme -** An American-led effort to return humans to the moon by 2025, with the ultimate goal of expanding space exploration to Mars and beyond.

Key Provisions under the Accord:

- **Peaceful Use:** Affirm that cooperative activities under these Accords should be exclusively for peaceful purposes and in accordance with relevant international law.

- Extraction of resources: Allows for the extraction and utilization of space resources, and aligns with its new space policy, which allows private players to engage in the mining of space resources.

- Information sharing: commitment to publicly share information on their activities and to the open sharing of scientific data.

- Issue of Space Debris: Signatories plan for the safe disposal of spacecraft and limit the generation of harmful debris.

What is it that India seeks to gain out of Artemis?

- **Benefits ISRO -** NASA and ISRO have agreed to a joint mission to the International Space Station (ISS) in 2024.

- **Gaganyaan -** Collaborating with NASA would enhance India's capabilities for the Gaganyaan human mission

- **Chandrayaan Mission:** India can leverage the Artemis programme to advance its own lunar exploration goals, such as the Chandrayaan-3 mission.

- **Bilateral ties -** The ties between India and the U.S. have been on an upswing and this accord improves bilateral space cooperation between them.

- **Economic potential -** It allows Indian companies and industries to participate in the global space economy and access new markets.

- **Space industry -** Increased investment in the space sector drives job creation, research and

development and the growth of India's space industry.

- **Collaboration -** India can collaborate and gain knowledge from other Artemis signatories.

Way Forward:

- Historically, Russia has been India's most dependable partner in the space industry, this accord can be seen as aligning with the US against Russia and China.

- There is a need to balance its commitments under the Artemis Accords with its obligations under other existing or emerging multilateral frameworks or treaties on outer space.

5.2 BIO-COMPUTERS

IN NEWS: Scientists at John Hopkins University have planned research on **"organoid intelligence (OI)" to create bio-computers.**

- Bio-computers are defined as computers that use components of biological origin (such as molecules of DNA) instead of electrical components.

What are Organoids?

- Organoids are tiny, self-organised three dimensional cells or tissues derived from stem cells.

- Planned research will use brain organoids, i.e., cultures of brain cells, as biological hardware.

- Organoid intelligence refers to the ability of organoids to exhibit certain behaviours or responses that are indicative of intelligence, such as problem-solving, learning, or adapting to changing environments.

Image Courtesy: The Hindu

Potential Future Benefits:

- **Improved AI capabilities:** can be used for complex information processing like the human brain.

- Ability to self-organise and self-repair.

- Greater energy and data efficiency.

- Multitasking via parallel computation

- They can help in drug development and in decoding the pathology of degenerative diseases like Parkinson's disease and microcephaly.

Challenges for bio-computers

- Brain organoids have a diameter of less than 1 mm and have fewer than 100,000 cells on average, limiting their computing capacity.

- Researchers will have to
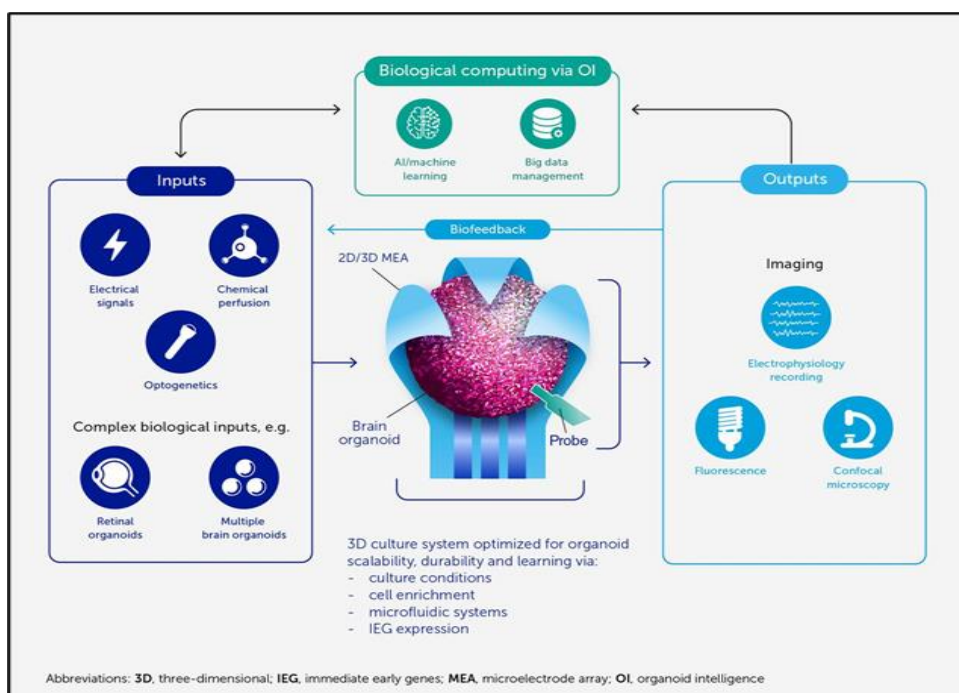
develop microfluidic systems to transport oxygen and nutrients and remove waste products.

- The hybrid systems will generate large amounts of data that will need to be stored and analysed using "Big Data" infrastructure and advanced analytical techniques.

- Ethical aspects: An ethics team is proposed to identify, discuss, and analyse ethical issues as they arise in the course of this work.

5.3 NASA-ISRO SAR (NISAR) Satellite

Context: NISAR is a joint Earth-observing mission between NASA and the Indian Space Research Organization (ISRO). It is expected to be launched in January 2024 from Satish Dhawan Space Centre into a near-polar orbit.

About NISAR:

- NASA-ISRO SAR (NISAR) is a Low Earth Orbit (LEO) observatory, which will map the entire globe in 12 days and provide spatially and temporally consistent data for understanding changes in Earth's ecosystems, ice mass, vegetation biomass, sea level rise, ground water and natural hazards including earthquakes, tsunamis, volcanoes and landslides.

- It will be the first radar of its kind in space to systematically map Earth, using two different radar frequencies (L-band and S-band) to measure changes of our planet's surface, including movements as small as centimeter.

- Synthetic aperture radar (SAR) refers to a technique for producing fine-resolution images from a resolution-limited radar system.

- The SAR payloads mounted on Integrated Radar Instrument Structure (IRIS) and the spacecraft bus are together called an observatory.
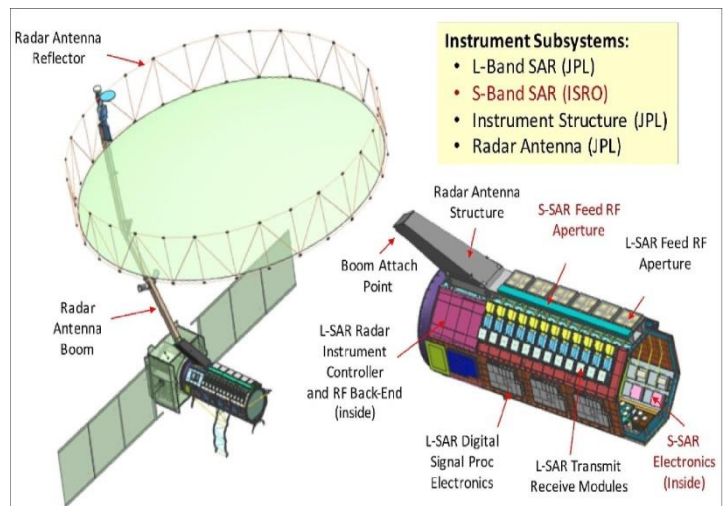
Contribution from different agencies:

- **By NASA:** Supply the L-Band SAR payload system, a high-rate communication subsystem for science data, GPS receivers, a solid-state recorder

- **By ISRO:** Supply S-Band SAR payload, the launch vehicle and associated launch services.

Significance of the mission:

- High Precision and Resolution: The usage of two microwave bandwidth regions (L-band and Sband), enables it to measure changes in earth surface less than a centimetre across.

- The Synthetic Aperture Radar used can penetrate clouds and darkness and enable the NISAR to collect accurate data at any weather and provide high-resolution images.

- The precision interferometric orbits of the mission will enable in mapping a few millimetres of deformations in the land surface.

- Large Imaging Area: The instrument's imaging area is greater than 240 kilometres along its orbit and it can image the entire Earth in 12 days.

- Observing Indian Coasts and Antarctica: NISAR will acquire data over the Indian Coasts and monitor annual changes in the bathymetry along the deltaic regions.

- Observations for different fields: Ranging from ecosystem disturbances to ice sheet collapse and natural hazards including earthquakes, tsunamis, volcanoes, and landslides.

Applications of the Mission:

Cryosphere Tracking	Ecosystem and Resource Tracking:	Disaster Management
• To measure the changes in permafrost. • To track the changes in Ice Sheets, Glaciers and the oceans of the world.	• To enable the measurement of forest cover and land use change. • To aid in Oil, Gas and Underground water exploration. • To track the changes in the Coastal ecosystem.	• To track location and impact of Earthquake • To map the effect of disaster in a region. • To track the volcanic activities. • To track the oil spills and their effects.

5.4 UN recommends new treaty for outer space

Context: The United Nations (UN) has recommended a new treaty for ensuring peace and security as well as preventing an arms race in outer space.

According to a UN policy brief, *For All Humanity —The Future of Outer Space Governance*, released in May 2024,

What is outer space?

- Outer space is the region beyond a planet's atmosphere. For Earth, it begins about 100 kms (62 miles) above sea level.

- The line separating the atmosphere and outer space is called the Karman line.

Existing treaties

- In 1959, the United Nations established the Committee on the Peaceful Uses of Outer Space to review and enable international cooperation in the peaceful uses of outer space.

- In 1963, countries agreed to prohibit testing nuclear weapons in outer space.

- The Outer Space Treaty 1967: Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

- In 1977, the prohibition of altering the space environment as a weapon was agreed upon.

Need for a new Treaty:

- Currently, there is no agreed international framework on space resource exploration, exploitation and utilisation.

- Exponential rise in satellite launches in the past decade. Example: An increase from 600 in 2019 and 1,200 in 2020 and 2,470 in 2022.

- Increase is fuelled by the active participation of the private sector.

- Space debris is another challenge. More than 130 million smaller than one cm have been recorded.

- Availability of Minerals on the Moon, asteroids and planets can be attractive for countries.

- For example, the Moon has rich deposits of helium-3, which is rare on Earth.

- Currently, there is no agreed international framework on space resource exploration, exploitation and utilisation.

Source: Down to Earth

Key Recommendations of the Treaty:

- Both binding and non-binding norms to address emerging risks to outer space security, safety and sustainability.

- Framework to prevent an armed conflict in outer space and the weaponization of outer space.

- Framework for coordinating space situational awareness, space object manoeuvres and events.

- Consideration of important legal issues, including jurisdiction, control, liability and responsibility for environmental pollution in space for present and future generations.

Framework on Space Debris Removal:

- Sustainable exploration, exploitation, and utilisation of space resources

- Norms and principles for Space Debris removal, considering both legal and scientific aspects.

5.5 Three parent baby

Why in news?

Recently, a baby has been born using three people's DNA in the UK with help of Mitochondrial Donation Treatment (MDT) procedure.

About Mitochondrial Donation Treatment (MDT)

- MDT is a technique in which a child is conceived from IVF (in vitro fertilization) using the genetic material of the parents and the mitochondrial material of a donor.

- It works on the principle in which the diseased mitochondria are replaced by healthy mitochondria in order to avoid transfer of

MAKING A THREE-PARENT EMBRYO
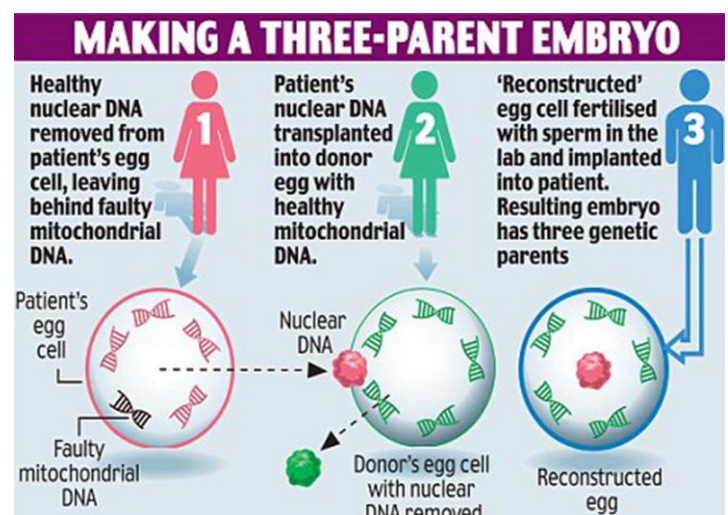
mitochondrial diseases from the mother to the offspring.

- Passing on mitochondrial diseases from parent to child can be prevented by MDT either before or after IVF of the egg.

Mitochondria and Mitochondrial Diseases

- Mitochondria are basically the powerhouses of the cells. They generate the energy, and thus are also responsible for cell function in the human body.

- Certain defects might occur impacting on the way the mitochondria produce energy for the cells and thereby impacting cell function.

- The diseases that arise out of such mitochondrial mutations are called mitochondrial diseases.

- When the mitochondria are impaired and do not produce sufficient energy, that affects how the organs function, leading to a broad assortment of symptoms across the body, including brain damage, organ failure and muscle wastage.

- Unlike nuclear DNA, which comes from both parents, Mitochondrial DNA comes only from the mother.

Most common techniques in the mitochondrial donation:

1) **Maternal spindle transfer technique**: Nuclear genetic material is removed from eggs and transferred to donated eggs that have had their nuclear genetic material removed. Eggs are fertilized later.

Maternal Spindle Transfer (MST) Technique
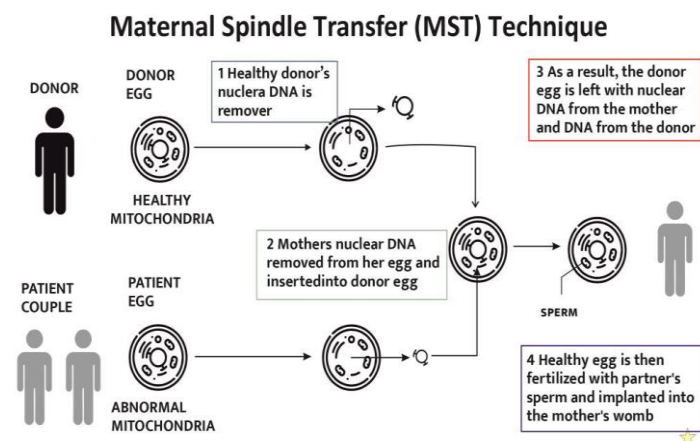
2) **Pronuclear Transfer Technique:**

Pro-nucleus is the nucleus of a sperm or an egg cell during the process of fertilization. In pronuclear transfer, the mother's egg is first fertilized with the sperm which produces a zygote. The pronuclei of the egg and sperm are then removed from the zygote and inserted into a donor egg that has been fertilized and **has had its own nucleus removed**. The zygote derived from the donor egg is then implanted into the mother's uterus.

Pronuclear Transfer (PNT) Technique (substitute to MST)
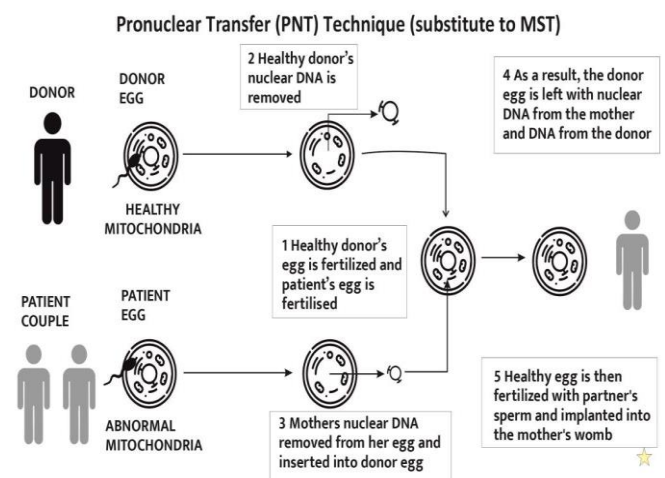
Issues with Mitochondrial Donation Treatment:

- **Effectiveness Concerns:** The dynamic nature of mitochondria and potential residual damaged mitochondria after transfer could compromise MRT's effectiveness and long-term benefits.

- **Incompatibility Risks:** Potential incompatibility between donor's mitochondria and receiver's nuclear genome could pose challenges.

- **Lack of Data:** MRT is in its experimental stages with inadequate data on potential adverse effects, making careful application critical.

- **Impact on Child:** There are concerns that MRT could influence a child's personality, including potential neurological changes, and pose risks

such as developmental disability and increased cancer risk.

- **Cost Barriers:** MRT is a costly procedure, making it inaccessible to many sections of society.

Benefits of Mitochondrial Donation Treatment (MDT)

- **Disease Prevention:** As there are no effective treatments for mitochondrial diseases that can cause severe health issues, MDT offers a chance for a healthier life for a baby.

- About one in 6,000 babies are affected by mitochondrial disorder.

- **Genetic Connection:** MRT can assist older women with poor quality eggs to have a biologically related child by retaining the woman's nuclear DNA while using mitochondria from a younger donor.

Conclusion

- If MDT technique is to be implemented in the country, there should be a regulatory body that governs its usage to avoid any unethical practices. Proper clinical trials are the need of the hour for data to be collected on the safety and efficacy of the technique being used.

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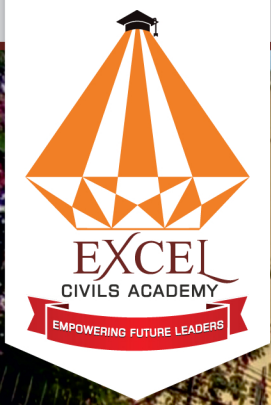
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